



SS CYRIL AND METHODIUS UNIVERSITY IN SKOPJE

FACULTY OF ECONOMICS – SKOPJE



ECONOMIC RECOVERY IN THE POST-CRISIS PERIOD

Proceedings from International Conference

Edited by Vladimir Filipovski





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FACULTY OF ECONOMICS – SKOPJE**



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***Proceedings from the International Conference
held at the Faculty of Economics – Skopje
29 – 30 May 2015***

Edited by Vladimir Filipovski

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FOREWORD

The adverse effects of the latest global financial crisis and the accompanying Great Recession (2007–2009) have not only prevented a strong and fast recovery, but have also seriously questioned the ability of the major world economies to return to their pre-crisis long-term growth path. All this has created serious challenges facing economic and business theories and their policy prescriptions. Those challenges range from how to redesign economic policy and regulatory reforms to how to reinvent the business models so that markets, firms and governments can lay down the foundations for a future sustainable economic growth and job creation.

Aiming at creating a forum for exchange of ideas and empirical research that try to search for answers to these intellectual and practical challenges, the *Faculty of Economics* within the *Ss. Cyril and Methodius University* in Skopje organized an international scientific conference under the title: *Economic Recovery in the Post Crisis Period*. The Conference took place on 29. – 30. May 2015 at the Faculty of Economics in Skopje and it covered several topics grouped into three broad areas as follows:

- I. Macroeconomic Issues in the Post-Crisis Environment
- II. Finance in the Post-Crisis Environment
- III. Enterprise Restructuring in the Post-Crisis Environment

The *Scientific Board* of the *International Conference on Economic Recovery in the Post-Crisis Period* consisted of the following members:

1. Vladimir Filipovski, Ss. Cyril and Methodius University in Skopje, Faculty of Economics-Skopje, Republic of Macedonia (Chair)
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12. Metka Tekavcic, University of Ljubljana, Faculty of Economics, Slovenia
13. Darko Tipuric, University of Zagreb, Faculty of Economics, Croatia
14. Laura Vasilescu, University of Craiova, Faculty of Economics and Business Administration, Romania
15. Libor Zidek, Masaryk University, Faculty of Economics and Administration, Brno, Czech Republic

The *International Conference on Economic Recovery in the Post-Crisis Period* set itself an objective to attract theoretical and empirical research which will offer scientific insights into the following issues:

- the issue of main drivers of the long-term economic growth and how to improve the productive potential of the economies, while also taking into consideration the income distribution effects;
- the new context for the conduct of the monetary policy and new modes and instruments for its implementation;
- the issue of providing for fiscal discipline in the age of the crisis-related fiscal expansionism;
- how to build a truly stable and efficient financial system;
- how can enterprises restructure their business models to optimally adapt to the post-crisis changes in the business environment, and
- how to invigorate entrepreneurship, SME sector development and job creation, particularly for the unemployed youth, and etc.

During the three Conference sessions, 35 presentations were realized involving scientific papers prepared by authors from 12 countries: Republic of Macedonia, USA, Australia, Russia, France, Czech Republic, Slovenia, Belgium, India, Mexico, Serbia, Albania and Italy. It may be said that the Conference have created an exchange of ideas and discussions on wide range of issues, starting from the challenges to macroeconomic theory and policies, moving on to the issues related to financial markets and labor markets, then discussing issues that are of fundamental importance not only for the development of the enterprise sector but also for the overall process of economic development the core of which being innovations, their generation and policies for their promotion and stimulation.

The *Faculty of Economics* within the *Ss Cyril and Methodius University* in Skopje has subsequently organized the publication of the *Proceedings of the International Conference on Economic Recovery in the Post Crisis Period*. These *Proceedings* include not only the papers which were presented at the Conference but also several other papers that were submitted for the Conference and accepted by the *Editorial Board* of the *Proceedings*. The members of the *Editorial Board* are the following:

1. Vladimir Filipovski, Ss. Cyril and Methodius University in Skopje, Faculty of Economics-Skopje, Republic of Macedonia (Chair)
2. Daniela Mamucevska, Ss. Cyril and Methodius University in Skopje, Faculty of Economics-Skopje, Republic of Macedonia

3. Stojan Debarliev, Ss. Cyril and Methodius University in Skopje, Faculty of Economics-Skopje, Republic of Macedonia
4. Borce Trenovski, Ss. Cyril and Methodius University in Skopje, Faculty of Economics-Skopje, Republic of Macedonia
5. Kiril Jovanovski, Ss. Cyril and Methodius University in Skopje, Faculty of Economics-Skopje, Republic of Macedonia

This publication, the *Proceedings of the International Conference on Economic Recovery in the Post Crisis Period*, follows the same classification of the papers as in the one followed at the *Conference*. The first section contains papers related to the topics in macroeconomic theory and policies and the issues in economic growth and development. The second section contains papers that deal with banking and finance aspects of the macroeconomic issues. The third section is devoted to the various issues of the business sector restructuring in the post crisis context.

The *Proceedings of the International Conference on Economic Recovery in the Post Crisis Period* includes 35 papers from 62 authors/coauthors coming from 15 countries (Republic of Macedonia, USA, Russia, Australia, Canada, Honk Kong, France, Italy, UK, Czech Republic, Poland, Belgium, Slovenia, Serbia, Albania).

We would like to express our utmost appreciation and gratitude to all the authors of the papers included in these *Proceedings* and we believe that the readers will find many interesting thoughts and analyses related to some challenging economic issues.

Skopje, November 2015

Prof. Vladimir Filipovski
Editor in Chief

ACKNOWLEDGEMENTS

In organizing the *International Conference on Economic Recovery in the Post-Crisis Period*, the Faculty of Economics within the Ss Cyril and Methodius University in Skopje has been helped with the precious support from several institutions and individuals.

First of all, we would like to express our appreciation and acknowledgements for the esteemed Rector of the Ss Cyril and Methodius University in Skopje, Prof. Velimir Stojkovski, Ph.D., who has decisively contributed to make the financial support of the University to be timely and efficiently available to the organizer of the Conference, the Faculty of Economics Skopje.

We would also like to acknowledge the support of the American Embassy in the Republic of Macedonia, through its staff for economic affairs, has also provided logistical and financial support for bringing an American scholar to participate at the Conference.

In the similar vein, the Macedonia 2025 Foundation has also provided logistical support in organizing the Conference and we would like to thank its staff.

We would like to thank our young colleague, an MBA graduate Filip Fidanoski, for his time and efforts to help the Conference through successfully communicating with the Conference participants from various foreign countries.

Acknowledgements also go to *Vitaminka Joint Stock Company* from Prilep which has financially supported the Conference.

Skopje, November 2015

Editorial Board

CONFERENCE TOPIC

I.

**MACROECONOMIC ISSUES
IN THE POST-CRISIS PERIOD**

IMPACT OF CURRENCY INTERVENTIONS ON THE ECONOMIC DEVELOPMENT IN THE CZECH REPUBLIC

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ABSTRACT

The Czech economy was struck by the world financial crisis after 2008, similarly to other economies in the region. Monetary as well fiscal policies reacted and tried to improve economic performance. Foremost, the Czech National Bank (CNB) decreased its main interest rates very close to zero. Regardless of such measures, monetary development in the Czech Republic was heading towards deflation in the autumn of 2013. The CNB did not have any ordinary instrument in its portfolio and decided to apply non-orthodox measures in the form of intervention on the foreign exchange market. The intention was to depreciate the Czech crown and thus via exchange rate channel increase inflation in the country. Applying the SVAR model, this paper aims to find out whether the intervention had an impact on price level, exports, production, and interest rates.. Contrary to expectations, we did not find inflationary impact of the measures on the price level. We only discovered impact on exports with the highest influence during the first three months.

Keywords: Czech economy, currency market, interventions, central bank

JEL classification codes: F31

INTRODUCTION

The central government institutions sometimes make extraordinary decisions about macroeconomic policy. One of them took place in the Czech Republic in the autumn of 2013. At that time, the Czech central bank (the Czech National Bank) was in a critical situation because it had run out of ordinary monetary tools – the main interest rates were already close to zero and the central bank expected that the economy was heading towards deflation. The bank decided for an emergency measure in the form of intervention on the foreign exchange market with the intention to depreciate the currency – the crown. This extraordinary step was taken with a view to weakening deflationary pressures in the economy.

The goal of this paper is to quantify and evaluate the impact of interventions on key macroeconomic variables: economic activity (growth), exports (growth) and inflation (growth of price level).

The structure of the paper corresponds with our goal. The first section is dedicated to the development of the exchange rate regime in the Czech Republic and the situation around

application of the interventions. Our model is introduced in the second section and we sum up our research and our conclusions in the third section.

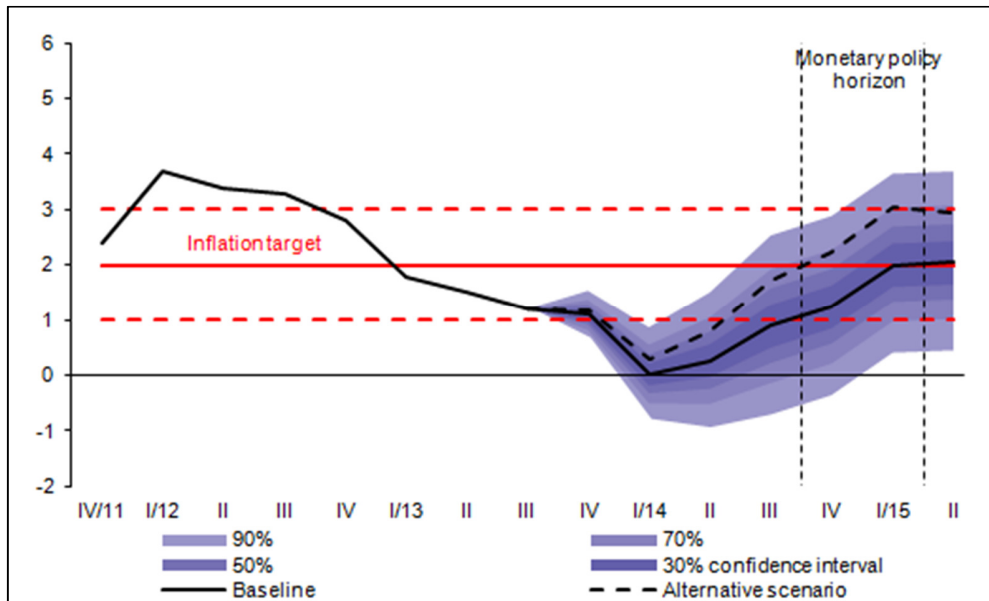
DEVELOPMENT OF THE EXCHANGE RATE POLICY

Historically, Czechoslovakia and later on the Czech Republic applied several exchange rate regimes during the transformation process. Three devaluations took place during 1990 and the exchange rate was consequently fixed to a basket of five currencies. At the same time, the crown became convertible for transactions on the current account. The fixed exchange rate regime survived till 1997. But several changes were introduced meanwhile –the fluctuation zone was introduced (1992), the basket was limited to two currencies (1992), the crown became fully convertible (1995) and the fluctuation zone was again widened (1996). The country suffered from currency crises in the spring of 1997 and in consequence the central bank was forced to leave the fix exchange rate regime. The bank decided to apply a new monetary policy framework – inflation targeting. The exchange rate regime was switched to managed floating. But the central bank in practice intervened only rarely – and only around 2000. The exchange rate mechanism was de facto free floating (more about exchange rate regime for example Němec, Žídek, 2013).

This situation changed in the autumn of 2013. The central bank was generally successful in long-run achieving of its inflation goal. Most of the time, it was able to keep year-to-year inflation in its target 2% +/-1%. Then the world financial crisis and consequent economic crisis struck the Czech economy. The economy was affected via international channels that interconnect the economy with the outside world. There were no internal reasons for the economic downturn – banks stayed healthy and the overall financial sector was functioning well. The economy overcame the slump but it was affected by other crisis in 2012-13. Inflation declined with this recession as well. The Czech crown was meanwhile (surprisingly) appreciating. The central bank reacted in accordance with its policy and decreased its main interest rate (repo interest rate). It reached “technical zero” (0.05%) already in December 2012. The economy did not react to declining interest rates and inflation and the expected inflation kept going down. The bank (its Bank Board) began to worry that it would not only be unable to reach its inflation target but furthermore that the economy was directing towards deflation with negative consequences for the whole economy. Because the main tool had already been useless, the Board started to consider nonstandard measures in order to increase inflation and inflation expectations. Interventions on the foreign exchange market were foregrounded and discussed. The intention was to increase inflation in the economy via imported prices. These discussions took place during nearly the entire 2013 (for example CNB Inflation Report – II/2013). The IMF (2013) participated in the discussions and recommended interventions on the foreign exchange market during the summer consultations as well.

On its November meeting (November 7, 2013), the Board decided to react. Figure 1 shows the situation then, as perceived by the Board. Their model projected with a high probability deflation. The Board made decisions about interventions on the foreign exchange market with an intention to depreciate the value of the Czech crown below 27 crowns per euro and to keep it there (CNB, 2013b).

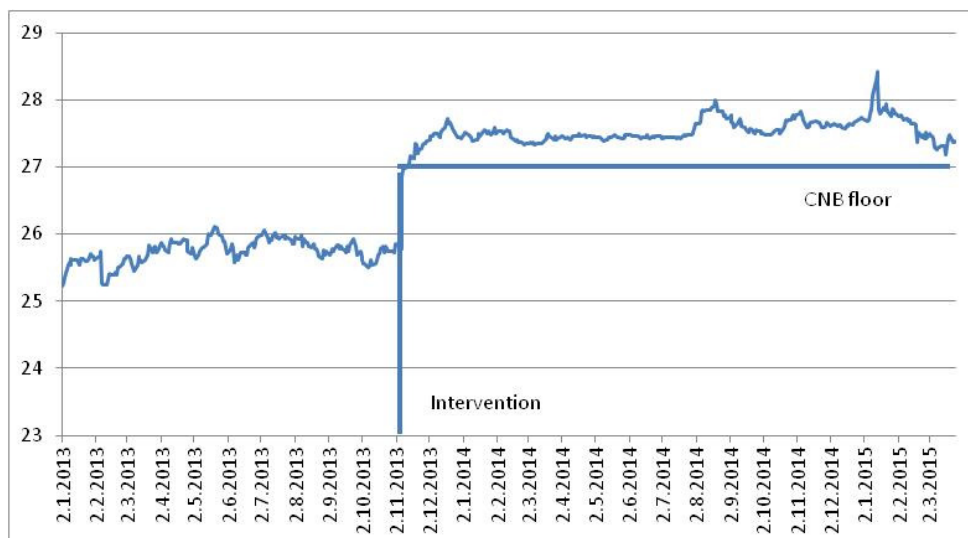
Graph 1: Headline inflation – comparison of the baseline and alternative (applying interventions) scenario in the view of the Czech National Bank



Source: CNB, Inflation Report/ IV, 2013.

The intervention was generally successful. The crown depreciated and the central bank was able to keep it below its targeted value even though it eventually did not intervene on the markets directly. It is interesting that the market subjects were convinced (after the first intervention) just by the will of the central bank to keep the exchange rate above the declared value. The practical impact of the intervention was a 6% depreciation of the exchange rate against the previous situation (see Figure 2). The Bank Board decided to keep the exchange rate below 27 CZK/EUR at least until 2016 (originally only till the beginning of 2015).

Graph 2: Exchange rate: Czech crown per Euro

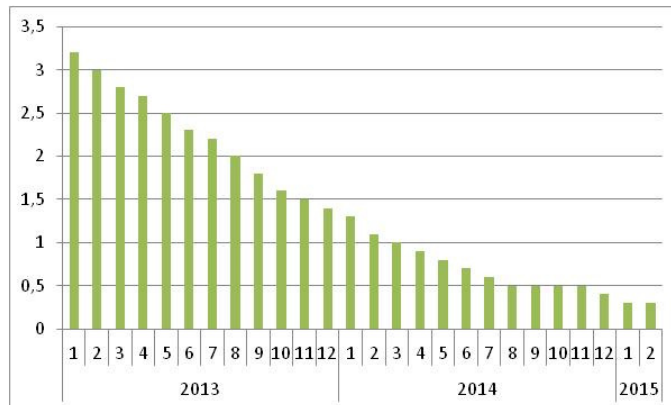


Source: CNB:

www.cnb.cz/cs/financni_trhy/devizovy_trh/kurzy_devizoveho_trhu/rok_form.jsp 26. 3. 2015

In Figure 3 we can see that the central bank estimated the inflation trend correctly. It was obviously missing its target after the beginning of 2014 but it was able to avoid deflation during the year. The central bank consequently argued that interventions were crucial in avoiding deflation (CNB, 2014). The IMF evaluated the interventions positively as well (IMF, 2014). The following part of the paper discusses the impact of the interventions on inflation.

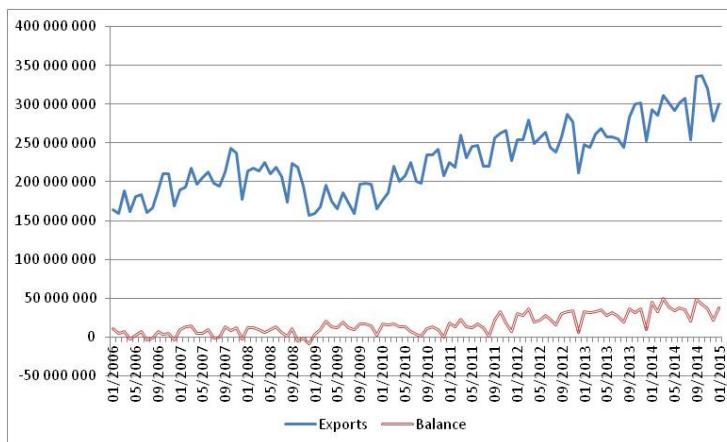
Graph 3: Inflation rate as an increase in average annual CPI indicating percentage change in last 12-month average over preceding 12-month average.



Source: Czech Statistical office: https://www.czso.cz/csu/czso/inflation_rate 28. 3. 2015

The second impact of the interventions should be naturally on Czech trade. We can expect that depreciation of the currency should support Czech exports and possibly increase trade balance surplus. We can see the development of these indicators in Figure 4. There is no visible impact of the interventions on these values. The exports seemed to be increasing after overcoming the impacts of the world economic crises in regular pace and their growth can be probably ascribed to general economic recovery in the economies of the trading partners. The same applies to trade balance – even though its surplus has slightly increased in the recent months. Another goal of the following part of the paper is to find out whether the interventions had any impact on Czech exports and trade balance.

Graph 4: Czech exports and trade balance in CZK (thousand)



Source: Czech Statistical Office: External Trade Database, <http://apl.czso.cz/pll/stazo/STAZO.STAZO?jazyk=EN> 25. 3. 2015

EVALUATING THE IMPACTS OF EXCHANGE RATE INTERVENTIONS

The main purpose of our paper – is to estimate the impact of exchange rate interventions on key macroeconomic variables in the Czech economy. We focus on explaining the sources of dynamics of exports, industrial productions, interest rate, exchange rate and inflation. To study the exchange rate transmission mechanism in the Czech Republic we use the methodology proposed by Ito and Sato (2008) tuned in a way to incorporate the particularities of the Czech economy. Interactions between the exchange rate changes and the dynamics of macroeconomic variables will be studied within an identified structural vector autoregressive model (SVAR).

Our SVAR analysis starts with an estimation of a reduced form VAR model. Obtained residuals are then transformed to the structural shocks using Cholesky decomposition. Identified structural shocks are incorporated into series of simulation exercises that will decompose the actual trajectories of observed variables into the particular shock components. The resulting historical shock decomposition points out the main factors standing behind the development of the macroeconomic variables in the last fifteen years (including the period of exchange rate interventions).

Our VAR model is set up using the vector of five endogenous variables:

$$x_t = (\Delta EXP_t, IIP_t, \Delta IR_t, \Delta ER_t, \Delta CPI_t),$$

where ΔEXP_t denotes changes in the natural logarithms of exports, IIP_t represents the changes in the natural logarithm of index of industrial production, ΔIR_t denotes changes of interest rate, ΔER_t represents the differences in natural logarithm of nominal effective exchange rate and ΔCPI_t is the difference of the natural logarithm of the consumer price index. Our model is thus based on growth rates or changes of corresponding variables which will be explained in more detail below.

For estimation purposes, we use the monthly data from January 2001 to July 2014. The data source is the database ARAD provided by the Czech National Bank. The observed variables for the Czech Republic are as follows:

IIP: Index of industrial production (all industries), 2010=100;

CPI: Consumer prices index, all items, 2005=100;

IR: three month Prague interbank rate (3M PRIBOR);

EXP: volume of export in millions of CZK;

ER: Nominal exchange rate (EUR per CZK), direct quote (increase means appreciation);

All variables (except exchange rate and interest rate) were seasonally adjusted using the X12-ARIMA procedure. After seasonal adjustment, the variables (except interest rate) were transformed using logarithmic transformation. Unit root tests proved the existence of unit roots in all variables. Our variables were expressed in growth rates terms (i.e. logarithmic differences). In case of interest rate, only the first differencing was applied. These transformations led to stationary variables. All the variables were selected in accordance with the arguments presented by Ito and Sato (2008) and are very similar to those used by Mirdala (2009). These variables express economic linkage between exchange rate and internal macroeconomic factors. Export growth represents possible external demand shocks; domestic demand shock effects are included in the growth of industrial production; and interest rate changes allow us to capture the effects of monetary policy on domestic inflation.

Identified structural shocks are based on the Cholesky decomposition of the variance-covariance matrix Ω of the reduced-form VAR residuals. The link between the reduced-form VAR residuals (u_t) and the structural shocks (ε_t) can be written as

$$u_t = S\varepsilon_t,$$

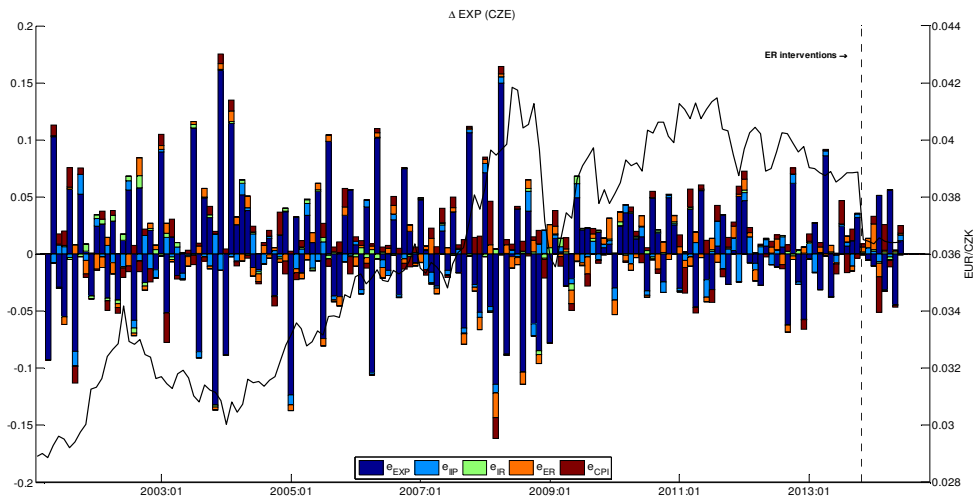
where $u_t = (u_t^{EXP}, u_t^{IIP}, u_t^{IR}, u_t^{ER}, u_t^{CPI})$, $\varepsilon_t = (\varepsilon_t^{EXP}, \varepsilon_t^{IIP}, \varepsilon_t^{IR}, \varepsilon_t^{ER}, \varepsilon_t^{CPI})$ and S is the lower-triangular matrix derived given the covariance matrix Ω . The Cholesky decomposition of Ω implies $\Omega = PP'$

with a lower triangular matrix P . Since $\Omega = E(u_t u_t') = SE(\varepsilon, \varepsilon_r)'S = SS'$, where structural disturbances ε_t are considered to be orthonormal, the matrix S is equal to P . The structural model defined by the previous equation is identified due to the fact that lower-triangular matrix S imposes enough zero restrictions ($k(k-1)/2$), where k denotes the number of endogenous variables (in our case we have five endogenous variables). The lower-triangular matrix S implies that some structural shocks have no effect on the endogenous variables in the short run. The ordering is thus important and is based on economic intuition. For example, we assume that changes in exports are influenced only by the export (foreign demand) shock ε_t^{EXP} itself.

The lag order of the first-stage VAR model was selected at order 2 using the Akaike information criterion (AIC). The constant term was excluded from our model specification, which might be justified by the fact that there are no significant (i.e. non-zero) growth trends in the monthly growth rates of the observed variables. The reduced form VAR model has been estimated using the complete data set starting from 2001M1 (the first month of 2001) to 2014M6¹. Structural shocks were then computed from the VAR residuals in the aforementioned way.

The impacts of exchange rate changes and exchange rate interventions are evaluated at first using the historical shock decomposition. We try to account for these shock decompositions for each endogenous variable. Careful attention is paid to the period of nine months after the exchange rate interventions in the autumn of 2013.

Graph 5: Historical shock decomposition – exports (monthly growth)



Source: authors' own computations based on estimated model

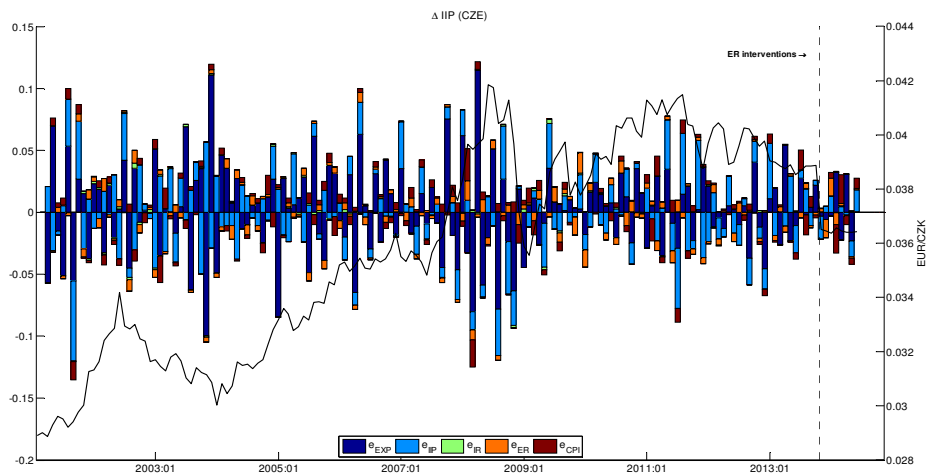
Figure 4 shows the historical shock decomposition of monthly export growth and the development of exchange rate (direct quotations where increase means appreciation). Presented structural shocks contributions were computed using the identified and simulated SVAR model. Non-zero shocks were simulated with respect to the lag of reduced-form model (i.e. first two periods are omitted). The outset of start of the exchange rate interventions is marked as a vertical line. Foreign demand shocks are responsible for most of the observed variability through the whole examined period. Changes in domestic demand and exchange rate have only a limited impact on the development of Czech exports. Exchange rate interventions boosted the export growth within the

¹ The first observation in 2001M1 was not lost due to differencing procedure, using the last observation in 2000.

period of three months after the interventions. We are not able to observe either negative or positive impacts of exchange rate changes afterwards.

Growth rates of industrial production are strongly influenced by the foreign demand shocks (see Figure 5). From this point of view, the economic growth in the Czech Republic may be considered as export-led growth. Exchange rate interventions caused only small increase in the industrial production shortly after the outset of the interventions (approximately three months after this event). Long-lasting growth supporting tendencies were not proved.

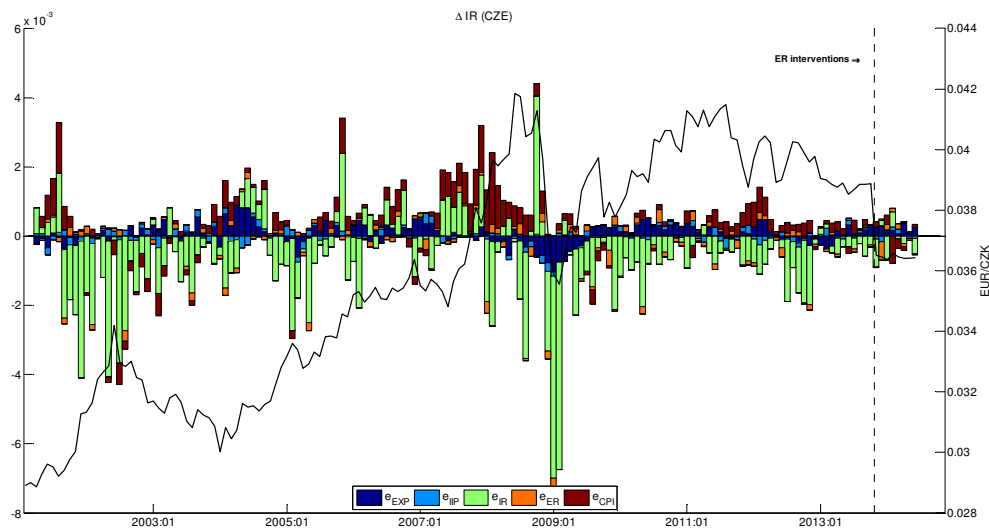
Graph 6: Historical shock decomposition-index of industrial production (monthly growth)



Source: authors' own computations based on estimated model

Interest rate changes are fully determined by the monetary shocks with temporary influence of shocks in inflation.

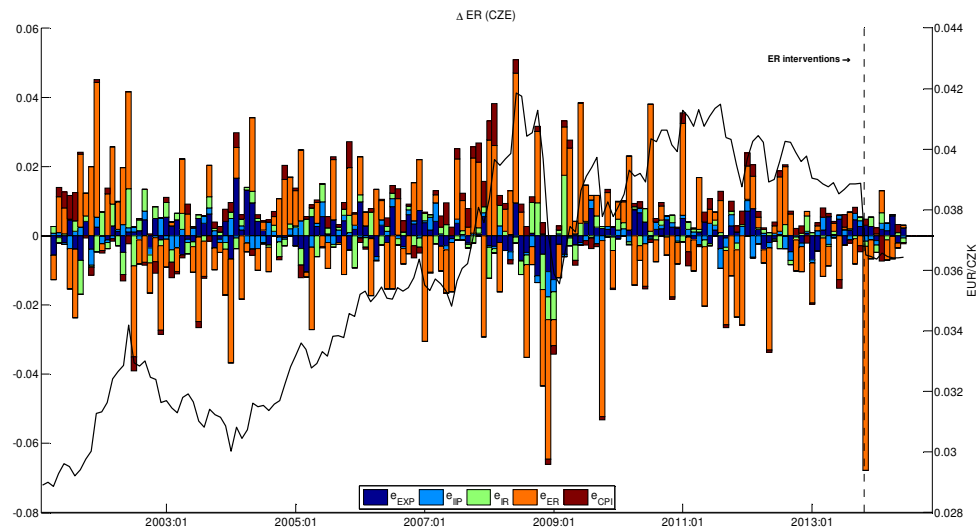
Graph 7: Historical shock decomposition – interest rate (monthly change)



Source: authors' own computations based on estimated model

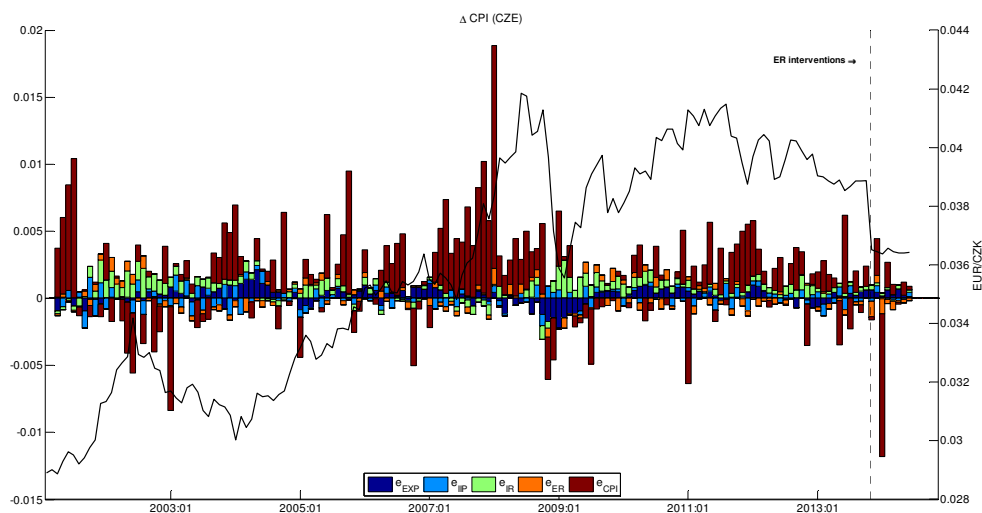
As for the exchange rate changes, a small amount of these changes may be explained by shock in exports (i.e. foreign demand). The rest may be considered to be a result of other factors (external exchange rate shocks) not explained in our model. The main goal of the exchange rate interventions was to prevent deflationary pressures. Although the observed period after the interventions is relatively short, there is no evidence of direct inflationary effects of these interventions. On the contrary, a small deflationary effect was recorded. This may be caused by positive supply shocks connected with decrease in oil prices. Only a part of positive inflationary shocks may be related to the growth of economic activity (industrial production) that might have been induced by exchange rate changes.

Graph 8: Historical shock decomposition – exchange rate (monthly growth)



Source: authors' own computations based on estimated model

Graph 9: Historical shock decomposition – monthly inflation



Source: authors' own computations based on estimated model

Forecast error variance decomposition of inflation is shown in Table 1. We should notice that the exchange rate changes play only a minor role in the development of all macroeconomic variables (excluding exchange rate itself).

Table 1: Forecast error variance decomposition

	ε^{EXP}	ε^{IIP}	ε^{IR}	ε^{ER}	ε^{CPI}
ΔEXP	92.76%	2.36%	0.19%	1.75%	2.94%
ΔIIP	65.26%	30.04%	0.05%	1.73%	2.93%
ΔIR	3.21%	0.71%	85.40%	0.96%	9.72%
ΔER	6.54%	1.56%	4.31%	85.14%	2.45%
ΔCPI	2.25%	2.32%	2.97%	1.31%	91.15%

Source: authors' own computations based on estimated model

Relative importance of structural shocks may be found in Table 2. The presented numbers are outputs of the regressions where dependent variables are all model variables and explanatory variables are standardized structural shocks (identified within our SVAR model). The resulting R^2 is decomposed into individual contributions using the formula $R^2 = \sum_k b_k r_{yk}$ where b_k is the regression

coefficient at the k^{th} structural shock (i.e. standardized coefficient in the regression with original variables) and r_{yk} is the correlation coefficient between the corresponding standardized dependent variable and the k^{th} structural shock. All the computations were carried out for the entire periods². This approach allows us to distinguish overall historical influence of exchange rate changes on all modeled macroeconomic variables.

Table 2: Explained historical variability

	ΔEXP	ΔIIP	ΔIR	ΔER	ΔCPI
ε^{EXP}	94.11%	70.73%	8.23%	6.80%	1.82%
ε^{IIP}	1.70%	25.98%	0.67%	1.65%	1.62%
ε^{IR}	-0.53%	-0.18%	79.24%	3.81%	-1.81%
ε^{ER}	3.01%	1.85%	1.35%	85.55%	2.98%
ε^{CPI}	1.72%	1.62%	10.51%	2.19%	95.39%

Source: authors' own computations based on estimated model

As Table 2 indicates, exchange rate changes explain only a small part of variability in the rest of economic variables. All previous results suggested a negligible effect of exchange rate interventions on economic activity or inflation. It should be noted once again that all variables are expressed as monthly growth rates. To evaluate the average impact on year-on-year growth rate, we have to

² We have omitted the months in 2001 and 2002 due to the influence of initial zero-shocks conditions in historical simulation. Negative R^2 are the results of insignificant influence of the shocks on inflation. It means that their explanatory power was simply negative due to the fact that the sum of individual R^2 has to be equal to the overall R^2 .

annualize average shocks contributions to all of our model variables. The resulting average impacts may be found in Table 3. Focusing on the period of interventions (starting with November 2013) we can see that these interventions contributed considerably to export growth. Identified exchange rate growth contributed to year-on-year export growth of 9% by 4%, i.e. by a half of estimated growth. Export growth itself might have contributed to the consumer inflation by approximately 0.5%. Conversely, exchange rate changes did not stimulate inflationary pressures.

Table 3: Contributions of shocks to the annualized average month to month changes

	ε^{EXP}	ε^{IIP}	ε^{IR}	ε^{ER}	ε^{CPI}	m-o-m change (annualized)
2003M1 – 2013M10						
ΔEXP	2.92%	0.15%	0.63%	0.16%	2.35%	6.35%
ΔIIP	1.54%	-0.56%	0.17%	-0.12%	0.97%	2.06%
ΔIR	0.09%	0.00%	-0.58%	0.00%	0.29%	-0.20%
ΔER	0.87%	-0.07%	0.25%	-0.62%	1.32%	1.74%
ΔCPI	0.21%	0.01%	0.46%	-0.03%	1.70%	2.36%
2013M11 – 2014M06						
ΔEXP	3.84%	0.20%	0.34%	4.14%	-0.21%	9.01%
ΔIIP	0.59%	1.19%	0.10%	-0.91%	0.15%	1.22%
ΔIR	0.25%	-0.02%	-0.25%	-0.05%	-0.09%	-0.15%
ΔER	2.03%	-0.14%	0.03%	-11.06%	-0.29%	-9.59%
ΔCPI	0.49%	0.00%	0.22%	-0.49%	-0.66%	-0.44%
2003M1 – 2014M06						
ΔEXP	2.98%	0.16%	0.62%	0.38%	2.20%	6.50%
ΔIIP	1.49%	-0.46%	0.16%	-0.16%	0.92%	2.01%
ΔIR	0.10%	0.00%	-0.56%	-0.01%	0.27%	-0.20%
ΔER	0.93%	-0.07%	0.23%	-1.26%	1.23%	1.05%
ΔCPI	0.22%	0.01%	0.45%	-0.06%	1.57%	2.20%

Source: authors' own computations based on estimated model

CONCLUSION

The Czech central bank decided to use an extraordinary tool in the form of the interventions on the foreign exchange market in the autumn of 2013. This tool was used in a situation when its main instruments (repo interest rates) were at technical zero and the bank forecasted deflation. In response, the central bank decided to devalue the Czech crown by roughly 6%. The main goal of this measure was to counter the deflationary pressures in the economy.

We analysed the impact of the interventions on exports, industrial activity, interest rate, and inflation by the application of the SVAR model. Our conclusion was that the interventions had (in the short run – it was still only a year after the application) a significant (positive) impact only on exports and only in the period of the first three months (with the highest impact in the third month after the outset of the interventions). Our analysis reveals that the average year-to-year pace of export growth was 9% and the impact of the interventions was estimated at 4% – it means that nearly a half of the

export growth can be attributed to interventions on the foreign exchange market. The indirect impact of export growth was inflationary. But it was balanced by the direct impact of the exchange rate changes on inflation that was (contrary to expectations) negative. The overall impact of the measure on inflation was broadly zero which can be regarded as surprising and against the expectations of the Central Bank.

Our final conclusion is that the analysis did not prove any positive impact of the interventions on the price level. The measure had only a temporary (in first three months) influence on exports.

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STRUCTURAL REFORMS AND THEIR EFFECTS IN THE EU: EVIDENCE FROM THE LISBON STRATEGY

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ABSTRACT

This paper estimates for the panel of EU27 countries, the effects of labour and product market reforms on a broad set of macroeconomic variables, including growth, (un)employment, fiscal balances, inflation and risk premia. We find evidence that our proxys for labour and goods market reform efforts have small effects on most indicators. An import policy implication is that policymakers need to be aware that structural reforms agenda's like the Europe 2020 require a careful structure and timing of their implementation.

Keywords: structural reforms, EU 27

JEL classification codes: C22, E32, E66, F42

INTRODUCTION

The financial and economic crisis that has plagued the global economy since 2009 has evoked unprecedented policy challenges. In the European Union –and elsewhere–, probably the biggest challenge is designing strategies to boost job creation in the context of ongoing fiscal consolidation and structural economic and social transformation. To achieve this, the necessity of structural reforms is acknowledged by many. In recent years, economists and politicians have indeed spent considerable attention to the potential effects of structural reforms in the goods and labour markets. As a result, our understanding –both at the theoretical, empirical and policy levels– of the transmissions of structural reforms to the economy has improved considerably. Structural reforms are broadly speaking all measures that change institutional frameworks, their regulation and government policy (i.e. the “regulatory framework”) and thereby contribute to improving economic performance, productivity, labour utilisation, innovation, advancing (regional) economic integration and resilience to shocks.

Structural reforms may do so by fostering more open, well-functioning, transparent and competitive markets for goods and services, more efficient and flexible labour markets that generate opportunities and foster education, better functioning and effectively regulated financial markets, sustained small and medium-sized enterprises development, enhanced opportunities for vulnerable

populations, while safeguarding effective social safety net programs. Structural reforms thus potentially are important factors in promoting economic growth and alleviating poverty, in promoting the openness of the economy, in improving transparency and efficiency in resource allocation, in improving scope for private sector development and in strengthening institutions and capacity for policy analysis, is essentially the theoretical reasoning (see e.g. IMF (2004), EU Commission (2005), OECD (2006) and Joskow (2010) on this growth-structural reforms nexus).

When analysing structural reforms, complexity arises both from the essentially qualitative character of structural reforms –making it very difficult to quantify e.g. reform intensity- and from the complexity of the transmission process of structural reforms. Simple questions like how much reform activity is undertaken and what are the effects of structural reforms, are therefore very hard to answer actually.

At the conceptual level, it seems useful to distinguish between the direct transmission of structural reforms in the form of their effects on (potential) output (growth) and on (structural) unemployment from indirect effects on the broader economy, e.g. the effects of structural reforms on inflation, public finances and financial markets. By reducing inefficiencies in the goods and labour markets –market inefficiencies and market failures in other words- and regulatory inefficiencies –bureaucracy and other forms of government failures-, structural reforms aim at bringing potential output and structural unemployment closer to their equilibrium values that would be attained in the absence of any distortion to perfect competition. It is important to realize that structural reforms in addition are likely to have a whole range of indirect transmissions that may occur from their impact on fiscal deficits, interest rates, inflation or the exchange rate, e.g.

Given the qualitative nature of structural reforms and the complexity of transmissions, it seems very difficult to attach concrete numbers to structural reform efforts and the likely effects of a structural reform (or reform proposal) on output, unemployment and other variables. However, this paper finds that if one is willing to consider some simplifications, it will be possible to obtain a more quantitative analysis of structural reforms and their effects (i.e. “transmissions”). This paper namely tries to gauge the effects of structural reforms on growth, (un)employment and fiscal balances using a panel dataset of the EU 27 countries during the period 2000-2010.

Relating to structural reforms and their implementation, another research question that is often receiving interest is: under which conditions structural reforms are more likely to be implemented? Political and economic constraints limit the implementation of structural reforms. Structural reforms are typically opposed by vested interests, resulting in a *status quo bias* where structural reforms are strongly opposed by key constituencies that would be strongly affected by structural reforms in labour or goods markets. Affected groups have strong incentives to mobilise lobbying and political pressure to oppose the structural reforms. The uneven distribution of benefits and costs reduce the political support for carrying out reforms even if they would be beneficial to society as a whole. A significant political-economy literature studies the determinants of structural reforms, i.e. the reform capacity, seeking to explain cross-country differences in the scope and speed of reforms. In a notable study Hoj et al. (2006) find for a set of 21 OECD countries that the most important determinants of reforms include economic crises, exposure to foreign competition, government's duration in office, budgetary conditions and spillovers across policy areas – in particular from the product to the labour market.

Section 2 analyses the most important facts on structural reforms in the European Union. Section 3 estimates the impacts of reforms on a few macro-economic and budgetary variables. In section 4 an attempt is made to estimate the most important determinants of reforms in the EU 27. Section 5 concludes the paper by summarising the main findings.

AN OVERVIEW ON STRUCTURAL REFORMS IN THE EU27, 2000-2010

In June 2010, the European Union's Heads of State and Government adopted the Europe 2020 Strategy. With this new economic strategy -that builds on its predecessor, the Lisbon Strategy³ for growth and jobs- the EU has launched an ambitious and comprehensive policy agenda for Europe to secure macro-economic stability, healthy public finances and sustainable and inclusive economic growth.

Such a comprehensive reform agenda is expected to generate significant gains in terms of additional growth and employment as well as help ensure longer-term sustainability of public finances. An essential part of this strategy is the introduction of an ambitious structural reform agenda with reforms with a medium- to long term horizon that focus on promoting the sustainability of public finances, enhancing potential growth and realising the 2020 objectives, i.e. ensuring that the EU becomes prosperous, green and fair. A number of concrete targets to be achieved by 2020 is well-known by now: (i) the employment target of 75 percent, (ii) the R&D and innovation/GDP target of 3 percent, (iii) targets of reducing greenhouse gas emission by 20 percent, increasing energy from renewables and energy efficiency by 20 percent, (iv) reducing school drop-out rates below 10% and (v) reducing the amount of people in or at risk of poverty and social exclusion by 20 million. The Europe 2020 Strategy seeks to incorporate lessons from past experiences and economic analysis which indicate that a well-designed, comprehensive and convincing policy agenda aimed at strengthening the supply side of the economy should be an essential part of the policy response to lead the EU out of the crisis.

In brief, Europe 2020 provides an important framework for economic and structural policies in the EU and is a comprehensive attempt to coordinate national reform processes by setting common policy targets and establishing an enhanced macro-structural surveillance. An important question in the context of the Europe 2020 Strategy is what we actually know about the effects of structural reforms on envisaged target variables such as growth, employment and fiscal balances in the EU 27 countries. As already noted in the introduction such simple questions about the size of reform efforts and the impact of reforms are actually difficult to answer. In this section we will therefore first survey the structural reforms that have been carried in the period 2000-2010 –the Lisbon Strategy period in essence-. In the next section we will use this information on structural reforms and try to estimate the effects of these reforms on a set of macroeconomic variables for the set of 27 EU countries.

i) Labour market reforms in the the EU

To analyse the structural reforms in the labour market we rely on the LABREF database that is maintained by the EU Commission. The LABREF database covers 8 broad policy fields which are

³ For a detailed assessment of the Lisbon Strategy, see EU Commission (2006).

subdivided into 36 areas of policy intervention defining as many labour market institutions and possible labour market reforms in the sense of changes in these labour market institutions. These categories are: (i) labour taxation (TAX) (employers' social security contributions, employees' social security contributions, income tax), (ii) unemployment and welfare related benefits (UNB) (net replacement rate, duration of unemployment benefits, coverage, entitlement), (iii) active labour market programmes (ALM) (public employment services, training, direct job creation and employment subsidies, other schemes), (iv) job protection (JPR) (permanent contracts, temporary contracts, hiring and firing), (v) pension systems (PEN) (early retirement, disability schemes, pensions), (vi) wage bargaining (BAR) (statutory minima, contractual flexible arrangements, government intervention in wage bargaining), (viii) working time (TIM) (participation friendly schemes, working time organisation over the life time), (viii) immigration and mobility (MOB) (border controls, selective immigration policies, measure to facilitate labour market integration of immigrants, housing, social security portability, degree recognition).

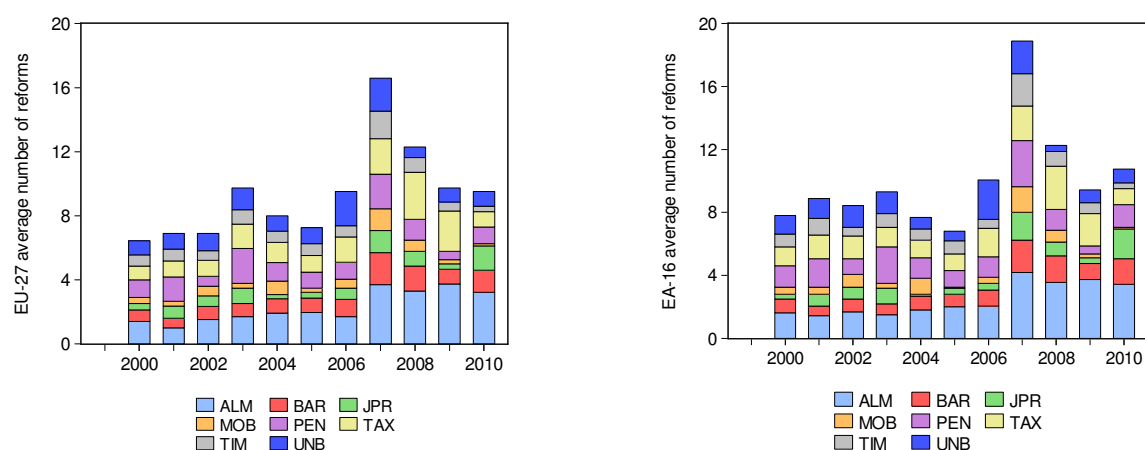
Reform count will be used as a proxy for structural reforms in the labour market. Clearly the number of reforms is a very coarse measure of reform efforts. In fact it may often lump together measures of rather limited importance and major reforms. Another problem would be that an initial reform that is later undone, is actually counted as two separate reforms. This approach is, however, inherent to the fact that the changes in the institutional and regulatory structural reforms are of a qualitative nature. Notwithstanding these limitations, this measure is providing already some more insights into structural reform designs and dynamics: their scope, speed, timing and cross-country variation can be assessed.

From the LABREF database the follow picture arises concerning the intensity of structural labour markets reforms in the euro area and EU27.

Figure 1

Number of labour market reforms in the European Union and Euro Area. 2000-2010.

Source: own calculations from the EU Commission LABREF database.



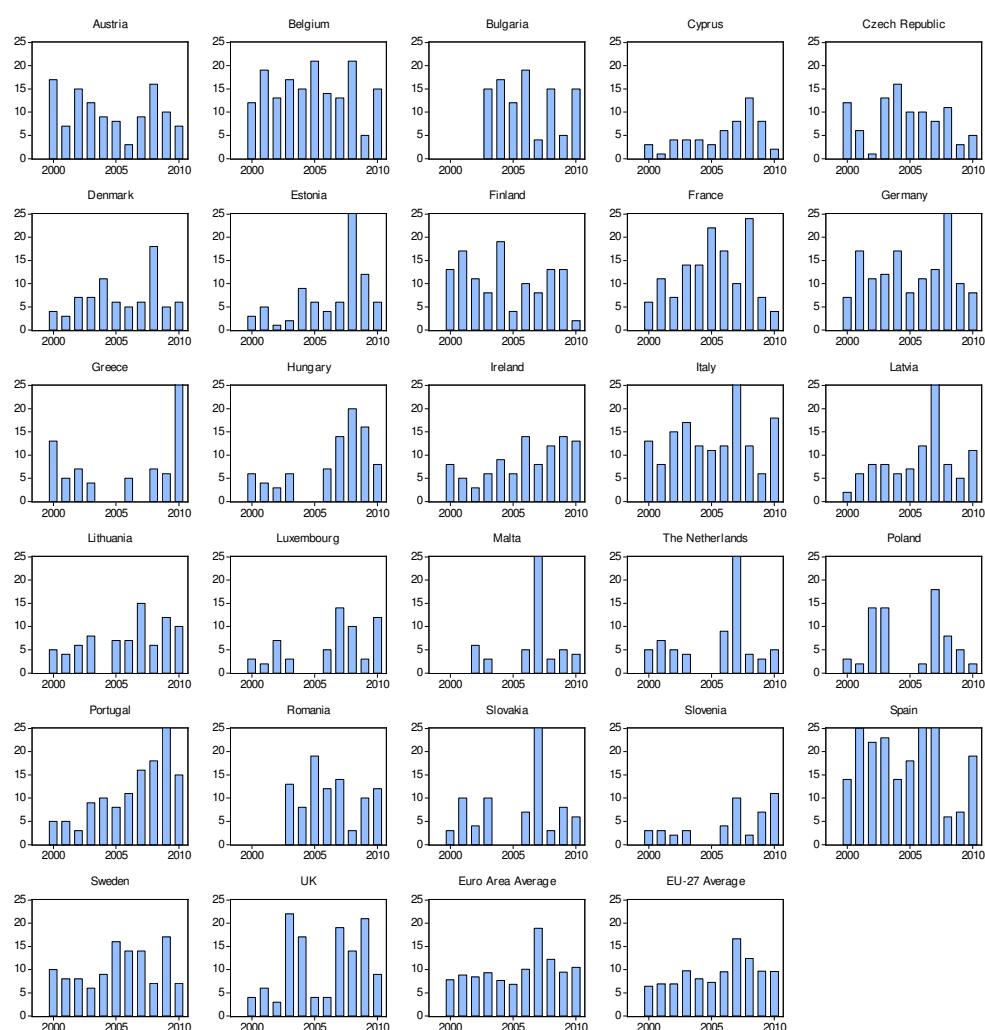
There is obviously considerable variation over time and between the different reform categories. All types of reform categories matter on average, reforms on active labour market policies

and taxation appear somewhat more frequent than other categories. The average number of reforms in both euro area and EU 27 during this period is around 9.5 per year, the minimum of around 7 is reached in 2005 and the maximum of around 17 in 2007.

Also between countries there is considerable variation in the intensity of labour market reform. Figure 2 shows per country the total amount of labour market reforms during the period 2000-2010:

Figure 2

Number of Structural Reforms in the labour market, EU-27 countries, 2000-2010: Total sum of reforms in the eight reform sub-categories (TAX, UNB, ALM, JPR, PEN, BAR, TIM, MOB). Source: own calculations from the EU Commission LABREF database.



Slovenia displays the lowest number of labor market reforms during this period (4.1 per year on average during this period), Spain the highest (19.8 per year on average during this period).

ii) Product market reforms in the EU

Broadly speaking, the aim of goods market reforms is to foster pro-competition forces in goods and services markets and to reduce economy-wide regulatory burdens in goods and services markets. Thus, by fostering efficiency of the allocation of production factors goods market reforms can have an effect on growth. Moreover, goods market reforms can thereby also have effects on other macroeconomic variables, e.g. employment, fiscal balances and inflation.⁴

Also in the area of product reforms it is possible to distinguish a number of categories of reforms: (i) streamlining registration and licensing procedures, (ii) facilitating start-ups, (iii) simplifying bankruptcy procedures, (iv) promoting competition for public contracts and cutting red tape, (v) strengthening competition in network industries (unbundling energy networks, improving third-party access and easing entry restrictions introducing or consolidating the power of the regulatory authority), (iv) reducing price controls and reduce other barriers to competition in retail trade, streamlining competition laws and policies, (v) introducing incentive-based regulation, (vi) reducing the scale and scope of public ownership, (vii) reducing barriers to foreign trade (including non-tariff barriers) and foreign direct investment. Similar to the case of labour market reforms it is difficult to quantify these essentially qualitative variables into a quantitative measure that measures the structural reforms in goods markets.

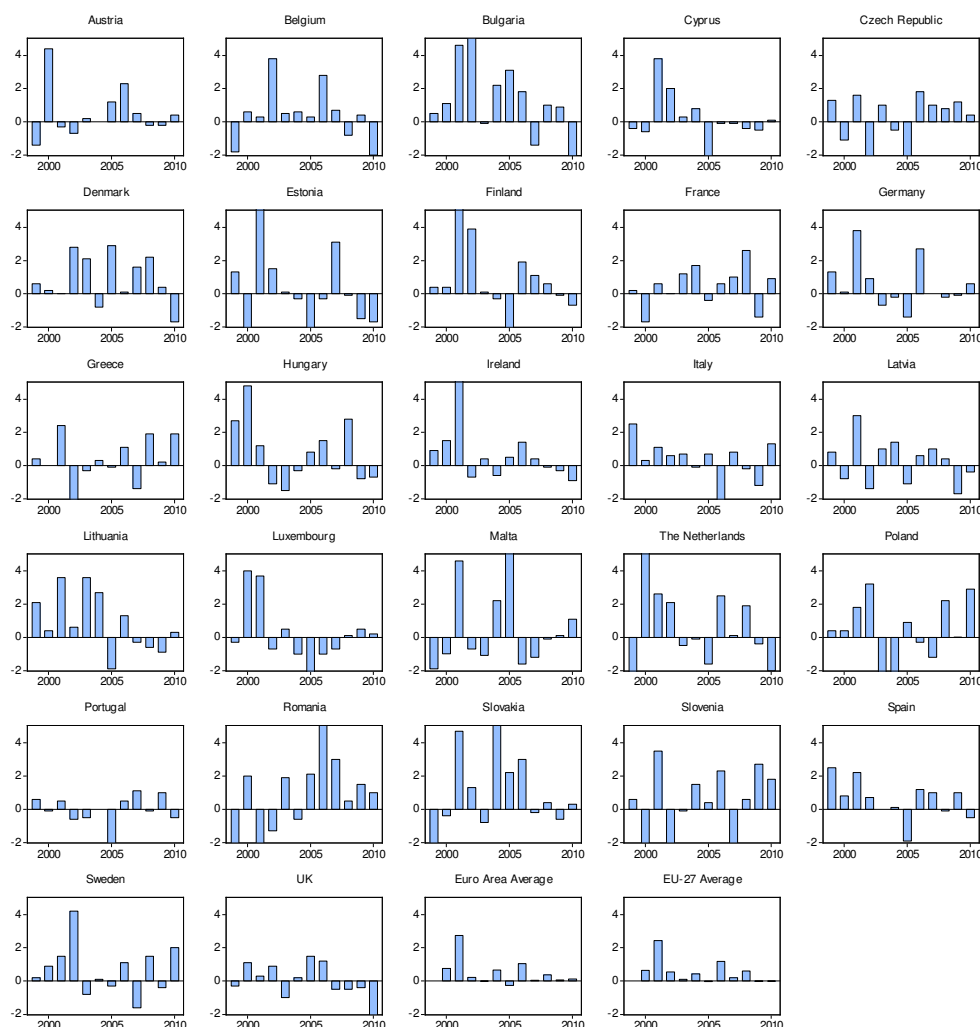
Goods market reforms in our analysis will be proxied by the change in the Economic Freedom of the World (EFW) Index that is provided by the Heritage Foundation on a yearly base. It measures ten components of economic freedom, assigning a grade in each using a scale from 0 to 100, where 100 represents the maximum freedom. The ten component scores are then averaged to give an overall economic freedom score for each country. The ten components of economic freedom are: Business Freedom, Trade Freedom, Fiscal Freedom, Government Spending, Monetary Freedom, Investment Freedom, Financial Freedom, Property rights, Freedom from Corruption, Labour Freedom. In the Index of Economic Freedom, these ten components of economic freedom are weighted equally in determining country scores. For a country considering economic reforms, those components on which it scores the lowest are likely to be the most important in terms of providing significant opportunities for improving economic performance. To estimate the intensity of goods market reform in each EU country, we take the annual change in the Index of Economic Freedom (available from <http://www.heritage.org/index/download>).⁵ A negative change would therefore amount to a reform reversal or lower amount of economic freedom.

⁴ Bassani and Duval (2006) e.g. find a positive effect of goods market reform and employment growth.

⁵ A comparable indicator is the OECD's OECD Indicator of Product Market Regulation (Woelfl et al. (2009)). This indicator is, however, not available for all EU-27 countries and for the years 1998, 2003 and 2008 only, for those reasons the EFW indicator was used. Also the Fraser Institute's Indicators of Economic Freedom (<http://www.freetheworld.com/>) provide a comparable set of indicators on product market regulation.

Figure 3

Goods market reforms in the EU27. Source: own calculations using the Economic Freedom of the World Index.



The average amount of goods market reform thus measured by the change in the EFW index in euro area and EU 27 during the period 2000-2010 is respectively 0.39 and 0.55 per year; least reform activity was seen in 2005 (-0.61 and -0.03, respectively), while 2001 witnesses the largest amount of goods market reform (1.95 and 2.43, respectively). As in the case of labour market reforms, considerable cross-country variation is seen: Portugal displays the lowest goods market reforms during this period (-0.05 per year on average during this period), Bulgaria the highest (1.38 per year on average during this period).

EFFECTS OF STRUCTURAL REFORMS IN THE EU: EVIDENCE FROM PANEL DATA

To provide more insights on the possible effects of structural reforms in the EU, panel regressions that link several macroeconomic performance measures to indicators of structural

reform as well as various controls, are carried out in this section. More specifically, panel regressions are run for the panel of 27 EU countries for the period 1990-2010: essentially the period of the Lisbon Strategy. Estimated are the effects of the structural reforms measures presented in the previous section on the following variables: (1) output growth, (2) productivity growth, (3) unemployment rate, (4) long-term unemployment rate, (5) employment, (6) employment of older workers, (7) primary fiscal balance, (8) fiscal balance, (9) inflation and (10) risk premium.

I. Estimation and Identification Strategy

We proceed our estimation in the following manner. We start by estimating the effects from structural reforms on the 10 macroeconomic variables using pooled OLS estimates of the EU-27 panel, provided in Table 1. As to be expected much variation in the macroeconomic variables can be explained by (i) the lagged dependent variable, reflecting persistence, and (ii) output growth -as a proxy for the business cycle- which is clearly as a driving adjustment in labour markets, public finance, inflation and the risk premium. Europe's financial and budgetary crisis is clearly reflected in the highly significant effects from the year dummies for 2009 and 2010.

It is seen that (with exception of the risk premium), labour market and goods market reform will have the same directional effect. These structural reforms indicators have positive effects on growth, productivity, fiscal balance and inflation and a negative effect on unemployment. It is seen that the goods and labour market reform indicators, however, have in all cases only small effects. This could lead to the conclusion at first sight that reforms hardly have an effect. However, when taking into account that 9.5 labour reforms per year take place in EU countries on average and that the goods market reform indicator increased by 0.55 per year on average in the EU (during the sample period), the effects do become more meaningful. It would imply that the average labour market reform effort (during the sample period at least) contributes almost 0.3 percent to growth and the average goods market reform almost 0.1 percent. In similar vein, labour market reforms and goods market reforms contribute to a reduction in the unemployment rate with 0.15 and 0.01 percent, respectively, an increase in the employment rate by 0.16 and 0.03 percent, and an increase in the fiscal balance by 0.2 and 0.01 percent.

While the pooled estimations of Table 1 enable to draw a broad picture on the effects of structural reforms on the broader economy, they suffer from one drawback: idiosyncratic heterogeneity remains unaccounted for. To account also for idiosyncratic cross-country heterogeneity in the estimations, we re-estimate in Table 2 the panel, including fixed or random country effects. The fixed c.q. random effects will pick up the cross-country variation that is not explained by the cross-country variation in endogenous variables and could in this way contribute to improve the explanatory power of the panel regressions. The inclusion of fixed or random effects is based on the Hausman correlated random effects test. Comparing Table 2 with Table 1 we see that the results of the fixed/random effects estimation confirm our results and conclusions obtained with the pooled OLS estimation in Table 1.

Table 1 Effects of structural reforms on macroeconomic variables, pooled OLS estimation, panel of EU-27 countries, 2000-2010

Dependent variable	(1) Output growth ^a	(2) Productivity growth ^b	(3) Unemployment rate ^c	(4) Long term unemployment rate ^d	(5) Employment ^e	(6) Employment older workers ^f	(7) Primary fiscal balances ^g	(8) Fiscal balance ^h	(9) Inflation ⁱ	(10) Risk premium ^j
Constant	1.73*** (0.51)	0.39 (0.26)	1.07*** (0.21)	2.60** (1.02)	-0.55 (0.63)	0.73* (0.44)	-0.62** (0.29)	-0.93*** (0.32)	1.63** (0.65)	2.21*** (0.58)
Lagged dep. variable	0.72*** (0.04)	0.02 (0.05)	0.99*** (0.02)	0.96*** (0.02)	0.99*** (0.01)	0.98*** (0.01)	0.87*** (0.04)	0.88*** (0.04)	0.24*** (0.06)	0.21*** (0.06)
Output growth		0.63*** (0.04)	-0.28*** (0.03)	-0.13 (0.11)	0.22*** (0.02)	0.17*** (0.04)	0.13*** (0.04)	0.16*** (0.05)	0.34*** (0.09)	-0.13 (0.09)
Labour Market Reforms	0.03** (0.02)	0.01 (0.01)	-0.02** (0.01)	-0.08** (0.04)	0.02** (0.01)	0.01 (0.84)	0.02 (0.02)	0.02 (0.02)	0.01 (0.03)	-0.05* (0.03)
Goods Market Reforms	0.01 (0.09)	0.01 (0.05)	-0.01 (0.04)	-0.21 (0.15)	0.05* (0.03)	0.12** (0.05)	-0.01 (0.06)	0.01 (0.07)	0.16 (0.14)	0.14 (0.13)
Euro Area	0.03 (0.29)	-0.99*** (0.06)	-0.26* (0.14)	-0.31 (0.57)	0.45*** (0.12)	0.41** (0.20)	-0.16 (0.26)	-0.23 (0.25)	-0.59 (0.52)	-1.19** (0.49)
D2009	- (0.52)	0.57 (0.46)	0.31 (0.31)	-5.40*** (1.34)	-0.29 (0.28)	0.55 (0.46)	-3.27*** (0.58)	-2.93*** (0.58)	-1.76 (1.16)	2.33*** (0.83)
D2010	5.47*** (0.62)	2.23*** (0.41)	0.96*** (0.23)	8.12*** (0.98)	-0.84*** (0.20)	-0.89*** (0.34)	0.01 (0.47)	0.04 (0.46)	1.01 (0.87)	2.61** (1.13)
Adjusted R2	0.54	0.72	0.92	0.89	0.98	0.98	0.73	0.74	0.22	0.11
S.E. regression	2.60	1.58	1.09	4.65	0.98	1.62	2.01	2.02	3.99	3.95
Log likelihood	-695.00	-500.33	-436.82	-864.74	-407.33	-555.29	-615.83	-625.02	-752.66	-822.74
Durbin Watson	1.98	1.31	1.25	1.48	1.41	1.60	1.70	1.66	2.00	1.98
Mean dep. variable	2.63	1.66	8.17	39.93	64.04	42.62	-0.08	-2.51	3.03	1.15
No. Obs.	294	269	293	294	294	294	293	296	270	296

Notes: ***: significant at a 1% level. **: significant at a 5% level. *: significant at the 10% level.

^a Gross domestic product at market prices, volume, annual percentage change. Source Eurostat.

^b Labour productivity per hour worked - GDP in PPS per hour worked. Source Eurostat.

^c Total unemployment rate, % of civilian working age population, annual average. Source Eurostat.

^d Long-term unemployment in % of total unemployment. Source Eurostat.

^e Employment rate (15 to 64 years). Source: Eurostat.

^f Employment rate (55 to 64 years). Source Eurostat.

^g General government, Net borrowing excluding interest. Percentage of GDP. Source: Eurostat.

^h General government, Net borrowing. Percentage of GDP. Source: Eurostat

ⁱ GDP deflator, Annual percentage change. Source: Eurostat. ^j Government bond yields 10 years' maturity, annual average, differential vis-à-vis Germany. Source: Eurostat.

Table 2 Effects of structural reforms on macroeconomic variables, panel of EU-27 countries, fixed/random effects OLS, 2000-2010.

Dependent variable	(1) Output growth ^a	(2) Productivity growth ^b	(3) Unemployment rate ^c	(4) Long term unemployment rate ^d	(5) Employment ^e	(6) Employment older workers ^f	(7) Primary fiscal balance ^g	(8) Fiscal balance ^h	(9) Inflation ⁱ	(10) Risk premium ^j
Constant	1.56*** (0.48)	0.75* (0.33)	1.63*** (0.34)	15.14*** (2.24)	1.48 (1.95)	0.86 (0.53)	-0.77* (0.42)	-1.53*** (0.47)	1.88** (0.90)	2.24*** (0.80)
Lagged dep. variable	0.36*** (0.06)	-0.14*** (0.05)	0.95*** (0.03)	0.66*** (0.05)	0.97*** (0.03)	0.98*** (0.01)	0.70*** (0.04)	0.72*** (0.06)	0.11* (0.06)	0.08 (0.06)
Output growth		0.63*** (0.04)	-0.33*** (0.03)	0.10 (0.12)	0.25*** (0.02)	0.18*** (0.04)	0.21*** (0.05)	0.24*** (0.05)	0.24** (0.09)	-0.28*** (0.09)
Labour Market Reforms	0.03* (0.02)	0.02* (0.01)	-0.02** (0.01)	-0.09** (0.04)	0.02** (0.01)	0.01 (0.01)	0.03* (0.02)	0.03* (0.02)	0.01 (0.04)	-0.05* (0.03)
Goods Market Reforms	0.03 (0.08)	0.04 (0.05)	-0.003 (0.04)	-0.14 (0.15)	0.05* (0.03)	0.11** (0.05)	0.02 (0.07)	0.03 (0.07)	0.16 (0.14)	0.14 (0.13)
Euro Area	-0.05 (0.84)	-0.62 (0.54)	-0.16 (0.36)	-2.60* (1.55)	0.18 (0.33)	0.38 (0.25)	-0.24 (0.73)	-0.28 (0.70)	-0.72 (1.48)	0.49 (1.33)
D2009	- (0.53)	0.11 (0.46)	-0.20 (0.32)	-4.71*** (1.38)	0.12 (0.33)	0.64 (0.46)	-2.64*** (0.60)	-2.28*** (0.60)	-2.79** (1.15)	4.31*** (1.19)
D2010	1.45* (0.78)	1.29*** (0.42)	0.91*** (0.23)	5.75*** (1.06)	-0.72*** (0.21)	-0.86** (0.33)	-0.73 (0.53)	-0.60 (0.52)	-0.03 (0.94)	1.55* (0.84)
Adjusted R2	0.60	0.76	0.93	0.90	0.98	0.97	0.74	0.76	0.22	0.14
S.E. regression	2.41	1.47	1.03	4.48	0.98	1.57	1.95	1.98	4.00	3.88
Log likelihood	-658.78	-467.01	-407.55	-839.84	-384.91		-594.16	-603.52	-739.26	-803.19
Durbin Watson	1.98	1.41	1.56	1.32	1.64	1.72	1.70	1.67	1.97	2.00
Mean dep. variable	2.63	1.66	8.17	39.93	64.04	42.62	-0.08	-2.51	3.03	1.15
Hausman test	Fixed	Fixed	Fixed	Fixed	Fixed	Random	Fixed	Fixed	Fixed	Fixed
No. Obs.	294	269	293	294	294	294	293	296	270	296

Notes: ***: significant at a 1% level. **: significant at a 5% level. *: significant at the 10% level.

^a Gross domestic product at market prices, volume, annual percentage change. Source Eurostat.

^b Labour productivity per hour worked - GDP in PPS per hour worked. Source Eurostat.

^c Total unemployment rate, % of civilian working age population, annual average. Source Eurostat.

^d Long-term unemployment in % of total unemployment. Source Eurostat.

^e Employment rate (15 to 64 years). Source: Eurostat.

^f Employment rate (55 to 64 years). Source Eurostat.

^g General government, Net borrowing excluding interest. Percentage of GDP. Source: Eurostat.

^h General government, Net borrowing. Percentage of GDP. Source: Eurostat

ⁱ GDP deflator, Annual percentage change. Source: Eurostat. ^j Government bond yields 10 years' maturity, annual average, differential vis-à-vis Germany. Source: Eurostat.

Table 3 Effects of structural reforms on macroeconomic variables, panel of EU-27 countries, fixed/random effects OLS, 2000-2010.

Dependent variable	(1) Output growth ^a	(2) Productivity growth ^b	(3) Unemployment rate ^c	(4) Long term unemployment rate ^d	(5) Employment ^e	(6) Employment older workers ^f	(7) Primary fiscal balance ^g	(8) Fiscal balance ^h	(9) Inflation ⁱ	(10) Risk premium ^j
Constant	1.51*** (0.48)	0.76** (0.33)	1.07*** (0.21)	15.29*** (2.28)	1.65 (2.00)	0.85 (0.60)	-0.81* (0.42)	-1.00*** (0.33)	1.99** (0.88)	2.28*** (0.80)
Lagged dep. variable	0.35*** (0.06)	-0.15*** (0.05)	0.99*** (0.02)	0.66*** (0.05)	0.96*** (0.03)	0.98*** (0.01)	0.69*** (0.06)	0.88*** (0.04)	0.09 (0.06)	0.08 (0.06)
Output growth		0.63*** (0.04)	-0.29*** (0.02)	0.12 (0.12)	0.25*** (0.02)	0.19*** (0.04)	0.22*** (0.05)	0.17*** (0.05)	0.20** (0.10)	-0.30*** (0.10)
Active LM policy (ALM)	-0.02 (0.08)	0.08* (0.05)	-0.01 (0.03)	0.07 (0.14)	-0.02 (0.03)	-0.04 (0.05)	-0.08 (0.06)	-0.05 (0.06)	-0.07 (0.13)	-0.07 (0.12)
Bargaining (BAR)	0.11 (0.14)	0.06 (0.09)	-0.02 (0.06)	-0.37 (0.27)	-0.01 (0.06)	0.01 (0.09)	-0.03 (0.12)	-0.05 (0.11)	0.75*** (0.24)	0.15 (0.23)
Job Protection (JPR)	-0.27** (0.12)	-0.01 (0.07)	-0.02 (0.05)	-0.11 (0.22)	0.03 (0.05)	0.02 (0.08)	0.21** (0.10)	0.18* (0.09)	-0.13 (0.20)	0.01 (0.19)
Mobility (MOB)	0.05 (0.20)	-0.27** (0.12)	-0.09 (0.08)	-0.49 (0.36)	0.11 (0.08)	-0.02 (0.13)	0.12 (0.16)	0.14 (0.15)	0.36 (0.33)	0.37 (0.31)
Pension (PEN)	-0.10 (0.10)	-0.04 (0.06)	-0.04 (0.04)	-0.02 (0.18)	0.04 (0.04)	0.04 (0.06)	-0.02 (0.08)	-0.02 (0.07)	-0.20 (0.16)	-0.07 (0.15)
Taxation (TAX)	0.16* (0.09)	0.10* (0.06)	0.01 (0.04)	-0.14 (0.17)	0.02 (0.04)	0.04 (0.06)	0.11 (0.07)	0.03 (0.07)	-0.09 (0.16)	-0.26* (0.15)
Time (TIM)	0.28* (0.16)	-0.03 (0.10)	-0.06 (0.07)	0.16 (0.31)	0.03 (0.06)	-0.02 (0.11)	-0.01 (0.14)	0.06 (0.13)	-0.35 (0.28)	-0.20 (0.27)
Unemployment Benefit (UNB)	0.02 (0.10)	0.07 (0.06)	0.02 (0.04)	-0.22 (0.20)	0.03 (0.04)	0.08 (0.07)	0.06 (0.08)	0.06 (0.08)	0.18 (0.18)	0.01 (0.17)
Goods Market Reforms	0.02 (0.08)	-0.03 (0.05)	-0.01 (0.04)	-0.13 (0.15)	0.05* (0.03)	0.10* (0.05)	0.02 (0.08)	0.01 (0.07)	0.17 (0.14)	0.14 (0.13)
Euro Area	-0.05 (0.85)	-0.47 (0.55)	-0.25* (0.14)	-2.27 (1.58)	0.17 (0.33)	0.37 (0.28)	-0.18 (0.74)	-0.18 (0.27)	-0.34 (1.47)	0.34 (1.35)
D2009	-8.24*** (0.57)	-0.11*** (0.48)	0.18 (0.31)	-4.95*** (1.44)	0.24 (0.31)	0.77 (0.48)	-2.41*** (0.62)	-2.66*** (0.59)	-2.94** (1.28)	3.99*** (1.24)
D2010	1.69** (0.81)	0.90** (0.45)	0.91*** (0.23)	5.50*** (1.14)	-0.62*** (0.22)	-0.78** (0.36)	-0.72 (0.55)	0.08 (0.47)	-0.24 (0.99)	1.48* (0.91)
Adjusted R2	0.61	0.76	0.91	0.90	0.98	0.96	0.74	0.73	0.24	0.14
S.E. regression	2.40	1.46	1.09	4.51	0.96	1.56	1.95	2.01	3.94	3.89
Log likelihood	-653.17	-461.08	-418.31	-837.67	-383.21		-589.99	-	-731.21	-800.14
Durbin Watson	1.94	1.48	1.28	1.36	1.66	1.77	1.74	1.71	1.99	1.99
Mean dep. var.	2.63	1.66	8.17	39.93	64.04	42.62	-0.08	-2.51	3.03	1.15
Hausman test	Fixed	Fixed	Random	Fixed	Fixed	Random	Fixed	Random	Fixed	Fixed
No. Obs.	294	269	293	294	294	294	293	296	270	296

Notes: ***: significant at a 1% level. **: significant at a 5% level. *: significant at the 10% level.

^a Gross domestic product at market prices, volume, annual percentage change. Source Eurostat. ^b Labour productivity per hour worked - GDP in PPS per hour worked. Source Eurostat.

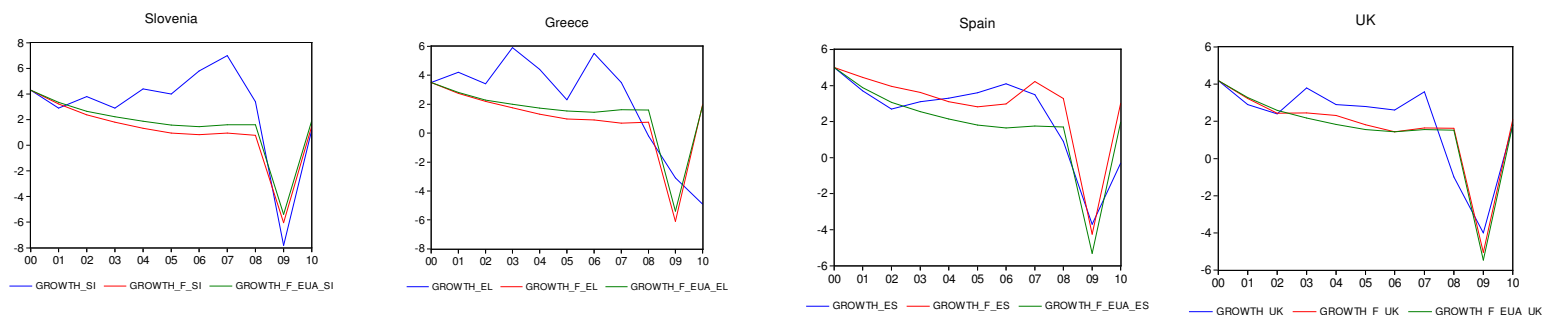
^c Total unemployment rate, % of civilian working age population, annual average. Source Eurostat. ^d Long-term unemployment in % of total unemployment. Source Eurostat.

^e Employment rate (15 to 64 years). Source: Eurostat. ^f Employment rate (55 to 64 years). Source Eurostat.

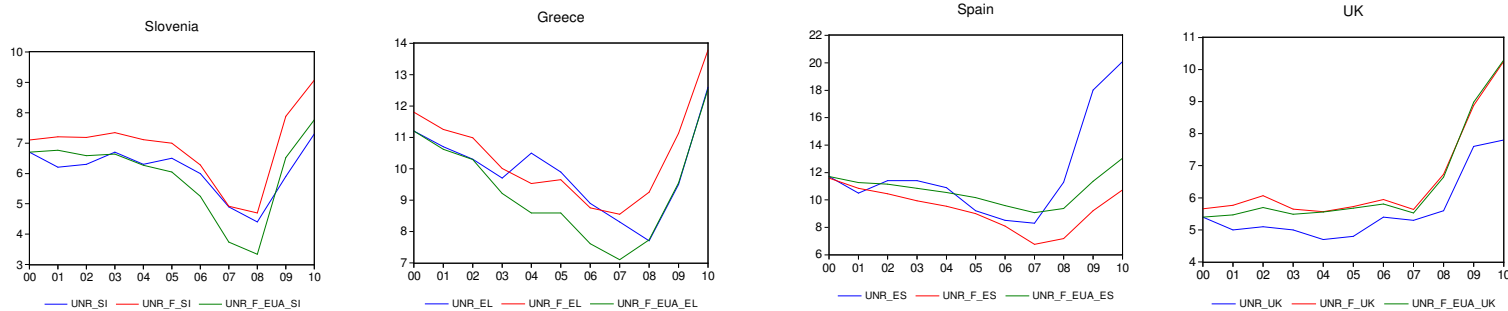
^g General government, Net borrowing excluding interest. Percentage of GDP. Source: Eurostat. ^h General government, Net borrowing. Percentage of GDP. Source: Eurostat.

ⁱ GDP deflator, Annual percentage change. Source: Eurostat. ^j Government bond yields 10 years' maturity, annual average, differential vis-à-vis Germany. Source: Eurostat.

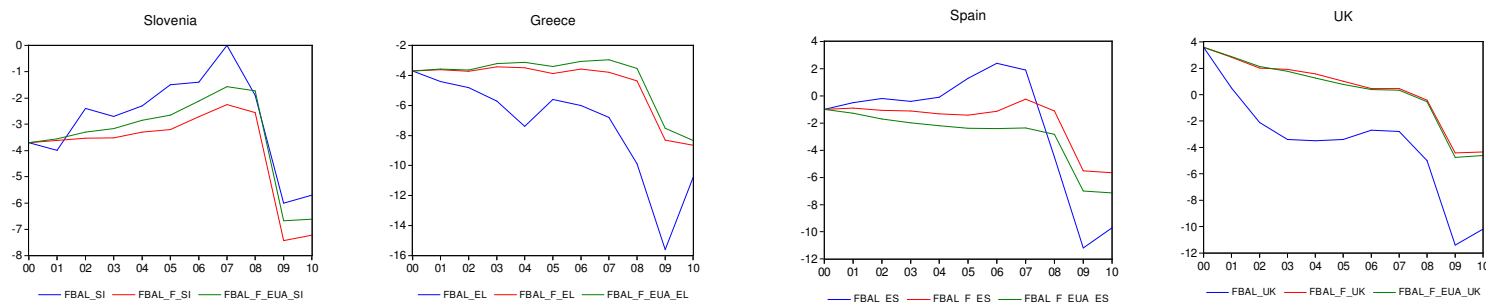
Figure 1 Comparison of predicted effects of actual reform strategy (red lines) with effects of a reform strategy that follows the EU27 average (green lines) and actual growth, unemployment rate and fiscal balance (blue lines).



(a) Real GDP growth



(b) Unemployment rate



(c) Fiscal balance (% GDP)

In a final step, we replace the overall labour market reforms indicator by the eight underlying types of labour market reforms attempting to find evidence whether or not one or more categories of labour market reforms are more important than other categories. In Table 3 the fixed/random effects estimation results for this case with the overall labour reforms indicator decomposed in the 8 underlying reform categories, is presented. A wide variety of effects is seen which can not be described all in detail. Effects are again typically of small size and struggle to reach statistical significance. An important reason is of course that in many panel observations the number of say reforms in unemployment benefits in country x in year y is zero or small. The effects of the goods market reforms and the other explanatory variables are again similar to the picture that resulted from Table 1 and 2.

The main insight from the estimation results appears to be that structural reforms –at least as to the extent proxied by our indicators- have mainly small effects on the macroeconomic indicators: the “reform multipliers” of each reform are likely to be small. The impact of different structural policies on various variables can be gauged using simulated “reform multipliers”. The multipliers report measure the effects of unit changes in different structural reforms items. The multipliers can be simulated over a ten-year period and at steady state to shed light on the time horizon required for different reforms to come to fruition. Given that typically various number and types of reforms are taking place at each datapoint, the overall impact of reform processes is certainly non-negligible.

From the estimation results alone however it is difficult to gauge how the various reform strategies that EU27 countries implemented in our sample period of the Lisbon Strategy really affected their economy. It seems interesting to conduct a thought experiment to obtain a more concrete idea about the reforms and their impact. In particular, we could ask ourselves the following question: what if country x would not have implemented its reform package as indicated by the reform measures we calculated but instead would have implemented the reform path of the EU27 on average, so speeding up the reform pace for countries with low reform effort and reducing the reform pace of fast reformers (and keeping the same reform intensity for countries basically for countries close to the average).

Figure 1 displays the effects of changing the reform path to the EU27 average in case of two slow reformers, Slovenia and Greece, and a country with fast reforms, Spain and a country close to the EU27 average, the UK. It is seen that that the Slovenian and Greek economy would have benefited in terms of higher growth, higher fiscal balances and in particular lower unemployment, if the reform efforts had been matching the European average over the same period. In a similar vein, the Spanish economy would have grown less, fiscal balances would have been lower and unemployment rate higher with a reform intensity at the European average. In the case of the UK that had a reform path that has been close to the European average, the effects are of course small compared to the other three countries.

Evaluation of the Lisbon Strategy

It is also interesting to interpret our results in the context of an overall evaluation of the Lisbon Strategy. In the original formulation by the EU Commission the Lisbon Strategy’s aim was to make the EU “the most competitive and dynamic knowledge-based economy in the world capable of sustainable economic growth with more and better jobs and greater social cohesion”, by 2010. To do so a number of headline targets of the Lisbon Strategy were formulated with a 2010 deadline: 70% total employment and a 3% GDP spend on R&D. The principal objective of the Lisbon strategy was to improve the pace and quality of reforms at national and European level: if Member States’ reforms had the desired effect, average GDP growth across the EU should be around 3%.

It has been acknowledged that the Lisbon Strategy has not delivered when looking at the key numbers only, even if one excludes the years 2009 and 2010 when Europe was hit by the severe effects from the financial and economic crisis.

CONCLUSIONS

This paper estimates for the panel of EU27 countries, the effects of labour and goods market reforms on a broad set of macroeconomic variables, including growth, (un)employment, fiscal balances, inflation and risk premia. We find evidence that labour and goods market reforms have small but significant effects on most indicators. An import policy implication is that policymakers need to be aware that structural reforms agenda's like the Europe 2020 require a careful structure and timing of their implementation.

But implementing growth-oriented labour market and goods market reforms may not be easy. This paper identifies the potential effects of reform strategies and allows policy makers to gauge the effects of reform strategies on different policy objectives. It stresses that with clear vision, strong leadership and solid policy analysis, output and employment growth-oriented reform can be realised.

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THE USE OF DIVISIA MONETARY AGGREGATES IN NOMINAL GDP TARGETING

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ABSTRACT

One of the hottest topics in monetary policy research has been the revival of the proposal for “nominal GDP targeting.” Recent research has emphasized the potential importance of the Divisia monetary aggregates in implementing that policy. We investigate bivariate time series properties of Divisia money and nominal GDP to investigate the viability of recent proposals by authors who advocate a role for a Divisia monetary aggregate in nominal GDP targeting. There are two particularly relevant proposals: (1) the proposal by Barnett, Chauvet, and Leiva-Leon (2015) to use a Divisia monetary aggregate as an indicator in the monthly Nowcasting of nominal GDP, as needed in implementation of any nominal GDP targeting policy; and (2) the proposal by Belongia and Ireland (2015) to use a Divisia monetary aggregate as an intermediate target, with nominal GDP being the final target of policy. We run well known diagnostic tests of bivariate time series properties of the Divisia M2 and nominal GDP stochastic processes. Those tests are for properties that are necessary, but not sufficient, for the conclusions of Belongia and Ireland (2014) and Barnett, Chauvet, and Leiva-Leon (2015). We find no time series properties that would contradict those implied by either of those two approaches.

Keywords: money, aggregation theory, index number theory, Divisia index, Divisia monetary aggregates, nominal GDP targeting.

JEL classification codes: C43, E01, E3, E40, E41, E51, E52,

INTRODUCTION

The recent financial crisis has induced central banks to explore and undertake unconventional approaches to monetary policy. One of the hottest topics in monetary policy research has been the revival of the proposal for “nominal GDP targeting”, advocated by many leading monetary economists, including Michael Woodford, Christina Romer, and Paul Krugman. Proponents argue that nominal GDP targeting can stabilize the macroeconomy more effectively than inflation targeting. In particular, they argue that by committing to return nominal GDP to its pre-crisis trajectory, the Federal Reserve could improve confidence and expectations of future growth.

We take no position on whether nominal GDP should be adopted as the new monetary policy target, but we investigate the bivariate time series properties of Divisia money and nominal GDP that are relevant to recent results by authors who do advocate a role for a Divisia monetary aggregate in nominal GDP targeting. There are two such proposals. (1) The least controversial is the approach of

Barnett, Chauvet, and Leiva-Leon (2015) to the use of Divisia money in Nowcasting of nominal GDP. Any approach to targeting nominal GDP requires availability of monthly measurements of nominal GDP. Monthly measurements of nominal GDP are needed regardless of the instrument of policy adopted to implement the targeting. But nominal GDP data are available only quarterly. Using an advanced dynamic factor analysis approach to Nowcasting, Barnett, Chauvet, and Leiva-Leon (2015) find that the most accurate available approach to Nowcasting nominal GDP would use a Divisia monetary aggregate as one of the relevant and highly significant associated variables, with the others being measures of real economic activity and inflation dynamics. While Nowcasting does not imply unidirectional causation, Nowcasting approaches do require existence of strong bivariate time series associations among the interpolated variable and the associated variables. (2) The more controversial approach, suggesting a monetarist perspective, advocates the use of a Divisia monetary aggregate as an intermediate target in the procedure for targeting nominal GDP. Such an approach has been advocated by Belongia and Ireland (2015), while a new Keynesian approach has been proposed by the same authors in Belongia and Ireland (2014).

Early suggestions of the possible use of monetary aggregates in nominal GDP targeting include Feldstein and Stock (1993), who showed that the relation between M2 and nominal GDP is sufficiently strong to warrant further investigation into using M2 to influence nominal GDP, as would be relevant to the second approach described above. Since recent research has found Divisia monetary aggregates to be substantially superior to simple sum aggregates, we concentrate in this paper on Divisia M2. See, e.g., Barnett (2012, 2015) and Barnett and Chauvet (2011) regarding the superiority of Divisia monetary aggregates over the now largely discredited simple sum monetary aggregates. But since our results are relevant to Nowcasting nominal GDP as well as intermediate targeting, our results are relevant even to proposals in which money is not used to influence nominal GDP, but only to interpolate the quarterly GDP data. In that case, our results need not be interpreted as having implications for the choice of instrument or intermediate targets in the policy rule.

Setting up a VAR model to indicate such relationship, we focus on $d(\ln NGDP)$ and $d(\ln M2)$, which are the growth rates of nominal GDP and Divisia M2. The estimated model indicates that there is a bidirectional Granger Causality relation between the two. We can make predictions based on our estimated model and can investigate how growth rate of Divisia money supply is going to impact nominal GDP and vice versa. The primary objective of this research is to run well known diagnostic tests of bivariate time series properties of the Divisia M2 and nominal GDP stochastic processes. Those tests are for properties that are necessary, but not sufficient, for the conclusions of Belongia and Ireland (2014) and Barnett, Chauvet, and Leiva-Leon (2015).

LITERATURE REVIEW

A nominal GDP target was previously called a “nominal income target” by early supporters such as McCallum (2011,2013). This approach is often contrasted with inflation targeting. Under some proposals on nominal GDP targeting, the central bank would try to keep nominal GDP growing at a predetermined rate. A nominal GDP *level* target is similar, except that the central bank would recall any previous deviations of nominal GDP growth from target and seek to compensate in later years. Apart from Bennett McCallum, who advocates nominal GDP growth rate targeting, most of the current supporters of nominal GDP targeting favor nominal GDP level targeting, such as Woodford (2013), Belongia and Ireland (2015), and Sumner (2012).

Christina Romer (2011), then chair of the Council of Economic Advisers, has urged adopting nominal GDP targeting as the monetary policy rule. In Romer’s view, such a policy would be a powerful communication tool. By pledging to do whatever it takes to return nominal GDP to its pre-crisis trajectory, the Fed could improve confidence and expectations of future growth. Because

nominal GDP reflects the Fed's dual mandate, stable price level and maximum real output, Romer argues that nominal GDP targeting would have a better chance of reducing unemployment than any other monetary policy approach under discussion.

Woodford (2013) argues that long run inflation targeting does not need to be repudiated as a policy framework, but rather needs to be completed. He argues that the target path for nominal GDP could be chosen such that keeping nominal GDP on that path should ensure, over the medium run, an average inflation rate equal to the inflation target. In his view, nominal GDP targeting can complete inflation targeting without conflicting with it. He further maintains that nominal GDP targeting would reduce the tension between the goals of restraining risks to financial stability, on the one hand, and maintaining macroeconomic stability, on the other⁶.

Sumner (2012), a persistent advocator of nominal GDP targeting and relentless blogger of "The Money Illusion," argues that the recent financial crisis exposed serious flaws with inflation targeting monetary policy regimes. In his view, GDP targeting would have greatly reduced the severity of the recession and also eliminated the need for fiscal stimulus. He also argues that nominal GDP targeting would make it easier for politicians to resist calls for bailouts of private sector firms, while assuring low inflation and reducing the severity of the business cycle. He also argues that nominal GDP targeting would make asset price bubbles less likely to occur. In summary, advocates of nominal GDP targeting believe it would provide the best environment for free-market policies to flourish.

On September 12, 2012, the Federal Reserve undertook policy initiatives influenced by Woodford (2003, 2005, 2012): an open-ended quantitative easing program, in which the amount of purchases depends on progress toward the policy goals. The Federal Reserve also announced it would maintain an easy money policy for some period after the economy has recovered. That announcement can be interpreted as an incremental move toward nominal GDP level targeting.

Nominal GDP targeting defines the final target of policy, but not the instrument, intermediate target, or rule used to implement the final target commitment. Many proposed approaches exist, including those that implement the final target for a new-Keynesian approach, a post-Keynesian approach, a monetarist approach, a classical approach, a new-classical approach, or an Austrian School approach. McCallum (1987) proposes a monetarist rule that uses the monetary base as instrument to target nominal GDP. He advocates targeting the growth rate of nominal GDP, rather than the level. His view is that if growth rates are on average equal to the target value over time, the policy would be unlikely to permit much departure from the planned path and should therefore be preferred. His rule employs a four-year moving average of past growth in monetary base velocity to forecast that velocity's growth in the coming quarter. Based on that forecast, the rule specifies the percentage of the gap between the targeted and actual levels of nominal GDP that the central bank should plan to close in the coming quarter.

In simulations, Dueker (1993) confronts McCallum's nominal GDP targeting rule with a world in which coefficients in the velocity equation for the monetary instrument are subject to unpredictable stochastic change. His approach differs from McCallum's by using explanatory variables to help forecast velocity in a time-varying parameter model. By allowing for time-varying coefficients, Dueker's forecasting model is argued to be more stable over time than fixed-coefficient models. Dueker concludes that McCallum's approach to nominal GDP targeting is simple yet robust to velocity behavior. However, Dueker's forecast-based rule performed somewhat better in simulations in which velocity was generated from a time-varying parameter model.

Recent contributors to the literature on nominal GDP targeting also incorporate aggregation theoretic monetary aggregates. Belongia and Ireland (2015) derive an approach to targeting the level of nominal GDP using a framework first outlined by Working (1923) and used, with minor modifications, by Hallman, et al. (1991) in their P-Star model. Belongia and Ireland's framework is

⁶ Regarding inflation targeting, see, e.g., Bernanke and Mishkin (1997) and Svensson (1998).

built on traditional quantity theoretic foundations and draws directly from Barnett's (1978, 1980) economic approach to monetary aggregation. With any desired long-run trajectory for nominal GDP, the framework can find a consistent intermediate target path for Divisia money. The central bank can use the monetary base to control the intermediate target path for either a narrow or broad Divisia monetary aggregate and thereby keep nominal GDP growing along any desired long-run path.

Their innovation lies in employing Divisia monetary aggregates to establish a path for the intermediate target and uses a one-sided filtering algorithm to control for slow-moving trends in velocity. The merits of this approach are its transparency to outside observers, its forward-looking design, and its potentially straightforward implementation.

Barnett, Chauvet, and Leiva-Leon (2015) developed dynamic factor models to Nowcast nominal output growth, using information from the previous release of nominal GDP, Industrial Production, Consumer Price Index, and Divisia M3. Their model is useful in giving monthly assessment of the current nominal GDP quarterly growth. This ability plays an essential role in monitoring the effectiveness of nominal GDP targeting monetary policy, regardless of the approach to implementation. In fact any approach that uses monthly feedback in its nominal GDP targeting approach becomes undefined, and thereby not applicable, without access to monthly GDP Nowcasts.

The Bivariate Time Series Relationship between Divisia M2 and Nominal GDP

As explained above, the use of Divisia monetary aggregates has been proposed in two different potential roles in nominal GDP targeting. One role is as an indicator variable in Nowcasting of monthly nominal GDP, as needed in any implementation of nominal GDP targeting. The other roles is direct use as an intermediate target in the policy design. Both cases imply the existence of a bivariate time series relationship between a Divisia monetary aggregate and nominal GDP. In this paper, we explore the nature of that relationship.

The Divisia monetary aggregate we use is Divisia M2, as provided by the Federal Reserve Bank of St. Louis in its FRED database. We use those data since they are well known and have a long history in this literature. But in future research, we plan to use the broader Divisia monetary aggregates, M3 and M4, supplied by the Center for Financial Stability in New York City⁷. The GDP data we use are supplied by the U.S. Bureau of Economic Analysis (BEA). Both series are seasonally adjusted. We eliminate heteroskedasticity by taking logarithms of the variables. We use $\ln NGDP$ and $\ln M2$ to denote the transformed data.

Unit Root Test

First we conduct a unit root test to examine stationarity of the series. If the series are non-stationary, regression could be spurious. We adopt the ADF (Augmented Dickey-Fuller) method for unit root test. The test results are displayed in the appendix as Table 1a.

The p values of both tests are greater than the 5% significance level, with 0.9951 for $\ln NGDP$ and 0.4876 for $\ln M2$ respectively. Hence, for each of the tests, we fail to reject the null hypothesis that the series has a unit root. Both $\ln NGDP$ and $d(\ln M2)$ series are non-stationary.

To test for causality relationship between nominal GDP and Divisia M2 money supply, we need the series to be stationary. For that purpose, we first difference the series to produce two first order differenced series $d(\ln NGDP)$ and $d(\ln M2)$. We then again conduct the ADF test on each of

⁷ See Barnett, Liu, Mattson, and van den Noort (2013).

those transformed series. The null hypotheses that $d(\ln NGDP)$ and $d(\ln M2)$ have unit roots are decisively rejected. The differenced time series are stationary processes. See Table 2a in the appendix.

Cointegration Test

Next we test cointegration between $\ln NGDP$ and $\ln M2$ to investigate whether there exists long run association between the two processes. If the two variables are not cointegrated, we could apply an unrestricted VAR model. If the variables are cointegrated, we should prefer a vector error correction model (VECM). We use Johansen's (1988, 1991) methodology. The p values for unrestricted cointegration rank tests using trace and maximum eigenvalue are 0.0828 and 0.0646 respectively, both higher than 5% significance level. See Table 3a in the appendix. Hence we fail to reject the null hypothesis of no cointegration between $\ln NGDP$ and $\ln M2$. We use an unrestricted VAR model in the following step.

VAR Model

We begin with a preliminary unrestricted VAR(2) model, as shown in appendix table 4a. We use the Akaike Information Criterion (AIC) to determine the appropriate maximum lag length for the variables in the VAR. Since we are using quarterly data, we choose lag equal to 4, when conducting VAR lag order selection. As the following table 1 shows, lag equal to 3 gives us the lowest AIC value. Therefore, we revise our model to a VAR(3) and estimate its coefficients. Detailed results are in appendix Table 5a.

Table 1: VAR Lag Order Selection Criteria

Endogenous variables: $d(\ln M2)$, $d(\ln NGDP)$

Sample: 1967Q1 - 2013Q4

Included observations: 183

Lag	Log L	LR	FPE	AIC	SC	HQ
0	1201.558	NA	6.94e-09	-13.10992	-13.07485	-13.09571
1	1259.317	113.6242	3.86e-09	-13.69745	-13.59222	-13.65480
2	1269.885	20.55929*	3.59e-09	-13.76924	-13.59386*	-13.69815*
3	1274.130	8.164230	3.58e-09*	-13.77191*	-13.52638	-13.67238
4	1277.989	7.338699	3.59e-09	-13.77037	-13.45468	-13.64241

* Identifies the lag order selected by the criterion in that column.

Log L: log likelihood

LR: sequential modified LR test statistic (each test at 5% level)

FPE: Final prediction error

AIC: Akaike information criterion

SC: Schwarz information criterion

HQ: Hannan-Quinn information criterion

Next we examine whether there exist autocorrelation problems among the disturbances. Using the Autocorrelation LM (Lagrange Multiplier) test with lag equal to 12, we acquire the following table 2 with most of the p values greater than the 5% significance level.

Table 2: VAR Residual Serial Correlation LM Tests

Null Hypothesis: no serial correlation at lag order

Sample: 1967Q1 - 2013Q4

Included observations: 184

Lags	LM-Statistic	P value*
1	8.170979	0.0855
2	10.45168	0.0335
3	6.668278	0.1545
4	6.192919	0.1852
5	10.20056	0.0372
6	7.367825	0.1177
7	2.768448	0.5973
8	4.482638	0.3446
9	9.023472	0.0605
10	1.994479	0.7368
11	12.65099	0.0131
12	5.147886	0.2725

*P value from chi-square with 4 degrees of freedom.

We fail to reject the null hypothesis of no serial correlation among the residuals of the VAR(3) model. The VAR(3) model is well-specified.

Granger Causality Test

We conducted Granger causality tests between $d(\ln NGDP)$ and $d(\ln M2)$. The results indicate that $d(\ln NGDP)$ Granger causes $d(\ln M2)$, and $d(\ln M2)$ also Granger Causes $d(\ln NGDP)$. Listed below in table 3 are the Granger causality test results.

Table 3: VAR Granger Causality, Block Exogeneity Wald Tests

Sample: 1967Q1 2013Q4

Included observations: 184

Dependent variable: $d(\ln M2)$

Excluded	Chi-sq	df	P value
$d(\ln NGDP)$	11.28757	3	0.0103
All	11.28757	3	0.0103

Dependent variable: $d(\ln NGDP)$

Excluded	Chi-sq	df	P value
$d(\ln M2)$	11.67938	3	0.0086
All	11.67938	3	0.0086

The P value of the null hypothesis that $d(\ln NGDP)$ does not Granger cause $d(\ln M2)$ is 0.0103, which is smaller than the conventional critical value 0.05. We reject the null and therefore conclude that $d(\ln NGDP)$ does Granger cause $d(\ln M2)$. The P value of the null hypothesis that $d(\ln M2)$ does not Granger cause $d(\ln NGDP)$ is 0.0086, also smaller than the critical value 0.05. We reject the null hypothesis and therefore conclude that $d(\ln M2)$ does Granger cause $d(\ln NGDP)$. There exists a bidirectional Granger causality relationship between $d(\ln NGDP)$ and $d(\ln M2)$.

Estimation of the Final Bivariate VAR

We implemented the bidirectional Granger Causality relationship between $d(\ln NGDP)$ and $d(\ln M2)$ by estimating a bivariate VAR in those two stochastic processes with optimized lag lengths selected from the EViews program. The coefficients of the two equations are stacked into one vector having elements, $C(i), i = 1, \dots, 14$, as defined in Table 6a in the appendix. The two equations we estimated in this VAR are defined in Table 6a. The coefficients of the first equation are $C(i), i = 1, \dots, 7$, while the coefficients of the second equation are $C(i), i = 8, \dots, 14$. See the table for the specification of those two equations and the estimates of their coefficients.

The p value for (1) is 0.0000, demonstrating that the coefficient of $d(\ln M2)_{t-1}$ is significant in the first equation. The growth rate of Divisia M2 money supply in the previous period has a significant impact on prediction of the current growth rate of Divisia M2. The corresponding p value of (2) is 0.9735, demonstrating that the second lag of the growth rate of M2 does not have significant predicting power for the current growth rate of M2. By eliminating the statistically insignificant coefficients, we acquire the following two estimated equations:

$$d(\ln M2)_t = 0.483728d(\ln M2)_{t-1} + 0.146457d(\ln M2)_{t-3} - 0.223671d(\ln NGDP)_{t-1} + 0.006672 \quad (1)$$

$$d(\ln NGDP)_t = 0.223336d(\ln M2)_{t-1} + 0.318158d(\ln NGDP)_{t-1} + 0.288470d(\ln NGDP)_{t-2} \quad (2)$$

Since $d(\ln M2)$ and $d(\ln NGDP)$ indicate the growth rates, the estimated equations can be interpreted as follows. The growth rate of Divisia M2 is affected by the growth rate of itself, lagged by 1 and 3 quarters, as well as by the growth rate of the previous quarter's nominal GDP. Furthermore, holding other variables constant, we can reach the following conclusions. From the first equation, if the growth rate of Divisia M2 during the last quarter increases by 10%, then the growth rate of M2 this quarter will increase by 4.83728%. But if the nominal GDP growth rate of the previous quarter increases by 10%, the M2 growth rate this quarter will decrease by 2.23671%. If the M2 growth rate, lagged three quarters, reaches 10%, the current growth rate will increase by 1.46457%. Similar analysis applies to the second equation, where $d(\ln NGDP)_t$ is the dependent variable.

Prediction

Based on the estimation of equations (1) and (2), we can predict the growth rate of Divisia M2 and nominal GDP in 2014 Q1 using the quarterly data in our sample ending in 2013 Q4⁸.

⁸ We could have used a longer sample period including more recent quarters by using data from the Center for Financial Stability (CFS) in New York City. But we limited this study to data made available by the Federal Reserve Bank of St. Louis, which has not updated its data as regularly as the CFS, which does update monthly.

$$\begin{cases} d(\ln M2)_{2014Q1} = 0.483728d(\ln M2)_{2013Q4} + 0.146457d(\ln M2)_{2013Q2} - \\ \quad 0.223671d(\ln NGDP)_{2013Q4} + 0.006672 \\ d(\ln NGDP)_{2014Q1} = 0.223336d(\ln M2)_{2013Q4} + 0.318158d(\ln NGDP)_{2013Q4} \\ \quad + 0.288470d(\ln NGDP)_{2013Q2} \end{cases}$$

Substituting the measured values of the variables into the right hand sides, the predicted growth rates are:

$$\begin{cases} d(\ln M2)_{2014Q1} = 0.014079 \\ d(\ln NGDP)_{2014Q1} = 0.012193 \end{cases}$$

The predicted growth rates can be used to predict the levels of M2 and NGDP in 2014Q1 by the following equations:

$$\begin{cases} M2_{2014Q1} = M2_{2013Q4} * (1 + d(\ln M2)_{2014Q1}) \\ NGDP_{2014Q1} = NGDP_{2013Q4} * (1 + d(\ln NGDP)_{2014Q1}) \end{cases}$$

Substituting into the right hand sides, we acquire:

$$\begin{cases} M2_{2014Q1} = 11758.8 \\ NGDP_{2014Q1} = 17286.5 \end{cases}$$

The 1.4% predicted growth rate of Divisia M2 money supply in 2014Q1 was inconsistent with the Federal Reserve's accommodative monetary policy. A consequence is reflected in the almost-non-growing 1.2% nominal GDP prediction in 2014Q1. In fact, the out of sample growth rate of 2014Q1 was -0.2%, according to the data released by Bureau of Economic Analysis (BEA).

CONCLUSION

In this paper we discuss the relationship between Divisia M2 money supply and nominal GDP. The primary objective of this research is to run well known diagnostic tests of bivariate time series properties of the Divisia M2 and nominal GDP stochastic processes that are necessary but not sufficient for the conclusions of Belongia and Ireland (2014) and Barnett, Chauvet, and Leiva-Leon (2015). We find no evidence to contradict the conclusions of those two papers about the potential relevancy of Divisia monetary aggregates in targeting nominal GDP, either as an intermediate target or as an indicator. Our results are not specific to either of those approaches and hence cannot provide conclusions about which of those two approaches should be preferred. Since neither of those two approaches contradicts the other, one possibility would be to use both of those approaches simultaneously. In that case, Barnett, Chauvet, and Leiva-Leon (2015) could be used to interpolate the quarterly data to provide the needed Nowcast monthly nominal GDP data, while Belongia and Ireland (2014) would then be used to implement a policy design using a Divisia monetary aggregate as an intermediate target.

But if a different policy design were adopted without an intermediate target, Barnett, Chauvet, and Leiva-Leon (2015) would remain relevant to producing the monthly data necessary for any approach to nominal GDP targeting.

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Appendix

Table 1a. Unit Root Test Result for $\ln NGDP$ and $\ln M2$

Null Hypothesis: $\ln NGDP$ has a unit root

	t-Statistic	P value*
Augmented Dickey-Fuller test statistic	-0.065053	0.9951
Test critical values:		
1% level	-4.008154	
5% level	-3.434167	
10% level	-3.141001	

*MacKinnon (1996) one-sided p-values.

Null Hypothesis: $\ln M2$ has a unit root

	t-Statistic	P value*
Augmented Dickey-Fuller test statistic	-2.197872	0.4876
Test critical values:		
1% level	-4.008154	
5% level	-3.434167	
10% level	-3.141001	

*MacKinnon (1996) one-sided p-values.

Table 2a. Unit Root Test Result for $d(\ln NGDP)$ and $d(\ln M2)$

Null Hypothesis: $d(\ln NGDP)$ has a unit root

	t-Statistic	P value*
Augmented Dickey-Fuller test statistic	-10.34110	0.0000
Test critical values:		
1% level	-4.008154	
5% level	-3.434167	
10% level	-3.141001	

*MacKinnon (1996) one-sided p-values.

Null Hypothesis: $d(\ln M2)$ has a unit root

	t-Statistic	P value*
Augmented Dickey-Fuller test statistic	-7.718251	0.0000
Test critical values:		
1% level	-4.008154	
5% level	-3.434167	
10% level	-3.141001	

*MacKinnon (1996) one-sided p-values.

Table 4a. VAR(2) Estimation

Vector Autoregression Estimates

Sample (adjusted): 1967Q4 - 2013Q4

Included observations: 185

Standard errors in () & t-statistics in []

	$d(\ln GDP)$	$d(\ln M2)$
$d(\ln GDP)_{t-1}$	0.343726 (0.07111) [4.83377]	-0.203535 (0.06393) [-3.18391]
$d(\ln GDP)_{t-2}$	0.296876 (0.07117) [4.17157]	0.110804 (0.06398) [1.73192]
$d(\ln M2)_{t-1}$	0.230714 (0.08198) [2.81432]	0.502884 (0.07370) [6.82361]
$d(\ln M2)_{t-2}$	-0.018083 (0.08169) [-0.22137]	0.051093 (0.07344) [0.69573]
Constant intercept	0.002710 (0.00177) [1.53297]	0.007922 (0.00159) [4.98427]
R-squared	0.320419	0.300597
Adj. R-squared	0.305317	0.285055
Sum sq. residuals	0.011651	0.009416
S.E. equation	0.008045	0.007233
F-statistic	21.21725	19.34060
Log likelihood	632.2211	651.9214
Akaike AIC	-6.780769	-6.993745
Schwarz SC	-6.693732	-6.906708
Mean dependent	0.016113	0.014431
S.D. dependent	0.009653	0.008554
Determinant residual covariance (df adj)		3.38E-09
Determinant residual covariance		3.20E-09
Log likelihood		1284.335
Akaike information criterion		-13.77659
Schwarz criterion		-13.60252

Table 5a. VAR(3) Estimation

Sample (adjusted): 1968Q1 - 2013Q4

Included observations: 184

Standard errors in () and t-statistics in []

	$d(\ln NGDP)$	$d(\ln M2)$
$d(\ln NGDP)_{t-1}$	0.318158 (0.07460) [4.26460]	-0.223671 (0.06667) [-3.35472]
$d(\ln NGDP)_{t-2}$	0.288470 (0.07726) [3.73398]	0.062865 (0.06904) [0.91053]
$d(\ln NGDP)_{t-3}$	0.076208 (0.07535) [1.01134]	0.074424 (0.06734) [1.10515]
$d(\ln M2)_{t-1}$	0.223336 (0.08300) [2.69084]	0.483728 (0.07418) [6.52140]
$d(\ln M2)_{t-2}$	0.061580 (0.09397) [0.65531]	0.002791 (0.08398) [0.03323]
$d(\ln M2)_{t-3}$	-0.113475 (0.08194) [-1.38480]	0.146457 (0.07323) [1.99990]
Constant intercept	0.002610 (0.00190) [1.37251]	0.006672 (0.00170) [3.92561]
R-squared	0.331774	0.320114
Adj. R-squared	0.309123	0.297067
Sum sq. residuals	0.011451	0.009146
S.E. equation	0.008043	0.007188
F-statistic	14.64676	13.88960
Log likelihood	629.8995	650.5791
Akaike AIC	-6.770647	-6.995425
Schwarz SC	-6.648340	-6.873118
Mean dependent	0.016098	0.014412
S.D. dependent	0.009677	0.008574
Determinant residual covariance (df adj.)		3.34E-09
Determinant residual covariance		3.09E-09
Log likelihood		1280.607
Akaike information criterion		-13.76747
Schwarz criterion		-13.52286

Table 6a. Final VAR Coefficient Estimation

Estimation Software: EViews computer program

Sample: 1968Q1 - 2013Q4

Included observations: 184

Total system observations 368

	Coefficient	Std. Error	t Statistic	P Value
C(1)	0.483728	0.074176	6.521397	0.0000
C(2)	0.002791	0.083982	0.033235	0.9735
C(3)	0.146457	0.073232	1.999902	0.0463
C(4)	-0.223671	0.066674	-3.354718	0.0009
C(5)	0.062865	0.069043	0.910526	0.3632
C(6)	0.074424	0.067343	1.105148	0.2698
C(7)	0.006672	0.001700	3.925608	0.0001
C(8)	0.223336	0.082999	2.690835	0.0075
C(9)	0.061580	0.093971	0.655308	0.5127
C(10)	-0.113475	0.081943	-1.384797	0.1670
C(11)	0.318158	0.074604	4.264599	0.0000
C(12)	0.288470	0.077255	3.733981	0.0002
C(13)	0.076208	0.075353	1.011342	0.3125
C(14)	0.002610	0.001902	1.372509	0.1708

Equation: $d(\ln M2)_t = C(1)d(\ln M2)_{t-1} + C(2)d(\ln M2)_{t-2} + C(3)d(\ln M2)_{t-3} + C(4)d(\ln NGDP)_{t-1} + C(5)d(\ln NGDP)_{t-2} + C(6)d(\ln NGDP)_{t-3} + C(7)$

R squared	0.320114	Mean dependent var	0.014412
Adjusted R squared	0.297067	dependent var	0.008574
S.E. of regression	0.007188	Sum squared resid	0.009146
Durbin-Watson stat	1.977980		

Equation: $d(\ln NGDP)_t = C(8)d(\ln M2)_{t-1} + C(9)d(\ln M2)_{t-2} + C(10)d(\ln M2)_{t-3} + C(11)d(\ln NGDP)_{t-1} + C(12)d(\ln NGDP)_{t-2} + C(13)d(\ln NGDP)_{t-3} + C(14)$

R squared	0.331774	Mean dependent var	0.016098
Adjusted R-squared	0.309123	S.D. dependent var	0.009677
S.E. of regression	0.008043	Sum squared resid	0.011451
Durbin Watson stat	1.998140		

WHAT DO WE KNOW ABOUT THE EFFECTS OF EXPANSIONARY FISCAL POLICY – LESSONS FROM THE GREAT CRISES

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ABSTRACT

This paper first describes the design and functioning of fiscal policy during the Great Depression – mainly on the example of the USA. Then it summarizes the debates and different assessments of the efficiency, i.e. inefficiency of the fiscal stimuli during the Great Depression. These estimates, for reasons of objectivity, are placed within the historical context of developments in the 1930s: dominance of the liberal economic philosophy; the “boom” of economic activity in developed countries in the period 1922 – 1929; insufficiently developed macroeconomic science and the increasing influence of Keynes’s economic concepts before and during the crisis. Later, the effects of expansionary fiscal policy used for addressing the challenges of the Great Recession are analyzed. In this context, the paper provides the dilemmas and controversies regarding the estimation of the value of fiscal multipliers and the limits of discretionary fiscal policy – especially those related to the accumulation of structural budget deficits and the growth of public debt. In spite of the present controversies and dilemmas about the real possibilities and limits of expansionary fiscal policy, the authors especially/particularly highlight the viewpoint that fiscal stimuli, in time of severe and prolonged recessions, in the presence of a dysfunctional banking system and interest rates near the zero low bound rate, function well. In the end, the paper summarizes the lessons from the experience about the effects of expansionary fiscal policy during severe and prolonged recessions, as lessons for the Republic of Macedonia.

Keywords: fiscal policy, fiscal stimulus, fiscal multipliers, the Great Depression, the Great Recession, structural budget deficits, public debt.

JEL classification codes: E62, G01, H6

INTRODUCTION

There is a general consensus in the modern macroeconomic science that the research related to the most severe crisis in the world economic history – the Great Depression of 1929-1933 i.e. the complex reasons that determined it, the consequences on the real and financial sector of the countries and especially the policy response (fiscal and monetary), their efficiency, that is inefficiency etc., is extremely important for understanding the phenomenology of contemporary economic cycles and the way of functioning of economies. The Great Depression has been a “basic motivation event” in the

careers of many prominent economists – the Nobel laureates Klein, Modigliani, Samuelson, Solow, Tobin, who left deep marks in the modern macroeconomic science (Mankiw, 2006). Indeed, according to Bernanke (Bernanke, 2004), the Great Depression was and still remains an intellectual challenge for modern macroeconomics, due to two reasons: (1) the Great Depression enabled the emergence and the fast progress of modern macroeconomics and (2) the experiences of the 1930s continue to influence the “beliefs of macroeconomists” on the recommendations related to the key policies and the agenda for their research (Bernanke, 1994). We believe that the Great Recession of 2007-2009 will also play a similar role and will present a significant “motivation event” for modern macroeconomic science, that it will inspire new researches, i.e. will produce new lessons for crucial issues, including the policy response and increasing their effectiveness in the stabilization of economies. The aim of this paper is to summarize the knowledge and debates in the contemporary macroeconomic science on the effects and limits of fiscal policy in times of big crises (the Great Depression and the Great Recession) and to suggest lesson about the fiscal policy of the Republic of Macedonia.

Fiscal Policy During The Great Depression

A real assessment of the response of fiscal policy during the Great Depression requires knowledge about the historical context of the developments in the period before and after the emergence of the most severe crisis in the world economic history. The following facts should be kept in mind: (1) the dominance of the liberal economic philosophy; (2) the expansions, the “boom” of economic activity in the developed countries in the period 1922-1929; (3) the underdeveloped macroeconomic science, i.e. the insufficient knowledge of policymakers for the significance and effects of stabilization policies and (4) the increasing importance of Keynes’ economic concepts in the period before and during the crisis. The classical economic thought before Keynes claimed that markets have a pronounced power of self-regulation, of quick clearance, and that hence government involvement in economic activity would do more harm than good for economies. The period 1922-1929 was a period of expansions and prosperity. In that period the industrial production and the national income of the USA grew by almost 50 percent. France experienced a fast growth and doubled the industrial production. In Germany the growth was more modest and appeared in 1925-1929, while Great Britain was an exception by not being a part of the prosperity (Marcel and Taieb 2008, pp. 135 - 140). The “boom” periods of economic activity are followed by increasing inflationary pressures, making the governments strengthen the restrictiveness of the key macroeconomic policies – fiscal and monetary. Furthermore, we should keep in mind the fact that the modern macroeconomic science emerged with the publication of Keynes’ *General theory of employment, interest and money* and that before that very little was known about the stabilization effects of fiscal and monetary policy. These three factors (liberalism, the 1922-1929 expansion and the underdevelopment of macroeconomic science) show why the developed economies implemented procyclical policies right after the emergence of the Great Depression. This especially applies to France and Great Britain, whose governments were particularly oriented toward eliminating budget deficits and increasing the restrictiveness of monetary policy – rise in interest rates in order to prevent the outflow of gold from the countries and to maintain the fixed exchange rate of the national currencies. The situation was somewhat different in the USA, although there, at least in the starting years of the Depression, the policies can be hardly qualified as typically countercyclical. Namely, immediately after the beginning of the Great Depression, President Hoover, who was otherwise a sworn liberal and believed in the market self regulation, implemented certain countercyclical measures: cutting taxes, introducing government funding of public works, insisting that managers of large companies keep wages and investments and do not fire employees, increasing the expansionaryness of monetary policy etc. Still, he pointed out that the role of the state is limited and that it cannot substitute the private initiative. However, the USA in 1931 faced a significant budget deficit, and Hoover rushed to eliminate it the

very next year by increasing taxes, thus de facto suspending the countercyclical fiscal policy (Marcel and Taieb 2008; Romer, 2014). On the other hand, in order to protect the gold standard and to prevent speculative attacks on the dollar, the FED increased the interest rate i.e. tightened the monetary policy. The influence of Keynes' economic philosophy on the design of economic policy measures during the Great Depression has various estimations. Based on the fact that the New Deal program preceded Keynes' capital work *The general theory of employment, interest and money*, there are opinions in the literature that Keynes de facto did not have or at least did not have a significant influence on Roosevelt's New Deal, which was based on creating budget deficits for financing public works in the American economy in the second phase (from spring 1935). However, the fact remains that Keynes, as a prominent and authoritative economist, observed government policies after the emergence of the Great Depression, corresponded with the members of the May Committee in his country who suggested cutting the budget in the heat of the Great Depression. He severely criticized the typically procyclical government economic policy in England, gave statements and commentaries for American newspapers etc. In that time Keynes, who had the opportunity to read the Expert Report of the May Committees on the measures against the depression (which were typically deflationary), stated that that was "the most idiotic document that I have had the misfortune to read".⁹ In this sense, the most famous biographer of Keynes, Professor Robert Skidelsky, estimates Keynes' influence on Roosevelt's New Deal in the following way: "I, from my point of view, believe that Keynes had a larger influence on Roosevelt's New Deal, than is generally acknowledged, especially in the first phase of the New Deal, which preceded the General theory." (Skidelsky, 1997, p. 1). In light of this argument by Skidelsky is the fact that Keynes sent an open letter to President Roosevelt in December 1933, where he explained the essence of his policy for economic recovery, i.e. for the growth of national output and raising employment (Keynes, 1933). The letter was published on December 1933 in the New York Times and followed by other newspapers in the USA. Later, in 1935, there was a meeting between Roosevelt and Keynes and their cooperation and correspondence via private letters continued in the following years.

The expansiveness of fiscal policy during the crisis of the 1930s is mainly considered in relation to the implementation of Roosevelt's New Deal in the USA. Roosevelt became President of the USA in March 1933. His New Deal was implemented in two phases. The first phase lasted from May 1933 to spring 1935. This was a period when in the USA, in a short period, around 15 laws were adopted with the goal to reorganize and consolidate the banking sector and to revive the agricultural and industrial production. The second phase of the New Deal started in spring 1935. The countercyclical Keynesian policy was especially pronounced in this phase when big public works began to be organized within the Works Progress Administration (WPA), Tennessee Valley Authority (founded in 1933) etc., mainly financed with rising budget deficits. Through WPA, by 1938, about 3.800.000 people were employed, almost a third of the unemployed in the USA. Furthermore, also, with the intermediation of WPA 122.000 public buildings, 644.000 miles of new roads, 77.000 new bridges, 285 airports, 24.000 channels etc. were built (Fiti, 2009). These results, at least at first sight, seem spectacular and strengthen the conventional Keynesian view that fiscal stimulus within Roosevelt's New Deal, in terms of existence of the liquidity trap phenomenon and monetary policy ineffectiveness, are most creditable for saving the American economy from the claws of the Great Depression. This view has supporters even today. Regarding this, Almunia et al. (2009, p.3) write: "... fiscal policy, where applied, worked extremely well in the 1930s, whether because spending from other sources was limited by uncertainty and liquidity constraints, or because with interest rates close to the zero bound there was little crowding out of private spending."

This view is additionally argued with the indicators of the trajectory of the business cycle in the 1930s. Namely, as known, the Depression lasted 43 months (from August 1929 to March 1933),

⁹ See more on the correspondence with the May Committee in Robert Skidelsky's article titled "Once again we must ask: 'Who governs?'", *Financial Times*, June 16, 2010.

followed by a strong expansion lasting 50 months (from March 1933 to May 1937) (NBER, n.d.). This coincides with the election of Roosevelt as President of the USA and the beginning of the realization of his New Deal. However, the analyses of the Great Depression made after the Second World War, particularly the analyses of the amount and effectiveness of the fiscal stimulus within Roosevelt's New Deal, from which some especially significant are Brown (1956), Chandler (1970), later Christina Romer (2009; 2011; 2013) etc., question this viewpoint. These studies indicate the following conclusions:

First, contrary to the belief that Roosevelt introduced large fiscal stimulus, the fiscal expansion was small – around 1,5% of GDP of the USA. In that sense, Christina Romer highlights: "Even under Roosevelt the fiscal expansion was modest. When we think about the new Deal, we tend to remember things like the WPA (Works Progress Administration relief programme), which built dams and bridges, and civilian Conservation Corps, which constructed so many building in our national parks. These programmes left enduring legacies, and we often think of the fiscal policy response of the new Deal as being big and aggressive. But, what Chandler points out, building on a classic paper by C Cary Brown, is that the fiscal response to the great Depression was actually quite small ..." (Romer, 2014, p. 6).

Second, the fiscal stimulus during Roosevelt was short lasting, i.e. it was prematurely abolished. The federal budget deficits of the USA, expressed as the difference between budget revenues and budget expenditures (in billion dollars), had the following dynamics: 1933 (-1,3); 1934 (-2,9); 1935 (-2,5); 1936 (-3,5) и 1937 (-0,2) (Marcel and Taieb 2008, pp.166) i.e. they were larger in 1934, 1935 и 1936. Already in 1937 they were de facto suspended and the US economy, since May 1937, entered again a contraction phase that lasted 12 months. Hence the conclusion of C Cary Brown (often cited in the literature): "Fiscal policy, then, seems to have been an unsuccessful recovery device in 'thirties - not because it did not work, but because it was not tried" (Brown, 1956, pp.863).

Third, generally the effects of the fiscal stimuli in the 1930s on the US output are considered weak. This argument is related to errors in the design and implementation of fiscal policy – a small amount of fiscal stimulus, untimely elimination of the small budget deficits (by President Hoover after 1932 and by President Roosevelt after 1936) etc. A concrete estimation of the value of the fiscal multipliers is problematic, especially considering the fact that the statistical basis of the basic indicators of economic activity of the USA in the 1920s and the 1930s was far weaker and less reliable compared to the one after II World War. The literature recognizes that multipliers of fiscal stimuli differ among various programs of public consumption. Public works contributed to growth of economic activity, budget expenditures related to the stimulation of the agricultural sector had a negative impact on output, the increased tax rates, especially the top marginal rates to 58 and 67 per cent, contributed to higher tax evasion and to lower economic activity etc. (Fichback, 2010, pp.386).

Fourth, the recent economic literature in this field holds a view, especially advocated by Christina Romer, that the credit for the exit from the Great Depression does not belong to fiscal policy, but on the contrary, to monetary policy. This viewpoint is opposite to the explanation of the causes that determined a restrictive monetary policy in the 1930s in the case of the USA (the need for higher interest rates in order to prevent the outflow of gold from the USA and to prevent speculative attacks on the American dollar - Bernanke, 1994), but in any case it is interesting and related to what is called a Regime Shift.¹⁰

¹⁰ Christina Romer claims that monetary policy can be very useful even in terms of near zero nominal interest rate, under the assumption that monetary authorities succeed in influencing expectations, and prevent deflationary expectations. She draws this standpoint as a crucial lesson from the Great Depression of 1929-1933, claiming that during this crisis the monetary expansion was bigger than is believed, since it gained a specific form – "quantitative easing", performed by the American Treasury. Namely, Roosevelt in April 1933 temporarily suspended the gold standard and allowed the dollar to substantially depreciate. Later, the gold standard was reintroduced, now with a new, higher price of gold, which caused a large gold inflow to the USA, especially from the European countries which the FED chose not to sterilize, thus leading to a significant grow of money supply in the US economy (Romer, March 2009). Also in a number of more recent studies professor Romer (2011; 2013), citing Krugman's, Gotti's and other author's contributions in this field, supports the thesis

Fifth, in this context, we must nevertheless not neglect the opposite view (the one in the remarkably well argued study of Almunia et al., 2009) that also in the 1930s fiscal stimuli, despite their modest amount compared to the severity of the crisis, were efficient, because they were an inexpensive source of finance for consumption due to the low nominal interest rates (liquidity trap situation).

The Great Recession and the Fiscal Policy Response

The liquidity trap and reaching for fiscal policy measures

The Great Recession of 2007-2009 is the most severe financial and economic crisis since the one of the 1930s. In the economic literature, among other things, there are serious debates about the similarities and differences between the two great crises (see for example Romer, 2009; Almunia et al., 2009). However, what is often pronounced as the most significant common characteristic of both crises is the fall into a liquidity trap (The Zero Bound Interest Rates), of the most severely affected countries. This situation leads to: (1) problemizing the efficiency of monetary policy; (2) losing the credit function of commercial banks and prolonged recovery of the economies and (3) reaching for expansionary fiscal policy measures in order to ensure economic recovery. It seems that these three questions are today in the focus of the post crisis discussions in macroeconomic science. The three issues are extremely complex and accompanied by numerous controversies and dilemmas – can monetary policy be efficient and useful at zero bound interest rates, can deflationary pressures in the economies be prevented by influencing expectations and what are the real possibilities and limitations of fiscal policy? Our analysis focuses on the third question.¹¹

After the emergence of the Great Recession the belief prevailed that it could be overcome with the standard measures of the key macroeconomic policies. But soon, this belief was disproved by the development of the global financial and economic crisis. Namely, despite the fact that the central banks of the developed countries quickly reacted with “pouring” extensive liquidity without precedent in the previous history of economic cycles, things started to “go sour”. FED, by December 2008, had cut the policy rate to almost zero, the ECB gradually reduced the interest rate to 1%, and similar actions (aggressive monetary policy) were implemented by the central banks of England, Japan and other countries. This reaction of central banks, however, pushed developed economies into a liquidity trap (Krugman, 2009). Thus, the fiscal stimuli became a crucial part of the policy response to the Great Recession, and fiscal policy returned to the center of debates for reviving the economies and for overcoming the consequences of the recession. In the USA, the fiscal stimulus started at the end of President Bush’s mandate – he introduced tax cuts in amount of 1200 dollars per family (in the period April – June 2008). Then, Obama suggested a package of 787 billion dollars, 1/3 of which were tax cuts, 1/3 government consumption increase and 1/3 support for the most severely affected in the form of unemployment insurance and other social measures. In any case, Obama’s fiscal package

that monetary policy is useful also in a liquidity trap if there is good expectations management i.e. if radical changes are made to monetary policy through a so called Regime Shift – for example, unconventional measures of monetary policy (announcing the long run trend of interest rate and its tying to a certain target – inflation or unemployment rate – what is now already done by central banks of developed countries), targeting the nominal GDP etc.

¹¹ In terms of the issue of the efficiency i.e. inefficiency of monetary policy in terms of liquidity trap and of possible approaches for return of crediting, we suggest to the interested readers some, according to our opinion, extremely important papers in this field: Paul Krugman (1998) “It’s Back Japan’s Slump and the Return of Liquidity Trap”, *Brookings Papers on Economic Activity*, No.2: 137-205; Eggertsson Gauti and Michael Woodford, (2003) „The Zero Bound on Interest Rates and Optimal Monetary Policy”, *Brookings Papers on Economic Activity*, No.1: 139-233; Ben Bernanke (2013): “Communication and Monetary Policy, *Board of Governors of the Federal Reserve System and National Economists Club*, Washington, D.C.; Christina Romer (April, 2013) “It Takes a Regime Shift: Recent Developments in Japanese Monetary Policy Through the Lens of the Great Depression” (eml.berkeley.edu); Christina Romer: “Policy Responses to the Great Recession: The interaction of Leadership and Economic Ideas”, Iowa State University, December 1. 2011.

within the American Recovery and Reinvestment Act presents the largest countercyclical fiscal stimulus in the American economic history. Similarly, Germany initiated fiscal stimulus aimed at maintaining jobs in the peak of the crisis, the fiscal stimuli of China of 600 billion dollars were aimed at infrastructure objects and social protection and significant stimuli were implemented also in South Korea and Japan (Romer, 2011). Although the fiscal packages differed in their amount and composition from country to country, they basically included typical unorthodox measures – “nationalization of banks, acquisition of parts of banks assets, guarantying and subsidizing bank credits, even subsidies for acquisition of cars and other durables...” (Petkovski, 2008, p.179). According to estimates of the experts in the IMF, only the direct support of central budgets in certain countries for rescue of their financial systems, cumulatively, for the period 2008-2010, amounted to approximately 1.530 billion dollars i.e. 6,4% of their GDP. If the direct support is corrected for its positive effects on the gross domestic product, it comes down to 1.150 billion dollars, i.e. 4,8%. Actually, the direct support from central budgets of the countries was not that big – it has been much bigger in other episodes of financial crisis in some countries (IMF, 2011, p. 49). Still, the direct budget allocations in certain countries (Ireland, Germany, and Netherlands) absorbed large amounts of their gross domestic product.

Table 1. Direct Support for the financial sector of selected countries from the central budgets and its net effect (from the emergence of the crisis until the end of 2010)

Country	Direct support (% of GDP)	Effect – recovery (% of GDP)	Net direct support (% of GDP)
Belgium	4,3	0,2	4,1
Ireland	30,0	1,3	28,7
Germany	10,8	0,1	10,7
Greece	5,1	0,1	5,0
Netherland	14,4	8,4	6,0
Spain	2,9	0,9	2,0
Great Britain	7,1	1,1	6,0
USA	5,2	1,8	3,4
Average (% of GDP)	6,4	1,6	4,8
in billion US \$	1528	379	1149

Source: IMF, 2011, p. 5.

The table above does not include the support from regional and local levels, which must not be underestimated – approximately one third to one fourth of total public consumption in modern countries is executed on a regional and local level (Bogoev, 2004). For example, in Germany the financial injection from the regional governments and KfW bank for development is estimated at 1,1% of the country's GDP, in Belgium at 1,6% of GDP etc. (IMF, 2011, p. 8).

On the Efficiency of Fiscal Stimulus

Expansionary fiscal policy during recession (higher government consumption, lower taxes or a combination of both) expands structural budget deficits and causes accumulation of public debt, with all the negative consequences (short term and long term). Hence, the increased interest of macroeconomists for assessment of the efficiency of fiscal stimulus. This topic is complex and controversial, and the debates are focused on a few relevant issues – how big is the multiplier effect of increased government consumption, and of tax cuts; whether spending multipliers are higher than

tax multipliers; are the fiscal multipliers the appropriate approach and indicator for measuring the efficiency of the fiscal stimulus?

The estimates of the value of fiscal multipliers, especially those from prominent authors from the USA vary significantly (even for the same type of budget expenses) ranging from zero to 4, even to 6. This can be illustrated with the assessments of the multipliers of the fiscal expansion as a response to the Great Recession in the USA, but also in other countries. Christina Romer, once President of the Council of Economic Advisors to Obama, claimed that the government consumption multiplier (within the American Recovery and Reinvestment Act) would be between 1,5 and 1,6 and that the output gap of the American economy of 1.000 billion dollars would be closed by 2010. Contrary to the predictions of Christina Romer, Professor Robert Barro argued that previous experiences of the USA confirmed that in “normal times” the fiscal multiplier essentially moves around zero, that the increase in government consumption presumes cutting other items in the components of the aggregate demand – private consumption, investments or net-exports and therefore “The government spending is no free lunch”. According to him, the government spending multiplier of Obama’s fiscal stimulus (500 billion dollars) will be only 0,5, because the process will be accompanied by a crowding-out effect of 250 billion dollars. According to Sargent, the calculations of the efficiency of the fiscal stimulus that the Council of economic advisors provided to President Obama are completely naïve and “ignore what we have learned in the last 60 years of macroeconomic research” (Sargent, 2011). Professor Harold Uhlig’s research suggests an even smaller multiplier of budget spending – from 0,3 to 0,4, i.e. a growth of real GDP of 150 to 200 billion dollars, and a far higher tax multiplier, i.e. 0,5 after the first year, 2 after the second year and even 6 after the third year (Parkin 2012, pp.338 – 339; Ilzetski, Mendoza and Végh, 2012, p. 2). Spilimbergo et al. (2008, p.18-20) summarize the results of estimates from different authors of the fiscal multipliers in the USA and in other countries. For example, the estimation of the fiscal multipliers of the American economy based on VAR methods show larger multiplier effects from government consumption in the short run and lower in the long run. The opposite applies to tax cut multipliers. In this context the research by Blanchard and Perotti (2002) confirms that the multiplier effects of tax cuts and government spending vary in time. Christina and David Romer find that a tax cut in the USA of 1% of GDP, within few years, creates a multiple effect of close to 3% of GDP. On the other hand, Ramey’s (2008) research shows that even unproductive government spending (for weaponry) can have a multiplier effect larger than 1. Elmendorf and Furman (2008) concluded that “...the temporary tax cut in amount of 1% of GDP results in a 1% growth of GDP in the short run, if 50% of the released income by the tax cut is spent, but if only 20% of the released income is spent, the effect on GDP would be only 0,3% and that the increased government purchases has a larger effect on GDP than permanent tax cuts.” A study of nine EU countries, using the European Commission macroeconomic model, showed that the tax cut multiplier is only 0,3 in the first year or even less, while the government spending multiplier is between 0,3 and 0,7. Other studies show that both multipliers (from tax cuts and from government consumption) are larger if directed toward subjects with higher marginal propensity to consume (lower income population). Different and often controversial results come from assessments of fiscal multipliers of public infrastructure investments. These variations, in different countries (Australia, Canada, Germany, Great Britain and USA) range from zero to 4. Hence, Spilimbergo et al. (2008) conclude that even though the fiscal multipliers from key government objects have in principle significant productive effects for the private sector, there is no clear evidence that they are larger than those from government consumption. Further, fiscal multipliers tend to be higher in larger than in smaller countries. For example, some studies show that the fiscal multiplier (for a one year period) from direct and indirect tax cuts and from fiscal transfers are higher in Germany compared to France, Italy, Spain and Great Britain and that the short run multiplier from government purchases during unanticipated shocks tend to be higher in the USA than in Great Britain, France and Belgium etc. Perhaps such large spreads in the estimates of the efficiency of fiscal policy made some authors to resignedly ascertain that: “Nevertheless, it is remarkable that, 80 years after the Great Depression

and the onset of Keynesian economics, the range of mainstream estimates for multiplier effects is almost embarrassingly large.” (Auerbach, Gale and Harris, 2010, p.159). In this context, Barro argues that it would be far better to estimate the efficiency of fiscal policy with the cost-benefit approach, instead with the multiplier concept. (Barro, 2009). Yet, these differences in the estimated value of fiscal multipliers (the (in)efficiency of the fiscal stimulus) only point to the complexity of the issue and to the fact that many determinants affect the value of the fiscal multipliers. Putting aside the differences in the applied methods for assessment of the fiscal multipliers and the more extensive methodological problems (that strongly influence the results), we can find the following significant determinants of the value of fiscal multipliers (especially of long run fiscal multipliers):

The composition of government spending – in principle, long run fiscal multipliers related to infrastructure are higher than those related to “unproductive” government expenditures;

The level of development of the country – long run fiscal multipliers are higher in developed than in developing countries;

The exchange rate regime – countries with fixed exchange rate have higher long run multipliers;

Trade openness – open countries for trade have lower and often negative multipliers;

The level of public debt – highly indebted countries often have negative long run fiscal multipliers;

The economic cycle phase – the multipliers are higher during recessions than in expansions and they are far higher in times of prolonged recession and inefficient monetary policy, i.e. in terms of liquidity trap;

The strength of the automatic stabilizers – the weaker effect of automatic stabilizers suggests lower fiscal multipliers.

The above rules are relevant (although certain exceptions can be found) and are confirmed especially in recent studies in this field.¹²

Although the large spreads in the assessments of the fiscal multipliers complicate the analysis of the efficiency of expansionary fiscal policy in terms of serious contractions of economic activity, the experiences from the big crises (the Great Depression and the Great Recession) confirm that fiscal policy plays an important role in the recovery of economies. Even in the case of the Great Depression, when the fiscal expansion of the USA was modest (compared to the severity of the crisis), the psychological effects of Roosevelt’s New Deal on encouraging spending by the large macroeconomic sectors – household and business - must not be underestimated. Concerning the efficiency of Obama’s fiscal stimulus, it should be noted that there is an increasing number of authors that claim that they gave a big contribution to the recovery of the American economy and to reducing the unemployment – according to Christina Romer, they created (or prevented the loss of) almost 3 million jobs in the USA (Romer, 2011). The Nobel Prize winners Stiglitz and Krugman are known for their support for even larger fiscal stimulus than that planned with the Programme of President Obama. Other prominent neokeynesian economists also note that the effects of fiscal stimuli during severe and prolonged recession, such as the Great Recession of 2007-2009 proved to be more efficient than was presumed in the last 20 years. Even the IMF, known for its advocacy of fiscal austerity, also supported increasing the fiscal stimuli – a study by the IMF from 2010, analyzing the budgets of 15 countries which shows fiscal austerity in the last 30 years confirmed that in all cases the measures resulted in a fall in output and a rise of unemployment after each fiscal contraction (Romer, 2011, pp.18 –19). The faster recovery of the US economy and especially of the American labor market compared to the situation in Europe is definitely in some part attributed to the fiscal stimulus projected in the American Recovery and Reinvestment Act.

¹² Here we point to the study by Ilzetski, Mendoza and Vegh *How big (small) are fiscal multipliers?* NBER, 2012, based on the research of fiscal multipliers in 44 countries of which 20 developed and 24 developing countries, where the assessment is based on innovated quarterly data for a long period, compared to a number of other studies that use annuals statistical data.

On the Limitations of Fiscal Policy

The limits of discretionary fiscal policy are mainly related to (1) the long inside time lag of fiscal policy; (2) the limitations of the positive effects of budget deficits on output in the short run¹³ and (3) accumulation of structural budget deficits and creation of public debt. Budget deficits and public debt in developed countries in the period after 2008, resulting from the expansionary fiscal policy, surpassed the historical average typical for the post World War 2 period.

Table 2. Growth of budget deficit and public debt in selected countries, since 2008

	2008	2009	2010	2011	2012	2013	General government gross debt in 2013 (% of GDP)
Belgium	-1,1	-5,5	-4,0	-3,9	-4,1	-2,9	104,5
Germany	0,0	-3,0	-4,1	-0,9	0,1	0,1	76,9
Ireland	-7,0	-13,9	-32,4	-12,6	-8,0	-5,7	123,3
Greece	-9,9	-15,2	-11,1	-10,1	-8,6	-12,2	174,9
Spain	-4,4	-11,0	-9,4	-9,4	-10,3	-6,8	92,1
France	-3,2	-7,2	-6,8	-5,1	-4,9	-4,1	92,2
Italy	-2,7	-5,3	-4,2	-3,5	-3,0	-2,8	127,9
Hungary	-3,7	-4,6	-4,5	-5,5	-2,3	-2,4	77,3
Austria	-1,5	-5,3	-4,5	-2,6	-2,3	-1,5	81,2
Portugal	-3,8	-9,8	-11,2	-7,4	-5,5	-4,9	55,7
UK	-5,1	-10,8	-9,6	-7,6	-8,3	-5,8	87,2
EU - 28	:	:	-6,4	-4,5	-4,2	-3,2	85,4
EU - 18	:	:	-6,1	-4,1	-3,6	-2,9	90,9
USA	-6,7	-13,3	-11,2	-10,0	-8,9	-5,6	122,7
Japan	-2,5	-3,0	-8,3	-8,7	-9,0	-9,2	218,8

Source: Data Eurostat, 25.03.2015; IMF World Economic Outlook Database, October 2014; OECD Country Statistical Profile - United States, 2014; Japan www.tradingeconomics.com.

In the standard macroeconomic literature, the negative economic effects from the accumulation of budget deficits and the increased public debt can be located in several areas – reduction of national saving, consequences on the future generations (increased burden of public debt service) and crowding out private sector investments (Fiti and Tashevskaya, 2008). IMF analyses suggest that the growth of public debt of almost 40 p.p. of GDP (compared to the pre-crisis situation), will increase interest rates by 2 p.p. and reduce economic growth rates by 0,5 to 1 p.p. annually in the following years (Horton 2010, p. 28). Hence, neoclassical macroeconomists strongly oppose the large fiscal stimulus and remind that economies, in the long run, tend to function on their potential level and to reach full employment, that “they distort market confidence” and that they contribute to the abstinence of private investors due to expectations related to the negative implications from the fiscal

¹³ Budget deficits increase GDP in the short run. In the medium run, due to the increased money demand and interest rates, their positive effect disappears. In the long run, the crowding-out effect reduces the accumulation of capital and redirects it to unproductive uses, which ultimately reduces the output of the economy.

expansion (Lucas, 2011; Sargent, 2011) The views of some new Keynesians (especially Krugman and Stiglitz) regarding this question are diametrically opposite. Yet, the dramatic rise of budget deficits and public debt imposed the need for fiscal consolidation, as a long term process that is supposed to bring deficits and debts down to reasonable levels. But the dilemmas and controversies are many in this field as well. "In the short run, policymakers face a crucial dilemma. If they consolidate too soon - that is, they take actions to reduce budget deficits in the near term - they could kill the recovery. But inaction or policy mistakes could lead to concerns about further debt accumulation and ultimately reignite a crisis." (Horton, 2012, p. 26). In this sense, other economists also suggest that during a crisis we have to restrain from a premature termination of the fiscal stimulus (Romer, 2009).

Lessons for the Role and Importance of Fiscal Policy during Prolonged and Severe Recessions

Our analysis of the stand and functioning of fiscal policy during crises is based on the examples from the Great Depression and the Great Recession. Although the two big crises differ significantly, not only in terms of their intensity and consequences on the financial and real sector of the economies, but also in terms of the historical context of events, the state of economics science, especially of macroeconomics (Almunia et al., 2009), they nevertheless have common characteristics. The biggest similarity of these tremendously important episodes in the history of business-cycles is that both crises were global and mixed (financial and economic) and that in both crises the liquidity trap phenomenon existed and commercial banks lost their credit function. Experiences and mistakes of policymakers during the Great Depression were an important lesson for today's policymakers. The most important lessons on the role and importance of fiscal policy during prolonged and severe recessions can be summarized in the following way:

First, when economies fall into a liquidity trap (this in principle applies to mixed crises – financial and economic), fiscal policy proves to be a powerful tool for recovery of economies.

Second, the fiscal stimulus should correspond to the severity of the crisis in terms of amount, composition and timeline. Small fiscal stimuli, again relatively, i.e. against the severity of the crises, have small effects. The composition of government spending is extremely important. Public investments in large infrastructure are in principle more efficient, compared to government "unproductive expenses". Tax stimuli are more efficient if they are intended for those segments of the population that have lower income, i.e. higher marginal propensity to consume. A premature suspension of fiscal stimuli decelerates, prolongs the economic recovery.

Third, despite the numerous controversies related to the assessment of fiscal multipliers, the evidence shows that the efficiency is higher during deep crises and problematic efficiency of monetary policy. This assessment, as was previously concluded, is consistent with the argument that the efficiency of fiscal stimulus is larger when the banking system is dysfunctional, and the fiscal policy is inexpensive in view of the debt burden, i.e. it has low interest rates (Bernanke, 2014; Almunia et al., 2009).

Fourth, in good times governments should create enough fiscal space to enable action of fiscal policy in times of crisis.

Fifth, considering the fact that the effects of budget deficits in the short run increase GDP, but disappear in the medium run (because of the rising money demand and interest rates) and in the long run even reduce growth rates (crowding-out effect, displacement of accumulated capital toward unproductive uses etc.), fiscal consolidation is necessary after episodes of creation of large budget deficits and high public debt. One of its main goals is creating enough fiscal space for intervention in "bad times".

Lessons for the Republic of Macedonia

The Republic of Macedonia, after 2008, abandoned the strategy of fiscal austerity and began to create, for Macedonian terms, relatively large budget deficits. This resulted in a fast growth of public debt in the few recent years - the central government debt in the period 2008-2013 has practically doubled. In the case of Macedonia, there are a few key determinants of the value of fiscal multipliers that question the efficiency of the fiscal expansion implemented since 2008:

Unfavorable composition of public spending – a large share of public investments financed by budget deficits are unproductively spent on administrative buildings, monuments etc. A significant amount of public spending is also used for current expenditures, i.e. for covering the deficits in the pension funds, for wages of the hypertrophied public administration (including the increase in salaries recently implemented by the government) etc., which is an absurd and unsustainable situation.

The Republic of Macedonia is a small and open, highly import-dependent country – this factor also determines low fiscal multipliers. Even in the case of construction, a large part of the direct inputs are imported. Also a large part of the equipment for the administrative buildings (furniture, carpets, etc.) is produced abroad.

Aggravated situation with the public debt – the Republic of Macedonia, at first glance, has a relatively small public debt – the share of general government debt in GDP is slightly below 40% and places the country in the category of low to medium indebted countries. However, the debt is actually larger, if we consider the indebtedness of the local government units and the deficits of the public enterprises, as an integral part of public debt. Still, the problem with the public debt does not arise from its share in GDP, but from the weak export performance of the Macedonian economy, which already creates problems for the servicing the debt.

The Republic of Macedonia is a small country with low per capita income, and these features of the country suggest lower fiscal multipliers compared to large developed countries.

As a result of this situation: (1) the efficiency of the fiscal stimulus is small (according to some estimates, the fiscal multipliers of government expenditures are de facto negative) (Trenovski, 2013); (2) the fiscal space of the country is significantly narrowed, i.e. lost; (3) the debt sustainability is becoming problematic, even in the medium run.

In order to improve the situation we suggest immediately, without any delay to begin the process of fiscal consolidation, which should rely on a spending-based approach, and not on a tax-based approach. That is the best way to abandon the existing model of economic growth within which the Government (which is by definition a bad businessman and uses resources irrationally) is the biggest investor and employer in the Macedonian economy. The business sector should become the basic creator of economic growth. A well drafted and consistently implemented fiscal consolidation would allow creation of enough fiscal space for “bad times”. The so called new generation of fiscal rules that has been implemented in many countries in the post crisis period (balanced budget rules, rules based on the pay-as-you-go principle, rules for control of public debt etc.) (IMF, 2012), together with more dynamic economic growth rates of the country can substantially help to improve the composition of public expenditures of the country and to reduce the share of public debt in GDP. In this context, it is especially important that in the future, a priority of public investment is infrastructure (roads, railway, gasification etc.) that have a favorable effect on the business-climate in the country.

CONCLUSION

Our analysis, derived from the summarized effects of fiscal policy during the Great Depression and the Great Recession show that during mixed and deep crises (financial and economic) and in the presence of liquidity trap, the expansionary fiscal policy has an unavoidable role in the recovery of

economies. The efficiency of fiscal stimuli is determined by their extent, composition and timeline. The extent of fiscal stimulus should be in correlation to the severity of the crisis. Fiscal multipliers related to public investments in infrastructure are in principle higher than the ones related to “unproductive” public expenditures, and the multipliers from tax stimulations are higher if they are directed toward the part of the population with higher marginal propensity to consume. The time schedule of the fiscal stimulus is also important – their premature abolishment prolongs the recovery of economies. The budget deficits in the short run increase GDP, but their positive effect disappears in the medium run (due to the increased money demand and interest rates), and reduce economic growth rates in the long run. The limitations of expansionary fiscal policy are largely determined by the fact that during recession it increases structural budget deficits and public debt. Hence, fiscal consolidation, after episodes of creating large budget deficits and public debt, is necessary. One of its main goals is to create enough fiscal space in the periods of upward trend of business-cycles. These lessons for fiscal policy are relevant for the Republic of Macedonia. The most important determinants of the height of fiscal multipliers, elaborated in this paper, question the efficiency of expansionary fiscal policy in the case of the Republic of Macedonia. Macedonia, in the period after 2008, unfortunately “lost” its fiscal space with unproductive public investments. Therefore the process of fiscal consolidation should start without delay. Public investments in the future need to be primarily directed toward infrastructure – road, railway, gasification, energy etc.

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THE INNOVATION CAPACITY AND ECONOMIC GROWTH: EMPIRICAL ESTIMATION FOR CEE COUNTRIES

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ABSTRACT

This paper has two goals. The first goal is to investigate the question does the innovation capacity determine economic growth and economic performance of CEE countries, by applying several econometric techniques. The principal factor component analysis is applied in order to create a more reliable and representative variable that would measure the innovation capacity in our regression model, so as to avoid the multi – colinearity, being a common statistical weakness for this type of regression models. In our case, the innovation capacity as an variable of interest consist of general expenditure on R&D, number of patent, journal articles and scientific publications, as well as royalty payments. The second, panel econometric (random and fixed effects) regression and GMM dynamic panel regressions allow us to clarify the conclusions based on the new growth theory (endogenous growth models based on R&D and innovations) about the role and the importance of innovations, as a fundamental factor and the main engine of the long-run economic growth. Finally, we use an international benchmarks analysis to investigate the performance and the innovation capacity of the countries in the region, with special focus on the Macedonian economy, throughout the number of patent's applications, and firm's capacity for adoption, adaptation and transfer of new technology. This analysis would help in answering the second question in this paper, if the lack of innovation capacity was a binding constraint to economic growth in SEE countries, and particularly in the Republic of Macedonia.

Keywords: Economic growth, innovation, R&D, OLS panel regression, cross-country data, factor analysis.

JEL classification codes: O47, O3, O32, O38

INTRODUCTION

From the economic growth point of view, the role of technological advance consists in introducing new products and enhancing the quality of the assortment of current products. This process occurs differently depending on country position vis-à-vis the technological frontier:

- Countries on the frontier (with high tech) design new products and establish new quality/performance standards; and
- Countries below the frontier, which have out-of-date production technologies, reduce the distance between the country technological level and the world technological scope/edge through technological imitation and adjustment of the existing products and technologies.

The real technological advance usually results in enlarging the list of goods produced by the country (sophistication) and enhancing the quality of the existing products. Records about the number of produced goods are not available, but there is data about the inventory of exported goods.

Focusing on exports provides an additional advantage in research – the exported goods are competitive by definition, or correspond to the minimum quality standards.

The estimation of Macedonian innovation capacity and innovational performance will be done through:

- Growth accounting production approach
- Evolution of the national innovation capacity and cross-country estimation of innovation and economic growth performance;
- Comparative performance in registration of patents of inventions as a measure of R&D;
- Comparative performance in adopting innovations at the enterprise level.

Endogenous Growth Models and the Role of Innovation (R&D) to Economic Growth: An Overview

In order to comprehend the meaning of *knowledge* and *capital of knowledge* it is very important to make distinction between *knowledge* and *human capital*. Very often two terms are used as synonyms. However, there is an important difference. Knowledge refers to society's understanding about how the world functions.

Human capital, on the other hand, refers to cumulative stock of all resources devoted to transferring this understanding to the labor force. Or, to put it more explicatory, knowledge can be seen as the quality of society's textbooks, while human capital can be viewed as amount of time that has been spent (by population) reading this books [Mankiw (1995)]. More importantly, it seems that, while accumulation of human capital can be reasonably assumed to exhibit diminishing return, accumulation of knowledge does not encounter this problem. Consequently, accumulation of knowledge can be regarded as being most important sources of perpetual sustained growth. It is also important to make distinction between autonomous research, mainly basic, fundamental research and part of applied research, on the one side, and those research that are mainly devoted to discovery of new and/or modification of old products and/or production process (R&D), on the other side. Results of basic research are regarded to be entirely *nonrivalry* goods (use of this goods from one agent do not have influence on quantity of goods used by other agents) and *non-excludable* goods (producer / owner cannot exclude other agents from using them). In other words, results of basic research are regarded as *pure public goods*. For those reasons, possible private investors are not able to appropriate benefits from investment in basic research. Private rate of return is negligible compared to social rate of return, which is enormously large. In other words, although socially desirable, investments in basic research are impossible under private arrangements and market mode of transaction. For that reason, investments in autonomous and basic research are responsibility of government and public sector. The great economic importance of investment in basic research stems from the fact that results of the basic research represent a main input of R&D activities.

On the other hand, R&D investments are usually left to private sector and market mode of transaction. It doesn't mean, however, that *excludability* is absolute, and that, therefore, appropriability of benefits is satisfactory here. On the contrary, appropriability is far from being satisfactory. There are always possibilities to imitate new products and production process and to overcome different property rights limitations (patents). External effects in the form of spillovers are overwhelming phenomena here. For that and some other reason (increase in consumer surplus that is appropriated by consumers, for example), private rate of return are smaller than social rates of returns. Consequently, level of R&D investment is suboptimal under purely private arrangements. Government intervention, in form of subsidies, is necessary in order to increase the level of R&D investment. Facts speak by itself: approximately 20% to 30% of all R&D performed by private sector in modern market economies are financed by federal or local governments. Earlier mentioned point

on non-diminishing returns of knowledge accumulation, is important not only in making distinction between human capital and knowledge, but also in making distinction between new and *traditional approach in analyzing of R&D impact on economic growth*. In fact, first efforts to explain growth rate and especially to break Solow's residual by usage of some sort of R&D capital had been made by traditional theorist like Mansfield (1968, 1971, 1977), Kendrick (1973, 1981), Griliches (1980, 1984) and other.¹⁴ However, their efforts have two important shortcomings. First is already mentioned: they implicitly assumed that investment in R&D knowledge exhibit *diminishing return* like conventional investment in physical capital. In fact they introduced R&D capital in production function in exactly the same way in which physical capital is introduced. They simply added it as new factor of production. Its influence on growth rate is than measured as a multiple of its growth rate and elasticity of production with respect to R&D capital. R&D elasticity is, like in the case of conventional factors, measured as share of R&D in GNP. Such procedure, of course, involves certain changes in accounting of gross domestic product, capital and so on. Obvious consequence of this growth accounting practice is augmentation of contribution of overall capital (conventional + human + R&D) to economic growth. However, owing to diminishing rate of return property, R&D capital introduced in that way cannot be regarded as a source of sustained, perpetual growth.

The second shortcoming, which is in fact connected with the previous one, is even much less comprehensible. The way in which R&D capital is measured is wrong. It can even produce negative rate of growth of knowledge, which is obviously impossible. R&D capital is measured using *perpetual inventory procedure*, that is, it is measured as a cumulative of investment in R&D committed in the past which positive influences are still present now. Problems lay in a fact that they assumed, and in some cases calculated using fancy econometric technique, that R&D capital exhibit depreciation. So, if gross investments in R&D in certain period are less than depreciation of R&D capital, result will be negative rate of growth of knowledge and it is, as we already mentioned, impossible. Justification for accounting of R&D depreciation is found in a fact that owners (producers) of some innovation, because of external effects and spillovers, by passage of time lose ability to appropriate benefits from his investment in that innovation. Eventually their profit from that investment drops to zero. It is clear that this procedure can be legitimately used in explaining inter-firm differences in efficiency. But it cannot be used in sources of growth analysis. Changes in distribution of benefits from innovations have nothing to do with changes in quantity of knowledge. Attenuation of property rights of initial owners of innovations is not depreciation of productive power of knowledge. To see the mechanism of endogenous models with R&D investment, in what follow we will present the well-known Romer's (1990) model of growth.

Inclusion of the theory of technological progress into the neoclassical framework was not easy task because standard competitive assumptions were not easy to maintain. In fact, the return to scale of the production function tends to increase if technology A_t is introduced as factor of production, like in original Solow's model. Various attempts to overcome this difficulty by Shell, by treating knowledge as publicly provided good, or by Arrow and Sheshinski, by treating knowledge as a byproduct of "learning by doing", have not captured the basic idea of deliberate efforts of economic agents to develop new products and technologies. Introduction of intentional R&D activities in analysis of growth and the fact that firm may enjoy exclusivity of their inventions via the usage of patent based or other kind of intellectual property rights should be followed with departure from competitive assumptions framework characteristic for neoclassical growth theory. In other words, appropriate market (decentralized) theory of technological progress requires basic changes in neoclassical model in order to introduce imperfect competition. This was first time done in models of growth developed

¹⁴ Milenko Popovic (2006), "Old and New Theories of Economic Growth" (II part), Montenegrin Journal of Economics, Volume 2

by Paul Romer (1986, 1987, 1990, 1994, 1997)^{15,16}, and after that, extended by Aghion and Howitt (1992)¹⁷ and Helpman and Grossman (1994)¹⁸.

THE RESEARCH METODOLOGY FRAMEWORK

To research the main hypothesis and to fulfill the objective of the paper we apply integrated empirical techniques: panel cross-country econometric estimation and international comparative analysis. Each of these methods has different aspect and mechanism in the process of identifying if the innovation capacity is the most binding constraint to growth of a country.

Growth Econometrics

Panel data are more informative data; they include more variability, less colinearity and more efficiency.¹⁹ The question which researcher poses is which panel data methods to use: the Random Effects Model, or the Fixed Effects Model. The Random Effects Model seems appropriate when we think that unobserved effect is uncorrelated with all of the explanatory variables. Actually, the rationale behind the random effects model is that the variation across entities is assumed to be random and uncorrelated with the explanatory variables included in the model. Estimation of the Random Effects Model by Generalized Least Squares (OLS) is easy and routinely done by many econometric software packages. The basic model is as follows²⁰:

$$y_{it} = \beta_0 + \beta_1 x_{it1} + \beta_2 x_{it2} + \beta_k x_{itk} + a_i + u_{it} \quad (3)$$

Where we explicitly include an intercept so that we can make the assumption that the unobserved effect, a_i , has zero mean (without loss of generality) and the symbol, u_{it} refers to between-entity error terms. If we define the **composite error term** as $v_{it}=a_{it}+u_{it}$, then (1) can be written as:

$$y_{it} = \beta_0 + \beta_1 x_{it1} + \beta_2 x_{it2} + \beta_k x_{itk} + v_{it} \quad (4)$$

We would usually allow for time dummies among the explanatory variables as well. In using fixed effects or first differencing, the goal is to eliminate a_i because it is thought to be correlated with one or more of the x_{itj} . But suppose we think a_i is *uncorrelated* with each explanatory variable in all time periods? Then, using a transformation to eliminate a_i results in inefficient estimators. But this is elementary stuff – you don't need to teach econometrics.

The previous equation becomes RE model when unobserved effect a_i is uncorrelated with all of the explanatory variables i.e. covariance is zero:

$$Cov(x_{itn}, a_i) = 0 \quad t = 1, 2, \dots, T, n = 1, 2, \dots, k \quad (5)$$

¹⁵ Romer, P. M. (1990), "Endogenous Technological Change", *Journal of Political Economy* 98, S71-102.

¹⁶ Romer, P. M. (1994), "The Origins of Endogenous Growth", *Journal of Economic Perspectives* 8(1), 3-22.

¹⁷ Aghion, P., and Howitt, P. (1992), "A Model of Growth through Creative Destruction", *Econometrica* 60(2).

¹⁸ Grossman, G. and Helpman, E. (1991), *Innovation and Growth in the Global Economy*, Cambridge: MIT Press.

¹⁹ Gujarati, Damodar N. (2003), *Basic Econometrics*. New York: McGraw-Hill

²⁰ Wooldridge, Jeffrey, (2002), *Introductory Econometrics A Modern Approach*, Thomson

Now for the Fixed effect if we have the following expression: $y_{it} = \alpha_i + \beta_1 X_{it} + u_{it}, t = 1, 2, \dots, T$, for each cross-sectional unit average, this equation becomes, $\bar{y}_{it} = \alpha_i + \beta_1 \bar{X}_{it} + \bar{u}_{it}$, here $\bar{y}_{it} = \frac{\sum_{t=1}^T y_{it}}{T}$, if we subtract two previous equations (in order to eliminate the unobserved time constant) we get:

$$y_{it} - \bar{y}_{it} = \beta_1 (x_{it} - \bar{x}_i) + u_{it} - \bar{u}_i = \Delta y_{it} = \beta_1 \Delta x_{it} + \Delta u_{it} \quad (6)$$

So the Fixed effects estimator is efficient when idiosyncratic errors are serially uncorrelated, and there is no assumption about the correlation between the unobserved effect α_i and the explanatory variables.

International Comparative Analysis

Another tool that is becoming increasingly popular is the use of international rankings. Many organizations with different objectives create indices to assess the relative importance of countries in a widening set of dimensions. The idea of measuring performance in a comparative manner is in principle very useful, as it provides feedback to a society about its performance relative to what seems feasible. As such, it can trigger a social conversation around the topic at hand. Moreover, if properly interpreted and used, it can contribute evidence to a diagnostic effort.

The main concept of this tool is to focus on some areas of relative weakness. However, poor performance of a country in an area can be an indication of an inadequate supply, and hence a problem, or just low demand for that particular factor given the country's structure. Countries for example may differ in the importance and effectiveness of R&D expenditures for their pattern of growth. One country may be spending more than another, and yet be under-spending more vis-a-vis its optimal allocation.

In this paper we focus on measuring the innovation capacity (via number of patent's application and firms' capacity for adaptation and transfer of new technology) of Macedonian economy and compare it with the countries in the region.

PANEL REGRESSION ANALYSIS OF INNOVATION AND ECONOMIC GROWTH IN THE CEE COUNTRIES

Data, Sources, Descriptive Statistics and Variables Description

Table.1 shows the mean of the variables, their standard deviation and minimum and maximum values of the variables, number of observations, panel and average time periods.

Table 1: Descriptive statistics and variables description

	Variable	Mean	Stand. dev.	Min.	Max.	Obs.
LGDP	Log GDP per capita, US\$	8.08	0.74	6.09	9.51	N = 124
Innovation	Log of Innovation capacity (Royalty payments, GERD, number of patents and Journal articles)	-1.89	0.34	-2.69	-1.17	N = 120
Human capital	Log of Human capital (Gross enrolment in primary, secondary and tertiary education and education spending)	3.86	0.11	3.57	4.08	N = 135
Export, % of GDP	Log of Export, as a % of GDP	18.14	1.59	13.92	21.09	N = 135
Bank credit	Log of Bank credit to private sector, as % of GDP	3.05	0.71	1.25	4.48	N = 131
Openness	Openness (Export plus Import), as a % of GDP	4.53	0.32	3.86	5.11	N = 53
Investment Rate	Investment rate, as a % of GDP	3.17	0.25	2.34	3.68	N = 120
FDI	Foreign direct investment	17.25	1.44	13.69	20.46	N = 120
Inflation Rate	Inflation rate, %	1.54	0.60	0.04	2.72	N = 120

The variables are: the *level of real GDP per capita*; *innovation capacity* measured by royalty payments, general expenditure on research and development, number of patents and journal articles; *human capital* measured by gross enrolment in primary, secondary and tertiary education and education spending; *export* as a % of GDP; *bank credit to the private sector*; *openness* measured as a share of total trade in GDP; the *investment rate*; *FDI*; the *inflation rate*.

Econometric Model, Results and Explanations

The econometric model that we estimate has the following structure:

$$g = \gamma_0 + \gamma_1 \ln Innov + \gamma_2 \ln Hum + \gamma_3 \ln Ex + \gamma_4 \ln Invest + \varepsilon_i \quad (8)$$

The outcome variable in the model is economic growth measured by the natural logarithm of real GDP per capita in different time periods, while the independent variables as determinants of economic growth for analyzed group of the CEE countries are 1) *Innovation capacity* measured by royalty payments, number of patents and journal articles and GERD; 2) *Human capital* measured by gross enrolment in primary, secondary and tertiary education, education spending and number of teachers per student); 3) *Investment rate* - private and public capital investment as a share of GDP; 4) *Export* measured as a percentage of real GDP; and 5) *Bank credits* to the domestic private sector as a percentage of GDP.²¹²²

The estimated results from the empirical study of innovation and economic growth for group of CEE countries is presented in the Table below.

²¹We used principal component factor analysis approach to create the more reliable variables.

²²The database is composed by combination of sources from relevant specialized agencies and international institutions: World Bank, IMF, EBRD international institution.

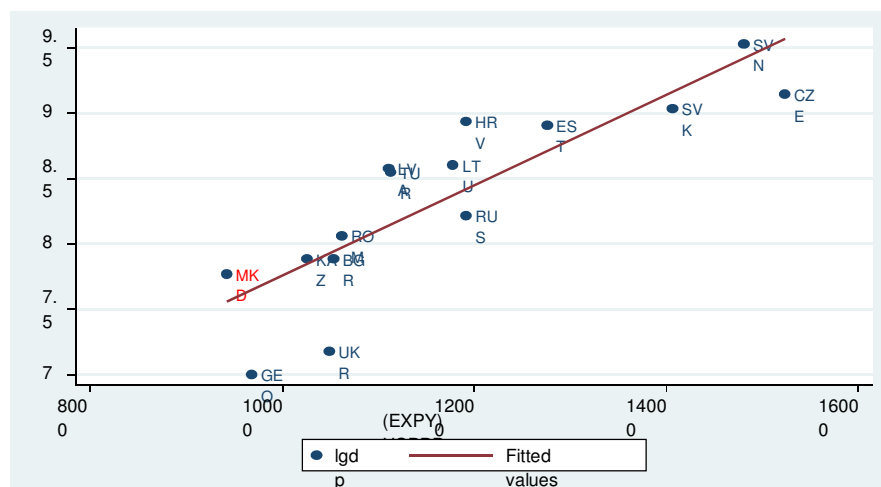
Table 2: Estimated results by OLS panel and fixed effects model

DEPENDENT VARIABLE: Economic growth	OLS Panel regression	Fixed effects model
INDEPENDENT VARIABLES:		
Innovation capacity	0.642*** (0.175)	0.124** (0.036)
Investment in human capital	2.672*** (0.774)	1.149*** (0.561)
Export, % of GDP	0.178*** (0.0346)	0.534** (0.384)
Bank credit to private sector, % of GDP	0.227** (0.0911)	
Investment rate		0.523** (0.347)
Constant	-5.155* (2.762)	-7.709** (2.940)
Observation	99	101
R-adjusted	0.696	0.474
Standard errors in заграда data		
*** p<0.01, ** p<0.05, * p<0.1		
Source: Author calculation		

From the above Table we can see that the Innovation capacity is highly positively correlated with economic growth, coefficient is 0.642, 0.124, respectively by using OLS Panel and Fixed effects model, and the t-test is 3.66, and 2.06, meaning that the coefficients are statistically significant at all conventional levels. The others factors in the model are also positive and statistically significant, regarding to economic growth, which is expected from the theory. These results and the R-adjusted coefficient (0.696 and 0.474) give us a strong argument that our model is unbiased.

Below is the graphical presentation of innovation capacity measured by the product and export sophistication and the economic performance of CEE countries, where it is obvious that Republic of Macedonia in this segment is present as a negative outlier. [Picture 1]

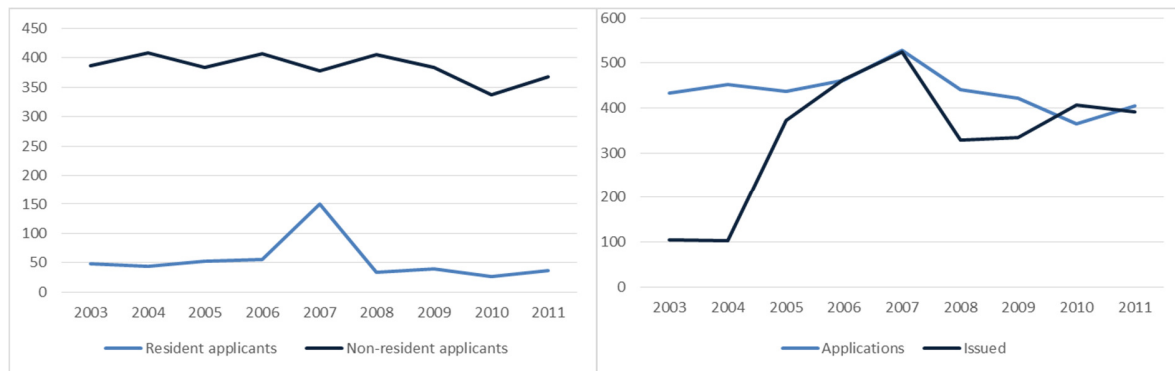
Picture 1: EXPY index and economic growth



THE ANALYSIS OF NATIONAL INOVATION CAPACITY

The number of patent applications and the number of registered patents are significant indicators that measure the innovation capacity of a country. The number of registered patents is much larger than expected from a country with such a size and development level as the Republic of Macedonia. But, if we analyze the structure of the applicants, it is obvious that non-resident applicants are a bit larger than the resident applicants, indicating that domestic science and R&D sector is not enough competitive. For illustration, in 2011 the total number of patent application is 405, from which, only 37 were from resident applicants.

Figure 1: Number of applications and issued patents, by the origin of applicants



Source: www.ippo.gov.mk/

Figure 1 shows the evolution of the number of requests for patents and the number of patents issued by the origin of applicants. The number of applications from residents has got a stable upward trend, while the number of applications from non-residents dropped substantially during the global economic crisis period.

Table 5: Matrix of correlation

	Number of Patents	Journal Articles	GERD	Tertiary Enrollment	GDP per capita
Number of Patents	1.0000				
Journal Articles	0.7334	1.0000			
GERD	0.8601	0.8943	1.0000		
Tertiary Enrollment	0.4718	0.6973	0.6209	1.0000	
GDP per capita	0.7846	0.8313	0.8067	0.6189	1.0000

Since we consider specifically the domestic capacity to innovate, we will focus on applications filled out by residents. In order to assess the performance of Macedonia on a global scale, we can use the following regression:

$$\ln Patents = \alpha_0 + \alpha_1 \ln(GDP/capita) + \alpha_2 \ln(GERD) + \alpha_3 Education + e_i$$

The exogenous parameters of this regression are GDP per capita, population, human capital measured by the average years of education and the R&D spending measured by General expenditure of Research and Development as a percent of GDP. The results are displayed in Table 4.

Table 6: Estimated regression results: Dependent variable: Number of patents

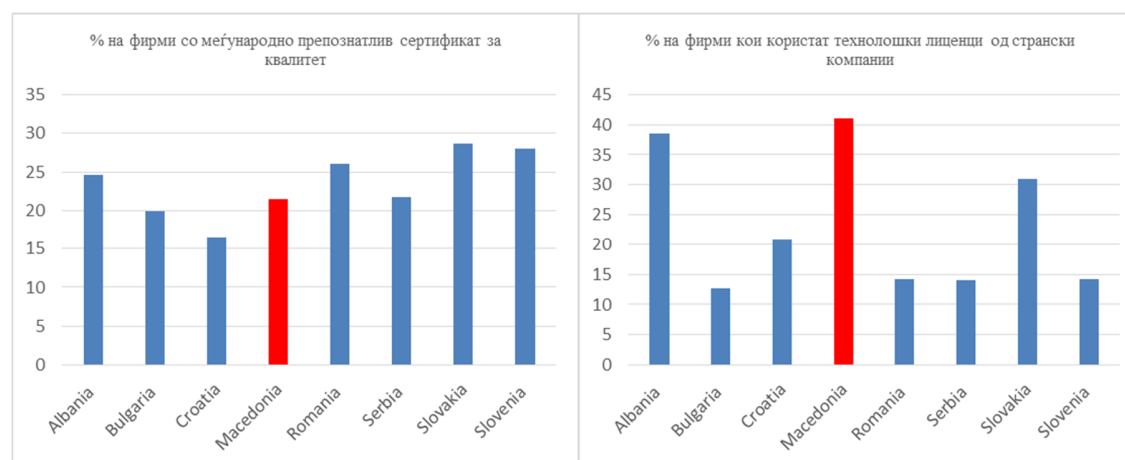
Variable	Coefficient	Standard Error	T-stat
Ln GDP per capita, PPP\$	0.8304339	0.240312	3.46
Human capital measured as average years of education	1.172034	0.6201607	1.89
General expenditure of Research and Development (GERD), % of GDP	0.7557995	0.2922528	2.59
Constant	-21.24028	2.052689	-10.35
			R ² =0.6817

The estimated OLS regression results show positive and statistical significant correlation between the level of GDP per capita, human capital and R&D spending, with respect to the number of issued patents.

INNOVATIONS AT THE ENTERPRISE LEVEL

The innovation capacity of a country is just a precondition; a major importance belongs to the ability to introduce relevant changes, and to implement the international practices and technologies at enterprise level. Republic of Macedonia is roughly at the same level as other countries from the region in terms of the percentage of firms with international certificate for quality and among the leaders in terms of the percentage of firms with international technological license, compare with countries in the region in 2012. [Picture 2]

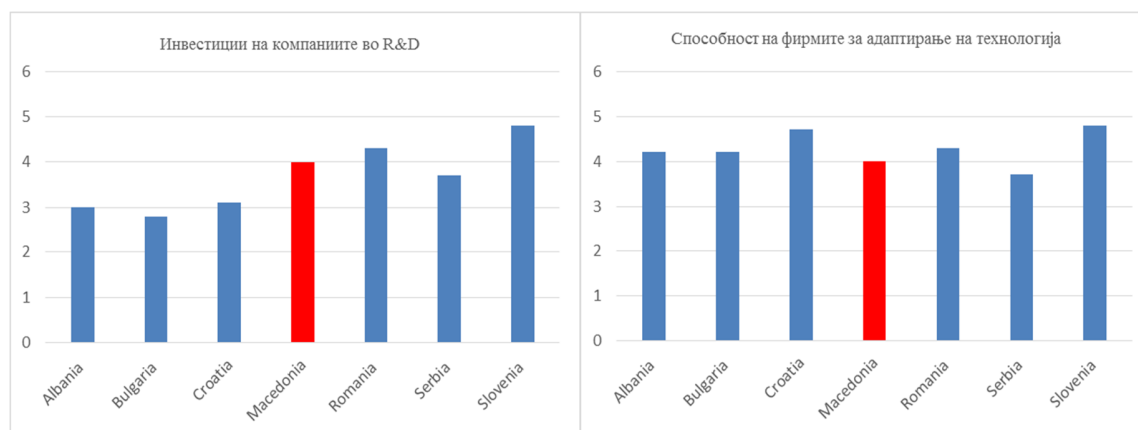
Picture 2: % of firms with international certificate for quality and % of firms with international technological license



Source: Enterprise Survey Index 2012

The expenditure on R&D incurred by the Macedonian enterprises is higher than the average, behind Romania and Slovenia as countries where firms spend much more for R&D activities. But, on the other side, the Macedonian firm's ability in adoption new technology is weaker than other countries in the sample. [Picture 3]

Picture 3: Company's investment in R&D and firm's ability in adoption new technology



Source: Global Competitiveness Index, 2013-14

CONCLUSIONS

The new generation of endogenous growth models embodies the role and importance of innovations as the main "engine" of the long-run economic growth. The main aim of this paper is to test empirically the hypothesis that innovations is a fundamental factor and main driver of economic growth by using the OLS panel regression and fixed effects model for a sample of CEE countries, and to analyze the innovation capacity and performance of Macedonian economy by using comparative analysis of performance in registration of patents and the ability for adopting new technology at the enterprise level. The second part of the research related to comparative analysis of innovation capacity of Macedonian economy and the identification of technological progress contribution to economic growth is concern to the hypothesis if innovation capacity is the most binding constraint to economic growth of Macedonian economy.

The estimated results by using OLS Panel regression and fixed effects model for sample of CEE countries show the positive and statistically significant correlation between innovation capacity and economic growth. The general conclusion from this regression estimation is that countries which have succeed in the process of designing a strong innovation capacity, have better economic performance in the analyzed period. Unlike the estimated regression coefficient of innovation that is representative for the whole sample of countries, we are skeptical that the innovations (interpreted in the way we did in our models) have had a significant role for economic growth in Republic of Macedonia. Moreover, the results of growth accounting indicates that the contribution of technological progress is negligible, compared with the capital's contribution to economic growth.

Appendix 1

Definitions and sources

Definition	Source	Further note
Growth rate	World Development Indicators, WB	
Log of GDP per capita, US\$	Calculated based on data from the World Development Indicators, WB	Taking log of GDP per capita, US\$
Innovation	World Economic Forum	Log of Innovation capacity (Royalty payments, GERD, number of patents and Journal articles)
Human capital	World Development Indicators, WB	Log of Human capital (Gross enrolment in primary, secondary and tertiary education and education spending)
Export growth, %	World Development Indicators, WB	
Investment growth, %	World Development Indicators, WB	Fixed capital formation growth, %
Bank credit to private sector	World Development Indicators, WB	Taking log and first difference of bank credit to private sector (% of GDP)
Inflation rate	World Development Indicators, WB	

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HAVE LOOSE MONETARY POLICY AND ENHANCED REGULATORY STANDARDS FOR BANKS LED TO SUSTAINABLE ECONOMIC RECOVERY?

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ABSTRACT

Ultra loose monetary policy is in place almost seven years. Conventional and unconventional monetary policy instruments significantly increased central bank balance sheets and asset prices. Bank balance sheets remained stagnant. They were oriented mainly in increasing their capital base and becoming stronger. Credit was not supporting economic growth. Companies were mainly borrowing from bond market, while households were mainly rescheduling their debt.

In countries with developed capital markets, bond market, successfully substitute credit market as a driver of economic growth. The most successful were USA and UK, which renewed economic growth permanently. These two countries, together with Germany, were successful in deleveraging, as well. European Monetary Union Area, remained mainly with highly concentrated banking sector, high leverage, need to permanently recapitalize banks, and low credit growth. Underdeveloped bond market was not able to substitute credit, especially for medium and small companies. Growth remained anemic and unemployment high.

Quantitative easing, has been used as main tool for economic recovery. It was affecting the economy through three channels: direct financing of ultimate borrowers; wealth effect and through maintaining very low yield for non-risk assets, banks were forced to increase their risk appetite in order to achieve higher yield.

Balkan countries are financially and economically highly connected with European Monetary Union Area. More than 60 percent they trade with EU, while the largest number of banks are subsidiaries of EU Area global banking groups. In this article it is analyzed how banking regulatory and monetary measures adopted in Euro Area were reflected on banking industry and economic growth in Balkan countries especially on Bosnia and Herzegovina, Croatia, Macedonia, Monte Negro, Serbia and Slovenia. In these countries central banks, were not able to implement any sort of Quantitative easing. Actually, it is investigated what was the scope to deviate in Balkan countries from banking regulatory and monetary measures in Euro Area.

The article deals with three issues: a) global response to crisis in banking sector and monetary management; b) monetary stimulus and banking sector reform in Euro Area; and c) what was room for independent monetary management and banking sector re-profiling in Balkan countries in order to generate sustainable growth.

Keywords: monetary policy, quantitative easing, banking industry, credit growth, deleveraging, economic growth.

JLE classification codes: E52, G28

INTRODUCTION

Just before the 2008 crisis and the longest and deepest global recession since World War II the “old orthodoxy”, was celebrating victory over business cycles. Great moderation was perceived as new long term stance of global economy.

Monetary policy would have only one long-term goal: **price stability**. As long as inflation is stable, everything would be the best in the best of all possible economic and financial worlds.

Rapid credit growth was associated with dynamic economic growth. Policymakers see little danger in the rapid credit growth; they were largely unconcerned by rising leverage; they thought that financial innovation and liberalization added to rather than reduced stability; and they believed it was easier to clean up after asset-price bubbles burst than to prevent them from growing in the first place.

There was no regulatory standard for bank leverage and liquidity. Only economic capital has to be maintained above 8%, based on risk weighted assets.

The business model of banking has been: employ as much implicitly or explicitly guaranteed debt as possible; employ as little equity as one can; promise a high return on equity; link bonuses to the achievement of this return target in short term; ensure that as few as possible of those rewards are clawed back in the event of catastrophe; and become rich. This was a wonderful model for banks. For everybody else, it was a disaster.” (Martin Wolf, Financial Times, September 3, 2014).

After the crisis it had become obvious that “great moderation” was short lived and business cycles are permanent feature of market economy. “Old orthodoxy” was substituted with “new orthodoxy”, involving strict regulatory standards for banks. Monetary policy remains the principal tool of macroeconomic stabilization, with fiscal policy playing subordinated role. The target of monetary policy is to keep inflation low and stable, though some central banks (notably the Fed) explain that the aim is the highest level of activity subject to hitting it’s inflation target.

Central banks broadened their instruments to include unconventional measures like quantitative easing and forward guidance. Through quantitative easing they directly inject funds on capital and credit market and affect long-term interest rates. Through forward guidance they influence long-term expectations regarding stance of monetary policy, especially developments on long-term interest rates.

Although higher financial development is associated with faster growth of value added in the sectors more heavily dependent on external finance, in OECD countries, financial development has no significant impact on value added growth anymore. Academic research has suggested that financial development does not have a uniformly positive effect on economic growth, at all levels of financial intermediation. The evidence points to the fact that there is threshold beyond which the positive effect of finance on growth starts petering out. (Vitor Constancio, April 2014, p. 2).

Credit booms and the apparently inevitable subsequent busts are hugely costly. In this respect monetary policy and regulators, should try credit booms not to become too big as ones before 2008. Financial sector has been more tightly regulated: higher capital, lower leverage, higher liquidity.

Economic capital based on risk weighted assets was increased from 8% to 10,5%, fully effective in 2019. Limit for bank leverage was imposed. Leverage of the bank cannot exceed/drop below 3% of capital with non-risk weighted assets and off-balance sheet exposure as denominator.

Minimum liquidity requirement is established for a period of a month. Within that period a bank should have sufficient liquidity to make all payments.

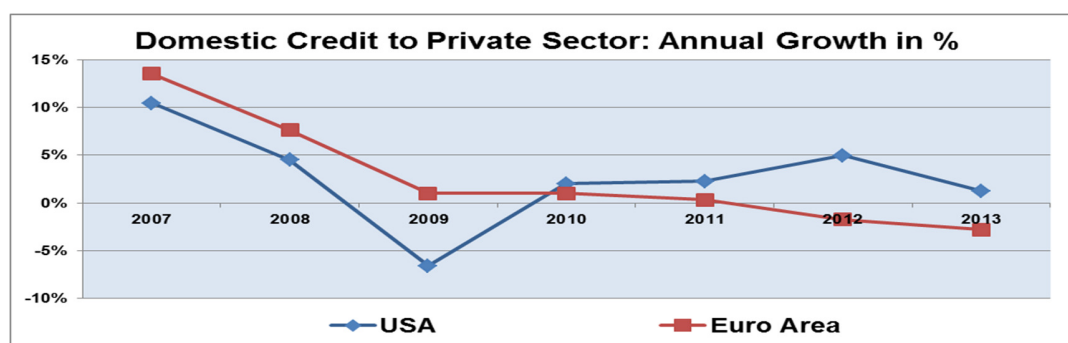
The text that follows is mainly exploring the effects of “new orthodoxy” on economic developments. It is divided in two chapters: chapter two that explores effects in matured market economies – USA and Euro area; and chapter three that explores effects in six Balkan countries: Albania, Bosnia and Hrcegovina, Bulgaria, Croatia, Macedonia, ands Serbia. Concluding remarks are presented in third chapter.

Effects of “New Orthodoxy” in USA and Euro Area

Seven years after global financial crisis, deleveraging has not been conducted effectively. Contrary, due to contraction of real GDP and the need governments in advanced economies to borrow

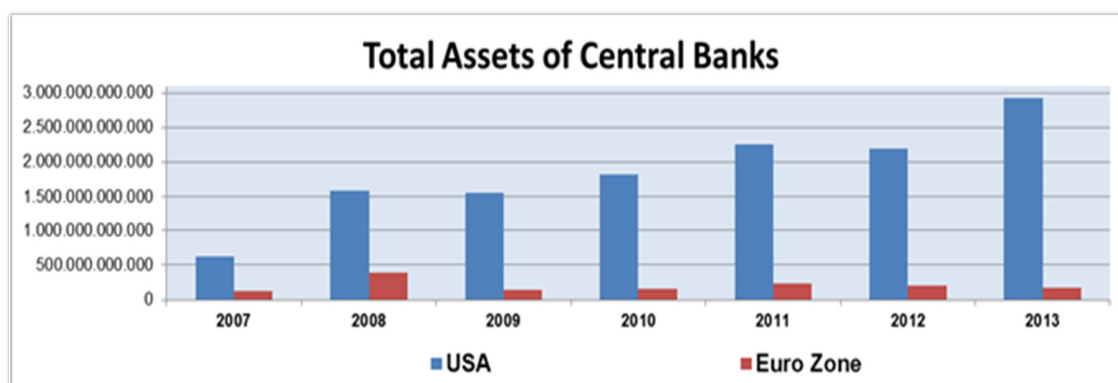
heavily to fund bailouts and offset falling demand in the recession, global debt and leverage have continued to grow. Four to five countries, succeeded to deleverage private sector: United States, the United Kingdom, Spain, Ireland and Germany (McKinsey Global Institute, February 2015, pp. 2-7). Thus, continuously high leverage of private sector, put in halt credit expansion of banks. The resulting state of affairs is a so-called “creditless” recovery in the matured market economies (Vitor Constancio, April 2014, p. 3).

Graph No. 1



Although printing press of all central banks has been very active credit growth in selected countries was stagnant or moderate. Cumulative credit growth to private sector in the period 2008-2013 in USA and Euro area was: 10.6 and 5.4, respectively. Thus, monetary stimulus, that has been in place in all countries was not affecting credit activity of the banks. Economic recovery was mainly funded through bond and stock markets and unconventional monetary policy instruments.

Graph No. 2 Total Assets of ECB and FED (in EUR million)



The balance sheet of Fed, in period of seven years was increased by 3.6 times, while balance sheet of ECB in the period 2007-2013 was increased by 38 percent. Short-term interest rates has been kept close to zero, recently even negative, while long term real interest rates, due to deflationary pressures were in a range of +0.5 percent to +1.5 percent in selected countries. “The real interest rate is most relevant for capital investment decisions. The Fed’s ability to affect longer-term real rates, is transitory and limited. Except in the short run, real interest rates are determined by wide range of economic factors, including prospects for economic growth – not by the Fed” (Ben Bernake, March 31, 2015).

As a main reason for low loan production of banking industry is presented high leverage of private sector not weak and unrepaired balance sheet of banks. "Since the onset of the global financial crisis, until last year, the top 20 European banks have increased their capital in absolute amounts net of shares buyback by 60% more than top 20 American banks" (Vitor Constancio, April 2014, p. 3).

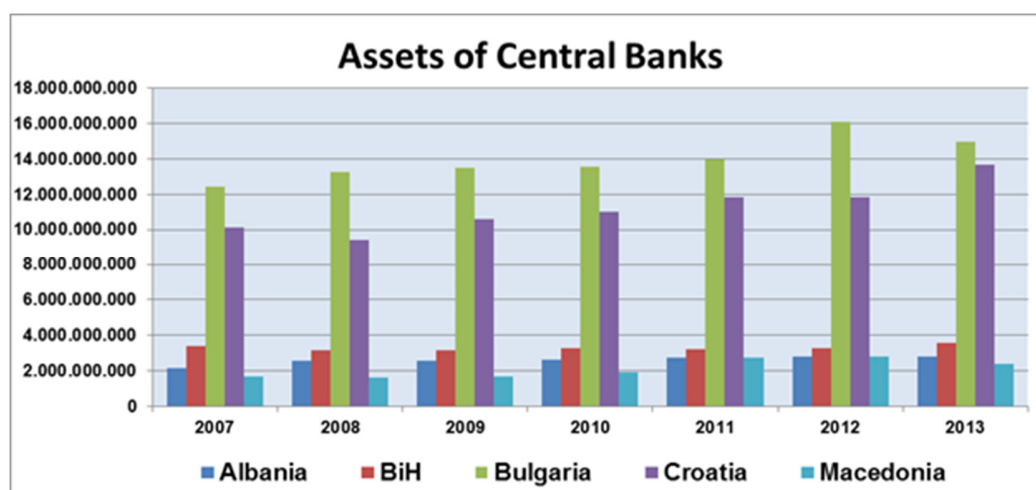
Stress test conducted by European Central Bank (ECB), showed that only 25 credit institutions out of 130, that account for 81.6% of total banking assets, need additional capital of EUR 25 billion (ECB, October 2014, p.2-5).

Lower bank leverage and higher capital strength, has been increasing the cost of intermediation for banks. It is assessed that full implementation of new regulation for capital adequacy framework, liquidity standards and new reporting systems will cost banks 33 percent less profitability. That will maintain rate of return in banking industry in the matured market economies in a range of 6 to 8 percent (8-12 percent before crisis), while in emerging Europe it is assessed to be in a range of 12 – 15 percent (15-25 percent before crisis).

Effects of the "New Orthodoxy" in Balkan Countries

Balkan countries by size are un-optimum currency areas. In this respect monetary policy in these countries is highly associated with monetary policy in Euro area. Three countries – Bosnia and Hrrzegovina, Bulgaria, and Montenegro – are conducting monetary policy based on currency board rule against the Euro. Two countries – Macedonia and Croatia – are conducting monetary policy based on fixed exchange rate against the Euro. Third group of countries are Albania, and Serbia using strategy of inflation targeting with exchange rate of their domestic currencies against the Euro as very strong indicator of future inflationary developments.

Graph No. 3



Expansion of total assets of the central banks in the period 2007 – 2013, in analyzed group of countries, depended on the net capital inflow. The highest growth was recorded in Macedonia 44.3 percent, Croatia 35.2 percent and Albania 32.6 percent. Growth of central bank assets in Bulgaria and Bosnia and Herzegovina was moderate: 20.1 percent and 5.8 percent, respectively.

As in matured market economies, credit growth to banking sector depended on three factors: liquidity of the banking industry, leverage of private sector – corporate and households, and capital strength of banks.

Banking sector in Balkan countries account for almost 90% of total financial system. In this respect, the banking sector is financial sector monopoly. Banks are predominantly owned by foreign – mainly EU banking groups. In this respect, capital strength of particular banks, depend on leverage of their mother bank – principal owner.

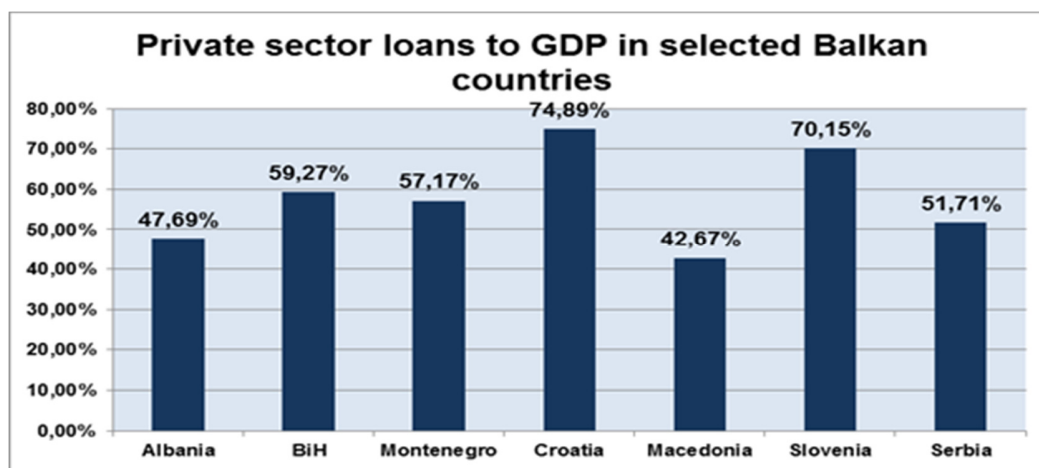
Leverage of Balkan countries banks is low. Average leverage ratio is above 6 percent (above 3 in matured market economies), two times higher than the minimum. Simultaneously, banks are well capitalized. Average capital adequacy ratio based on risk weighted assets is permanently high – in 2013 the average was 16,7%, and 17,1% excluding Slovenia. The most capitalized are the banks from Croatia (20,9%), Serbia (19,9%) and Albania (18,0%), while capital adequacy of Slovenian banks was 11,0%.

Banks from selected Balkan countries are universal classical type, whereas taking deposits and lending activities are dominant. Bank loans on average are accounting for 64,3% of total assets (31% EU average). This figure for Bulgarian banks is 86,3%, Serbia 71,2%, Bosnia and Hercegovina 63,7% and Croatia 64,6%.

From the point of view of leverage of the private sector, there was a space, increased liquidity to be processed into higher credit. However, by criteria of financial development, Balkan countries can be divided on two groups: **I group**: in which financial development can be assessed median – loans to GDP between 40% to 60% (Albania, Macedonia, Montenegro, Serbia, Bosnia and Hercegovina) and **II group**: where financial development is close to optimal – loans to GDP between 70% to 90% (Bulgaria, Croatia, Slovenia).

It can be concluded that credit growth in both groups is positively associated with GDP growth. However, the second group of countries is approaching the boundaries when credit growth will become impotent in respect of further fueling the economic growth.

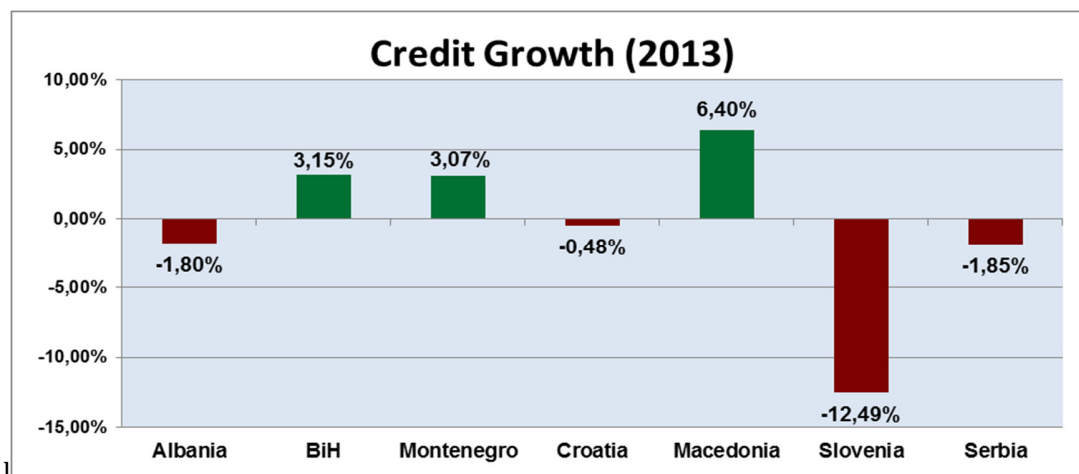
Graph No. 4



Leverage of companies and households was not factor that limited the credit growth in the Balkan countries. Deleveraging as part of “new orthodoxy” was not on the agenda in the Balkan countries.

Credit growth was associated with balance sheet expansion of central banks and inflow of foreign capital. Except Macedonia and Albania, where domestic deposits were not fully processed into loans, in all other countries where loans to deposit ratio was above 100, for further credit growth new foreign borrowing is needed.

Graph No. 5



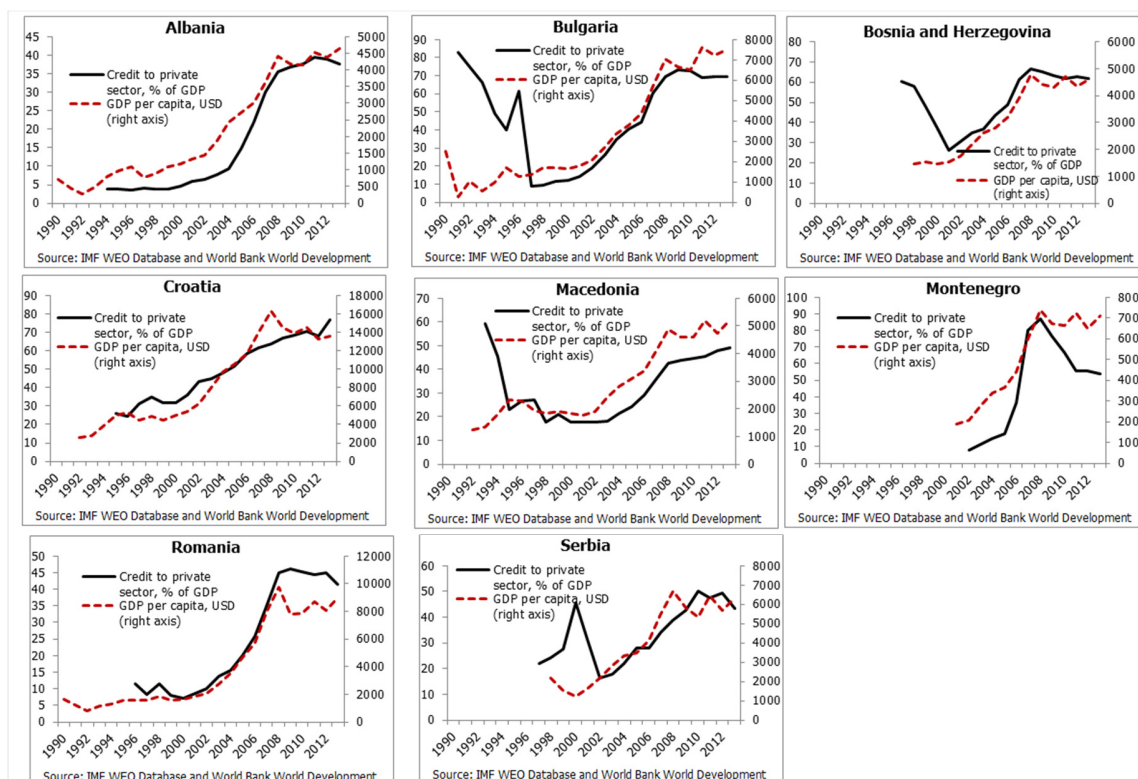
Relationship Between Credit and Economic Growth

In all Western Balkan countries there has been strong relationship between credit and economic growth. Graph No. 6 presents that, there are several common aspects present in all countries. For instance, in all Western Balkan countries the two variables mostly move together, particularly when both are rising. However, in several countries this co-movement starts after the volatility of the early transition years (e.g. Bulgaria or Serbia). Finally, in some of the countries there are indications of a de-coupling between loans and economic growth towards the end of the period (e.g. Montenegro or Romania).

The econometric analysis takes into account these factors, as well as the constraints arising from the relatively small sample and the question being investigated. In particular, the sample is consisted of annual data on 8 Western Balkans countries between 1990 and 2013. However, the panel is unbalanced, since data are not available for most countries for the early transition years. The econometric estimation is based on two key variables: GDP per capita in US dollars (*gdp_pc_n*) and the share of loans to the private sector in GDP (*loans2gdp_new*).

The features of our sample and the question at hand preclude the use of some of the most common panel estimation methods. For instance, we are unable to use the Least Square Dummy Variable (LSDV) estimator because the dynamic specification is a well-known source of bias in results, particularly in cases like ours when the time dimension is relatively short. In addition, LSDV would also not be appropriate, due to existence of endogeneity between loans and economic growth. While GMM methods would in principle be able to address the endogeneity problem, they are quite problematic when applied in samples like ours with a small number of cross-section units and a moderately long time dimension.

Graph No. 6 Relationship between Loans to GDP and GDP growth in Western Balkan Countries



Consequently, our estimation relies mostly on the class of mean-group estimators. We rely mostly on the Pooled Mean Group estimator (PMG), although we also present the results from Mean Group estimation (MG). The PMG estimator has several important advantages compared to other panel methods, most notably the allowance of parameter heterogeneity and the ability for a separate modelling of long-term relations and short-term dynamics. More precisely, the PMG estimator allows the short-term responses to differ between countries, while it constraints the long-term relations to be the same across countries. This approach is justified in the context of data analysis in Graph No. 6, which indicates common long-term movements of loans and economic activity in the Western Balkans, but with some short-term divergences in various countries.

We start the analysis of the effects of credit activity on GDP growth by comparing the mean group (MG) and pooled mean group (PMG results). Although results between the two methods are somewhat different, we decided to proceed with PMG, as indicated by the Hausman test. More precisely, the Hausman test does not reject the null-hypothesis, i.e. it justifies the use of a single error-correction mechanism as in PMG. On the other hand, it also indicates that MG would be inappropriate in this case, since it would use information in an inefficient manner by applying separate error correction terms.

Results of the PMG regression indicate that, in the 8 Western Balkan countries, there is indeed a long-term co-integrating relationship between GDP per capita and loan/GDP ratio, as indicated by the significant coefficient on loans in the error-correction term. This implies that, in the long term, an increase of loans/GDP ratio of 1 percentage point results in a GDP per capita that is higher for around 44 US dollars. In addition, the size of the error correction term itself indicates that more than a third of the disequilibrium between GDP per capita and loans is corrected within a year, thus pointing

towards a relatively strong adjustment mechanism. Further, in the short term, loans have a positive effect on GDP, which is significant at slightly higher than 10%. These results indicate that an increase in the loan/GDP ratio of 1 p.p. results in GDP p.c. that is higher for about 31 dollars, on average.

Table No. 1 Pooled Mean Group Estimator Results Loans/GDP and GDP per Capita (in USD Dollars)

Dependent variable: GDP per capita, USD	Option 1		Option 2	
Long-run coefficients				
Loans/GDP	43.83***	(4.12)	155.31***	(43.0)
time trend	151.22***	(16.24)	1314.35***	(306.29)
crisis dummy (2009-2013)			-9242.09**	(4451.17)
interaction (crisis dummy * loans/GDP)			-122.04	(79.34)
Loans post-2008 (Loans/GDP + interaction)			33.27	69.83
Short-run coefficients				
Error-correction	-0.39***	(0.12)	-0.11***	(0.02)
Δ Loans/GDP	30.64	(19.92)	-15.78**	(7.40)
constant	148.76	(189.8)	-1356.52***	(259.35)
Observations	137		137	
Number of countries	8		8	
Observations per group - average	17.1		17.1	
Observations per group - minimum/maximum	11/22		11/22	
Log-likelihood	-1021.97		-988.75	

Note: Standard errors in parentheses. ***, ** and * denote significance at the 1%, 5% and 10% level, respectively.

We also investigated whether there is any difference in the effect of loans before and after the global financial crisis. In order to do so, in our baseline regression we add a dummy variable (*dv_gfc*) which equals 1 between 2009 and 2013 and zero otherwise. Consequently, we also add an interaction term between the dummy and the loan/gdp ratio (*interaction_new*), which is used to analyze whether the effect of loans on GDP differs before and after the crisis.

The most important results from the previous specification still hold. There is a significant long-run relation between loans and GDP, which is even stronger in the pre-crisis years (an increase of GDP per capita of 155 dollars for a rise of loans/GDP ratio of 1 percentage point). In addition, there is also a significant short-run adjustment mechanism, which compensates deviations from the long-run equilibrium. We also conclude that there are some indications that the effect of loans on GDP does indeed differ before and after the crisis. In particular, results indicate that the effect of loans on economic activity has been insignificant after 2009, while previously we established that this effect was positive in the pre-2009 period. These results are also in line with the data analysis above, which indicated that post-2008 there is a de-coupling between economic activity and credits in several countries.

CONCLUSION

“New orthodoxy” still puts big emphasis on monetary policy in stabilizing economic developments. Two additional components are added: banks must be sound, which is dealt with new requirements for capital, liquidity and bank leverage; and credit can support growth up to certain leverage of private sector, when the leverage limits are overcome, further credit growth is counterproductive.

The “new orthodoxy” successfully dealt with two factors out of three: supply of liquidity through ultra loose monetary policy and boost of stock and bond markets; decrease of leverage and increase

of capital strength of the banks. However, there was no success in deleveraging of private sector and government world-wide. Recovery was creditless, mainly relying on quantitative easing and funded by stock and bond markets.

In Balkan countries, remedies of “new orthodoxy” were not needed. Banking sector was not leveraged and well capitalized. This refers as well for private sector – corporate and households. In these countries, higher liquidity was easily process in higher credit growth. Economic growth has been fuelled by credit growth, mainly. The key issue for these countries was low domestic savings and how to attract foreign capital in order to support further credit growth.

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IN SEARCH OF THE RELATIONAL RENT IN THE EDUCATION-INDUSTRY COOPERATION: THE HIGHER EDUCATION INSTITUTION PERSPECTIVE

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ABSTRACT

In the contemporary world, organizations undergo constant changes by adapting their aims, functions, tasks and management methods to altering environment, which is vitally important especially in the conditions of economic recovery in the post-crisis period. The condition of both business and education organizations development is orientation towards the environment, considering its present and future changes. Organizations operating within competitive environment are forced to search for opportunities of growth. One of them is finding complementary resources and maintaining cooperation with their donors. So, in the contemporary reality the idea of existence and development of any organization is strictly related to the existence of relationships between different organizations within the global market.

The aim of the paper is to highlight the importance of cooperation between business firms and higher education institutions. For the purposes of the objective of the paper there has been conducted the analysis of the references. There has been also used the desk research in the form of different reports and documents including the materials supplied by Faculty of Management of Czestochowa University of Technology in Czestochowa, Poland. Eventually, the applied leading research method was case study – the description of the case of Business Representatives Advisory Council as a particular form of University-Business cooperation.

The case study presented in this paper leads to the conclusion that both firms and universities pursue mutual cooperation which is focused on generating additional value for all the participating organizations. Collaborating organizations are able to generate relational rents through relation-specific assets, knowledge-sharing routines, complementary resource. endowments, and "effective governance." It is also noticeable that there are mechanisms involved that bring about rents based on cooperation such as interorganizational asset connectedness, partner scarcity and resource indivisibility (coevolution of capabilities).

Keywords: interorganizational cooperation, business, university, education, relational rent

JEL classification codes: I23, L14, L20, L22, M10, O40

INTRODUCTION

In the contemporary world, organizations undergo constant changes by adapting their aims, functions, tasks and management methods to altering environment, which is vitally important especially in the conditions of economic recovery in the post-crisis period. The condition of both business and education organizations development is orientation towards the environment, considering its present and future changes. Thus, the environment creates the opportunities of development. Organization development may take place when development conditions are detected and also properly exploited. Organizations operating within competitive environment are forced to search for such opportunities of growth. One of them is finding complementary resources and maintaining cooperation with their donors. So, in the contemporary reality the idea of existence and

development of any organization is strictly related to the existence of relationships between different organizations within the global market. Any kind of cooperation and networking are important tools allowing for gaining competitive advantage, gaining knowledge, improving sales, better stakeholders relations and lowering supply costs. The tools are vital both for the enterprises and education institutions.

Thus, the environment creates the opportunities of development. Organizations operating within competitive environment are forced to search for opportunities of growth. So in the contemporary world of the 21st century, in the era of globalization there is no place for an isolated activity of an enterprise. In this context, the idea of existence and development of any organization is strictly related to the existence of relationship between different organization within the global market.

One may conclude that the symbol of the 21st century is the individually circulating atom which is the metaphor of individualism. In the modern economy, the atom already belongs to the past. Contrary to the isolated, lonely atom, the symbol of the present century is network. The dynamics of the modern society and especially the modern economy increasingly undergoes the logics of network [Kelly, 2001, *passim*]. In this context it is essential to underline that it is the amount and the specificity of inter-organizational relations which considerably determines the development and competitiveness of organizations in the hyper-dynamic environment. In these conditions, success is strengthened due to the synergy and relational rent coming from creating relations and exploiting advantages resulting from the cooperation of different entities.

In the light of the above statements, the aim of the paper is to highlight the importance of cooperation between business firms and higher education institutions.

THE RELATIONAL RENT AS A RESULT OF INTER-ORGANIZATION COOPERATION

The acquisition of resources, which are necessary for the development and sustained competitive advantage on commercial (business) and non-commercial markets (e.g. public education), is available by hierarchical, market- and network-based or cooperative organizational arrangements.

There are important reasons for preferring the cooperative form of resource acquisition to the market-based and hierarchical ones [Duschek, 2004, pp. 53-73]. In order to acquire critical resources [Kuraś, 2014, pp. 79-87; Seroka-Stolka, 2013, pp. 79-82; Sipa, Lemańska-Majdzik 2011, pp. 127-143; Nowodziński, 2013, *passim*], from the resource-based perspective [Barney, 1991, pp. 99-120; Peteraf, 1993, pp. 179-191; Teece, Pisano, Shuen, 1997, pp. 509-533; Bresser, Hitt, Nixon, 2000, pp. 1-21], cooperative arrangements are perceived as an important alternative mode of acquisition of non-tradable resources. On account of factor market imperfections, strategically relevant resources can be acquired via learning processes and also with the aid of interorganizational relations [Hamel, 1991, pp. 83-104; Ireland, Hitt, Vaidyanath, 2002, pp. 423-446]. It has been argued that very few organizations can build core capabilities without importing some knowledge from beyond their boundaries [Leonard-Barton, 1995, p. 135].

Joint actions of organizations enable the strategy of development and gaining and sustaining competitive advantage in the conditions of limited technical, organizational and financial potential of an individual organization. Collaboration often means an increasing potential, access to qualified staff, costs reduction and first of all, competitive edge on the market. The idea of establishing cooperation networks as well as strategic partnerships between organizations has become a common practice on account of issues such as reducing total costs, improving operating effectiveness, improving flexibility and effective response to changing environment. Relationships between organizations are going far beyond regular trade practices that have always been a common habit.

Explaining the essence of the benefits of business-education cooperation may be supported by the reference to the idea of relational rent by J.H. Dyer and H. Singh [1998, pp. 660-679]. The central thesis of J.H. Dyer and H. Singh seminal paper on this kind of rent is that a pair or network of firms can develop relationships that result in sustained competitive advantage. Firm's critical resources may span firm boundaries and may be embedded in inter-firm routines and processes. This suggests that alliances may generate competitive advantages only as they move the relationship away from the attributes of market relationships. J.H. Dyer and H. Singh define a relational rent as a supernormal profit jointly generated in exchange relationship that cannot be generated by either the firm in isolation and can only be created through the joint idiosyncratic contributions of the specific alliance partners. At a fundamental level, relational rents are possible when alliance partners combine, exchange, or invest in idiosyncratic assets, knowledge, and resources/capabilities, and/or they employ effective governance mechanisms that lower transaction costs or permit the realization of rents through the synergistic combination of assets, knowledge, or capabilities.

Although, the J.H. Dyer and H. Singh relational view is mainly devoted to inter-firm relationships the core idea of this approach can easily be adopted to inter-organizational relationships, including the university-business cooperation. In this context, the (dis)advantages of an individual organization are often linked to the (dis)advantages of the network of relationships in which the organization is embedded. Building on Barney [1991, pp. 99-120], it is possible to state that competing organizations (both firms and higher education institutions) acquire standardized (nonunique) resources that cannot be sources of advantage, because these inputs (factors) are either readily available to all competing others or the cost of acquiring them is approximately equal to the economic value they create. However, a organization's critical resources may extend beyond the organization boundaries. So, adopting Dyer and Singh concept, organizations who combine resources in unique ways may realize an advantage over competing organizations who are unable or unwilling to do so. Thus, idiosyncratic interorganization linkages may be a source of relational rents and competitive advantage. This analysis suggests that an organization's critical resources may span organization boundaries and may be embedded in interorganization routines and processes. According to this point of view both firms and higher education institutions may gain critical resources enabling them to achieve competitive advantage. Business firms gain advantage on commercial markets and education institutions are able to become more competitive on the educational market. This cooperation also may bring about unique benefits for the economy as a whole, especially in the turbulent era.

UNIVERSITY – BUSINESS COOPERATION IN EUROPE

Both the business sector and higher education institutions make an important contribution to sustainable economic growth, employment and prosperity in the European Union (EU). They do so directly as employers and producers of goods and services, and through their role in promoting innovation and future capacity for growth, such as by developing a more skilled and knowledgeable workforce. Promoting and developing cooperation between higher education and business is a core element of the EU's Agenda for Modernising Higher Education, and the potential to enhance this contribution further, through increased levels of collaboration, is now firmly recognized within EU policy circles and in Member States, most recently with the publication of Europe 2020 and the related Flagship Initiatives [European Union, 2014, p. 5].

Cooperation between university and business in Europe is still in the early stages of development. According to the study commissioned by European Commission (EC)²³, one of every 3

²³Surveys were sent out to all registered European HEIs in 33 countries in 2011. In total, 6,280 responses were received from European academics and HEI management (HEI managers and HEI professionals working with

Higher Education Institutions (HEI) undertake no or a very low amount of UBC activity. According to the survey (n=2136 HEIs), 8% of them undertake no activities in the area of university-business cooperation (UBC), 26% undertakes low UBC and 66% undertakes medium to high level UBC. UBC is more than the creation of patents, licenses and contract research. There are eight different ways in which HEIs and business cooperate [European Commission, p. 43]. They are listed in table 1 along with the level of cooperation reported by individual academics and HEIs.

Table 1. Types of university-business cooperation in Europe

Area of cooperation	The level of cooperation of the surveyed entities	
	Academics (n=3460)	Higher Education Institutions (n=1753)
Collaboration in research and development (R&D)	5.0 (medium)	6.4 (medium)
Mobility of students	4.3 (medium)	6.3 (medium)
Mobility of academics	2.9 (low)	4.7 (medium)
Commercialization of R&D results	4.0 (medium)	6.0 (medium)
Curriculum development and delivery	3.8 (low)	5.8 (medium)
Lifelong learning (LLL)	4.0 (medium)	5.8 (medium)
Entrepreneurship	3.3 (low)	5.7 (medium)
Governance	2.9 (low)	5.2 (medium)

Source: own elaboration based on: T. Baaken, *Study on the Cooperation between HEIs and Public and Private Organisations in Europe*, Third Asem University – Business Forum 2012, “Driving Information” Putra World Trade Centre Kuala Lumpur 5-6 Nov. 2012.

The highest level of UBC is reported in Sweden (5.7), Denmark (5.6) and United Kingdom (5.5) while the lowest extent of activities in the area of university and business cooperation are reported in Austria (3.9), Italy (3.8) and Poland (3.3). The UBC mean for all European countries is 4.4.

As far as the most important barriers for UBC are concerned, the academics mainly list: bureaucracy within or external to the HEI, lack of HEI funding for UBC and lack of external funding for UBC. The most important barriers for HEIs are: lack of external funding for UBC, lack of financial resources of the business and that the business lacks awareness of HEI activities. On the other side, both for academics and HEIs, the driving force of development of UBC is: the existence of mutual trust, the existence of mutual commitment and having a shared goal.

According to the academics, the main benefits of UBC are: improvement of employability of future graduates, improvement of the learning experience of students, improvement of the performance of the business, receiving external funding, improvement of reputation in the field of research, support in achieving the mission of the university, vitality for individual academic research, improvement of the standing within the university, increasing the chances of promotion. The benefits listed at the organizational level of the HEIs are: increasing skills and graduate development, beneficial effects on the local industry, vitality of UBC for achieving the mission of the HEI, improvement of local productivity, creating local employment, increasing GDP and disposable income, creating a range of beneficial social and recreational benefits.

According to the survey [Science-to-Business Marketing Research Centre, 2013] significant change is required for Poland to improve collaboration between HEIs and business. There is a

industry) whilst from Poland, 620 responses from academics (461) and HEI management (159) were received. The study measured the perceptions of these two groups in respect to their own cooperation efforts and those of their universities respectively.

significant lack of commitment and cultural orientation to UBC in Poland. The extent of University-Business Cooperation in Poland according to the opinion of HEI management is shown in table 2.

Table 2. Extent of University-Business Cooperation in Poland

Area of cooperation	The level of cooperation of the surveyed entities
Collaboration in research and development (R&D)	4.9 (medium)
Mobility of students	5.5 (medium)
Mobility of academics	4.4 (medium)
Commercialization of R&D results	4.0 (medium)
Curriculum development and delivery	5.1 (medium)
Lifelong learning (LLL)	5.2 (medium)
Entrepreneurship	5.0 (medium)
Governance	4.7 (medium)

Source: own elaboration based on: *The State of University-Business Cooperation in Poland*, Science-to-Business Marketing Research Centre, December 2013, https://www.academia.edu/5636293/Poland_-_University-Business_Cooperation_UBC_Report (18.01.2015)

There is a low degree of diversity in the development of the different types of UBC in Poland, with Mobility of students (5.5), LLL (5.2) and Curriculum development and delivery (5.1) as the most developed types. According to the results, Polish HEI management report the extent of UBC being lower than the European average, especially for Mobility of academics and Commercialization of R&D results.

HIGHER EDUCATION IN PARTNERSHIP WITH THE INDUSTRY. THE CASE STUDY OF FACULTY OF MANAGEMENT OF CZESTOCHOWA UNIVERSITY OF TECHNOLOGY

Materials and Methods

For the purposes of the objective of the paper there has been conducted the qualitative analysis using the case study method. It is frequently applied when the research problem is complex and it refers to many variables of mutual relationships, which takes place in case of complex conditions influencing the development of the environmental strategy of the organization. An essential advantage of the case study method is obtaining the results of some practical importance for managers, especially in the area poorly explored empirically. Case study, as the research method, is, therefore, particularly useful in management sciences [Matejun, 2011, pp. 203-213], when the cooperation between organizations is studied.

In the paper, there have been used the materials provided by the Faculty of Management of Czestochowa University of Technology in Czestochowa, Poland.

The overall characteristics of Faculty of Management

Czestochowa University of Technology is situated in Czestochowa, Poland (the Silesian Voivodeship) being the largest university in the region. In the 2013/2014 academic year it celebrated its 65th anniversary. The university looks to the best traditions of Polish and world higher educational systems. It is guided by the principles of the truth, freedom of scientific research, democracy, respect for the views and dignity of a human being. It participates in the development of science, culture and

national economy. Its scientific and educational achievements have become an essential part of the history and tradition of the southern Poland.

Faculty of Management is the largest organization unit of Czestochowa University of Technology where 6000 students are expanding their knowledge and practical skills. So far, about 50 000 students have graduated Czestochowa University of Technology. Currently almost 14 000 people are studying at full-time and extramural courses.

Over 800 university teachers, mainly full professors, doctors with a post-doctoral degree, and doctors take care of the highest level of education of future holders of MSc, bachelor's degree, and engineer titles. Up-to-date teaching base, excellent staff, rich social base and 65 years of experience, backed up with numerous achievements, make Czestochowa University of Technology an attractive and important educational, scientific and cultural center of the Silesian province.

The cooperation with firms

The Faculty of Management is open to various forms of cooperation with business in the sphere of science and education. It organizes trainings and postgraduate studies. Its highly qualified specialist staff offers research and consulting services and prepares expert evaluations for economic subjects. The Faculty provides the best graduates for managerial positions to the business. Offering the candidates apprenticeships in companies is a chance to get acquainted with them.

Each year there are organized from a few to a few dozens of international and national conferences by the Faculty. Their subject matter ranges from the presentation of the latest trends and solutions in various areas of modern business to solving current operational, tactical and strategic problems which companies deal with in their activities. The conferences are addressed not only to schools, but also to enterprises, banks, self-government units and organizations of different kinds.

The Faculty of Management organizes symposiums, conferences and seminars in cooperation with national and foreign companies. Its chief asset in this area is a large and modern conference base and a longstanding experience in holding this type of events.

The Faculty of Management develops a program - 'People of big business in the academic environment'. Chairmen and directors of the biggest Polish and foreign concerns meet the Faculty students and employees, sharing their experiences in the field of management. By means of the above the Faculty has at its disposal the knowledge on the functioning of big business.

Enterprises may actively support Polish science by sponsoring the educational-scientific base, equipment, publications, conferences, seminars, exhibitions and other important scientific and educational undertakings realized by the Faculty of Management.

Business Representatives Advisory Council as a Particular Form of University-Business Cooperation

The Faculty of Management strengthens cooperation with enterprises operating efficiently in the region, the country and abroad. Partner companies at the Faculty of Management make Business Representative Advisory Council, which was appointed on 14 November 2012. It was formed as an advisory and consultative body of the Dean of the Faculty of Management. The Council represents the external stakeholders of the Faculty, and particularly representatives of the business environment. The mission of the Council is to approach the environment of science, business and local authorities, aiming at the exchange of ideas so as to bring about the benefits for: the University - in the field of science and research, enterprises – with reference to an increase in the potential of human resources, and the city and the region – in activities for the benefit of development.

The Council associates the leaders of business, remarkable practitioners – entrepreneurs and managers, particularly from the Silesian Voivodeship. Currently, at 17 September 2014, 30 organizations are the members of the council. The basic principles of the operating of the Council are:

- Cooperation with the Faculty of Management of Czestochowa University of Technology in the field of the teaching process, particularly with reference to offering new teaching courses and majors, which will the most highly correspond with the labor market needs and will satisfy both students and employers.
- exchange of knowledge and experiences between theoreticians and practitioners of management and developing new scientific and expert projects.
- cooperation in the field of organization of vocational training, internship, educational trips for students of the Faculty of Management
- supporting initiatives for the benefit of the development of the Faculty of Management

Business Representatives Advisory Council of the Faculty of Management of Czestochowa University of Technology supports the development of the mission of the Faculty of Management in the field of developing and establishing a long-term relationship between science and business, bringing about mutual benefits.

In the framework of the agreements on the scientific and educational cooperation between Czestochowa University of Technology (CUT) and enterprises, in the framework of the activities of the Council, there are developed the principles and terms of the collaboration. Following the agreements, the parties are obliged to the mutual support within their actual and legal capabilities and the consideration of issues and interests of the other party in their activities. In the framework of cooperation the Faculty of Management offers readiness for:

- participation in solving technical and organizational and economic problems of cooperating enterprises;
- preparation and participation in developing new organizational solutions.

Within the cooperation, enterprises agree to:

- provide free students' training,
- provide free internship for the employees of the Faculty,
- enable the staff of the Faculty to conduct scientific research,
- have the employees of the companies deliver speeches and run workshops for the students and employees of the FoM.

In the framework of the collaboration, The Faculty lets the name and the logo of CUT and the Faculty of Management be used by enterprises for marketing purposes. Additionally, the parties of the agreements express their interest in the cooperation in the field of the analysis, preparation, development and realization of requests referring to new financial projects from the funds and subsidies of the EU.

CONCLUSIONS

As D. Tapscot and A.D. Williams [Tapscot, Williams, 2008, passim] underline, global cooperation leads to the change of the way in which countries and societies use knowledge and the abilities to be innovative and to create value. It has a considerable influence on almost all the spheres of social life and management aspects.

It is possible to perceive cooperation as the critical factor in the development and growth of competitiveness of organizations functioning in the conditions of extraordinarily quickly changing environment.

The case study presented in this paper leads to the conclusion that both firms and universities pursue mutual cooperation which is focused on generating additional value for all the participating organizations. Collaborating organizations are able to generate relational rents through relation-specific assets, knowledge-sharing routines, complementary resource endowments, and "effective

governance."It is also noticeable that, as Dyer and Singh noted, there are mechanisms involved that bring about rents based on cooperation such as interorganizational asset connectedness, partner scarcity and resource indivisibility (coevolution of capabilities).

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CROATIA IN THE GREAT RECESSION: THE FAILURE OF AUSTERITY POLICES

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ABSTRACT

The Croatian economy has suffered strong adverse shock from both the global financial crisis and the Eurozone fiscal/economic crisis –output has fallen throughout the 2008-2014 period, with unemployment almost doubling during the same period and reaching 17.3% in 2014. Successive governments pursued policies of fiscal consolidation which seems to have had pro-cyclical, i.e. adverse effects on output. Similarly, the supply side policies particularly regarding the labour market, seem to have been unable to bring the economy closer to its full capacity constraint. The incentives program for foreign investment has fallen short of expectations although with Croatia becoming an EU member in 2013 it may be reasonably expected that its economy will become more attractive for foreign investors. Having all this in mind, it may be argued that the future prospect of the Croatian economy will depend on an improved pro-expansion economic policy mix that would enable a more effective use of domestic productive resources and improved mechanisms of regional cooperation with neighbouring countries.

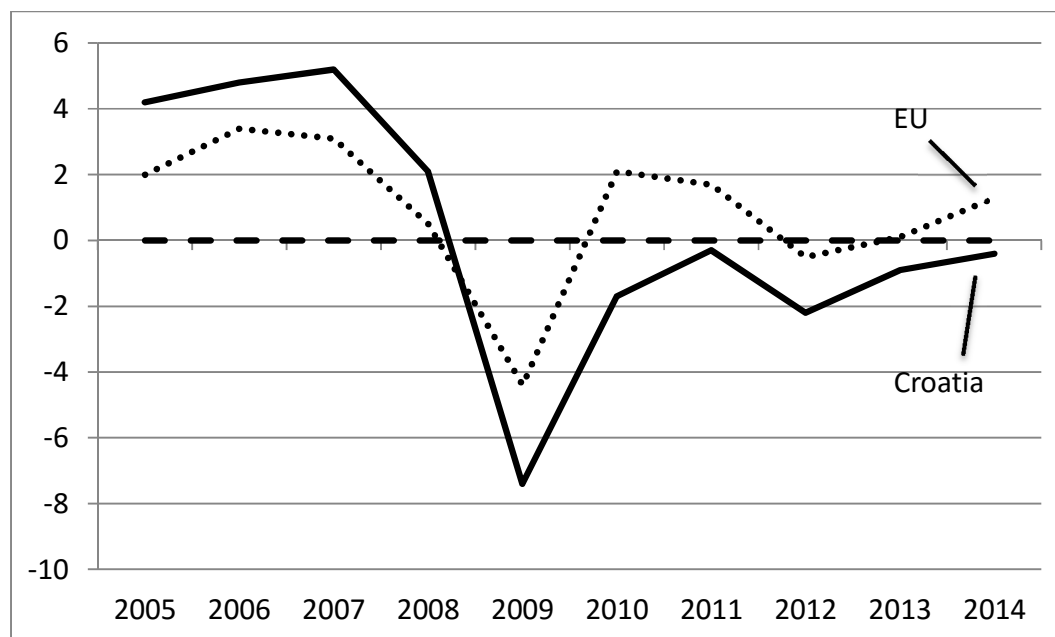
Keywords: austerity, economic recovery, pro-cyclical policies, fiscal consolidation, foreign direct investment, labour market reforms, recession

JEL classification codes: E61, E62, F31, F36, F42, G01, H20, H55, H68, J08

INTRODUCTION

Over the last six years the Croatian economy has been subject to a continuing recession (see Table 1) having experienced negative GDP growth over the entire period, while a shallow recovery is envisaged in 2015. The initial decline in GDP was not due to factors under control of the government, but rather to the negative shock inflicted on the world economy by the financial crisis in the international financial system that began in 2007 and led to a global economic downturn in 2009. Croatia was more affected than the EU, with a deeper downturn in 2009 due to her high dependency on international trade; especially on trade in services related to the tourism sector. Since then, Croatia's recovery has been slower than that of the EU. While the EU economy returned to positive, if tepid, growth in 2010, Croatia has languished in recession in each subsequent year. This poor economic performance indicates deep structural problems and difficulties in adjusting the economy in the wake of the initial recession, and raises questions about the appropriateness of economic policy since then.

Figure 1: Real GDP growth: Croatia and EU, 2005-14 (% p.a.)



Source: Eurostat online data

The downturn has had serious social consequences. The unemployment rate has almost doubled from a low of 9% in 2008 to a new peak of 17.3% in 2014 (see Figure 2). The increase in unemployment has been far greater than in the EU-27 countries. While it briefly converged to EU levels in 2009, it has since shot up to levels far above in the EU-27. A similar pattern has affected youth unemployment, which increased to around 50% in 2014. In the words of the European Commission this has placed a “strain on the social fabric” (EC AMR 2014: 27) while low employment rates are damaging growth prospects.

This paper outlines the economic policies that have been introduced to deal with this situation and makes a preliminary assessment of their likely effectiveness. The next section considers the policy responses to the onset of the crisis, section 3 reviews the policy measures that have been introduced since Croatia joined the EU and entered the excessive deficit procedure. Section 4 looks more closely at labour market reforms, and section 5 at measures to attract foreign direct investment, both designed to stimulate the supply side of the economy. The final section concludes.

POLICY RESPONSE TO THE ONSET OF THE CRISIS

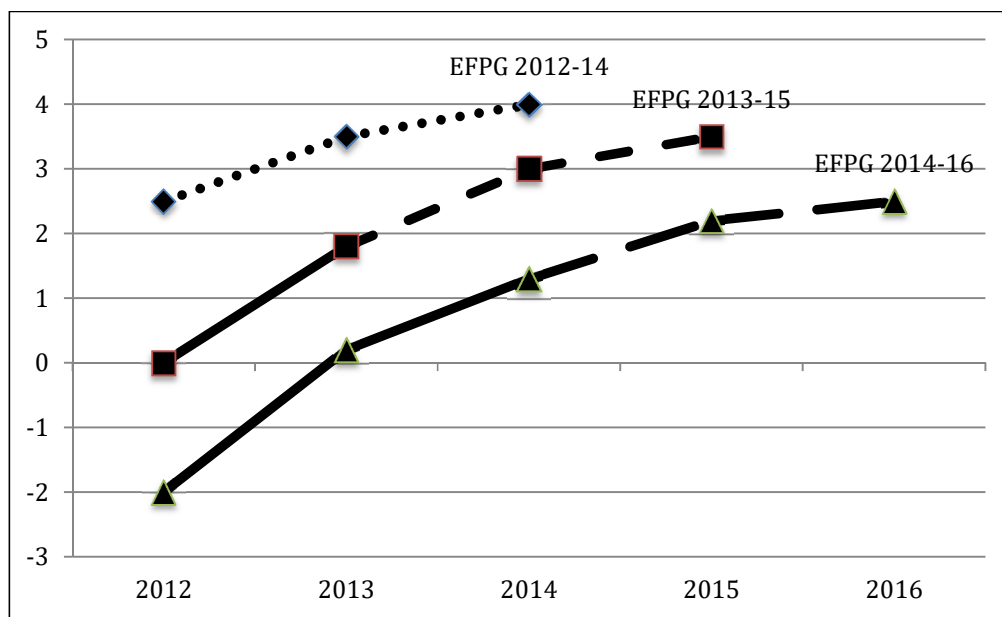
In response to the crisis, the HDZ government headed by Jadranka Kosor was to adopt a policy of fiscal consolidation and austerity as advocated by the International Monetary Fund (IMF 2010). This involved reducing expenditure on public administration and social programmes, structural reforms to enhance labor force participation and improve the business environment, and income and wage policies to improve competitiveness in the context of a broadly stable exchange rate (IMF 2010). A fiscal responsibility law enshrined fiscal consolidation in law by requiring the government to reduce budget expenditure by 1% each year until a primary balance in the general government budget is reached, after which the cyclically adjusted primary deficit is to be kept at around zero²⁴.

²⁴ This was part of the Croatian Recovery Programme introduced in April 2010.

Since it came to power in December 2011, the Milanović government continued on the track of fiscal consolidation announced by the previous government²⁵. The policy aim has been to shift towards an investment led model of growth, while simultaneously reducing the tax wedge (taxes and social contributions on labour) to encourage employers to hire more workers²⁶. Additional reforms in the labour market and to social contributions were to be introduced to provide additional incentives to the supply side of the labour market.

In its first budget in 2012, the new government announced cuts to the wage bill, to subsidies, and to health spending. VAT was increased by 2% combined with a 2% reduction in social health contributions designed to ease the burden of social contributions on wages and boost employment. A personal income tax allowance was introduced for low earners, while a 12% tax was introduced on profits and dividends, measures designed to change the balance of taxation away from labour and towards capital. These measures represented a continuation of economic policy of the previous HDZ government combined with some modest redistribution elements. However, the initial aim to boost investment was overshadowed by the decision to continue with the previous government's policy of fiscal consolidation, which, by reducing public expenditure at a steady 1% per year, removed purchasing power from the economy and undermined all other attempts at stimulating growth. The inevitable result has been a continued deterioration of the economy, and all projections for recovery that were predicted by the government's macroeconomic forecasts have been continuously downgraded (see Figure 2).

Figure 2: Government forecasts of growth have been constantly downgraded over time



Source: Economic and Fiscal Policy Guidelines, Ministry of Finance, Zagreb; various years as indicated. Note: Dashed lines indicate forecasts.

²⁵ In 2012 the Ministry of Finance stated “[t]he Croatian Government is determined to carry out fiscal consolidation and comply with the Fiscal Responsibility Act,” Economic and Fiscal Policy Guidelines for the Period 2013-2015, Ministry of Finance, (2012: 3).

²⁶ Ibid.

POLICY MEASURES WITHIN THE EU – THE EXCESSIVE DEFICIT PROCEDURE

Croatia joined the EU in July 2013 and soon afterwards the Milanović government had to cede effective control over many aspects of economic policy to the European Commission. The EU had adopted a system of “new economic governance” in 2010 in response to the eurozone crisis. As a member state, Croatia became immediately involved in the “European Semester” process that begins in November each year with the publication of an annual Alert Mechanism Report (AMR) for all EU member states. The 3rd annual AMR, published in November 2013, identified a severe macroeconomic imbalance in Croatia that required further investigation through the process of an In-Depth Review (IDR). Even before the results of the IDR were announced, Croatia was placed in the Excessive Deficit Procedure (EDP) in January 2014. From that point on, the most important instruments of economic policy were effectively taken away from the independent responsibility of the Croatian Government and handed over to the European Commission.

The IDR was published on 5 March 2014, and concluded that Croatia was experiencing an ‘excessive’ macroeconomic imbalance that required specific monitoring and strong policy action (ECFIN, 2014). The IDR identified a range of serious problems, including large external liabilities, declining export performance, highly leveraged firms and fast growing government debt. It also revealed that state owned companies had not been restructured, were highly indebted and were only weakly profitable. It also concluded that Croatia has the lowest activity and employment rates in the EU, while the business environment ranks below the average of all the EU’s post-communist states.

On 24 April, Croatia submitted its 2014 National Reform Programme and its 2014 Convergence Programme to the European Commission. The latter outlined the budgetary strategy to correct the excessive deficit by 2016 and to move the economy on to a path of sustainable economic growth. The projected aim was to reduce the deficit from 4.9% of GDP in 2013 to 3% of GDP by 2016, the deadline imposed within the EDP for meeting the 3% target. The Convergence Programme also forecast that government debt would peak at 72% of GDP in 2014.

The European Commission evaluated the National Reform Programme and issued its response and ‘recommendations’ in July 2014. The Recommendations heavily criticised the Convergence Programme for basing the forecasts on overly optimistic projections of economic growth in the forthcoming years, and for deviating from the standards of the European System of National and Regional Accounts (ESA) which prevented appropriate comparison with the Commission’s own forecasts (EC 2014 Recommendations). The Commission also criticised the programme on the grounds that it did not provide enough detail about the fiscal consolidation measures that would be taken to reduce the budget deficit. Overall, the Commission’s assessment of the Croatian programmes was that additional efforts would be needed in order to comply with the recommendations under the EDP to correct the excessive deficit by 2016.

The European Council also made a series of recommendations on reforms that would be needed to achieve the 2016 fiscal target. The main points made were that Croatia should enhance the quality of the public finances by reducing wages, social security expenditure and subsidies. More effective control should be placed on government expenditures, and the design of fiscal rules should be improved. On the revenue side, the tax base for the recently announced property tax should be better specified, and revenue collection should be improved by taking action against the informal economy and tax evasion.

In November 2014, the Commission issued its fourth annual Alert Mechanism Report (European Commission, 2014b). The report’s conclusions on Croatia’s economy were that macroeconomic imbalances remained a “serious concern”. The AMR found that the large negative net international investment position (NIIP) had improved slightly as the current account had returned to a surplus due to falling domestic demand and investment and the consequent drop in demand for imports. However, falling levels of investment were undermining economic recovery, while export performance was weak and Croatia was steadily losing its share of the global market. The AMR also

assessed that competitiveness had not improved, and that unit labour costs and the real effective exchange rate were even starting to rise again, putting any gains made in improving competitiveness at risk. Furthermore, the contracting economy and the high budget deficits had put the public debt to GDP ratio onto a rapidly rising trend.

LABOUR MARKET POLICY

One of the key concerns of the European Commission has been the poor performance of the labour market, especially for youth and for older workers (EC 2014a). An increasing number of young people are neither in education, employment nor training, while the proportion of people at risk of poverty and social exclusion has increased to levels significantly above the EU average. Despite growing unemployment, spending on and coverage of active labour market measures are below average in the EU. Nevertheless, various attempts at labour market reforms have been made relating to (a) active labour market policies (b) conditions for early withdrawal from the labour market and (c) employment protection legislation. Overall, these reforms have reduced the protection of workers and worsened working conditions.

Active Labour Market Policies

Under the terms of a Social Welfare Act that entered into force on January 2014 social welfare beneficiaries are required to participate in “social inclusion activities”. The maximum accumulated amount of benefits, have been limited to level of the minimum gross salary. On the positive side, a transitional period of three months has been introduced for welfare claimants who find a job, so that new employees do not lose all their benefits when they start work. New rules allow the continuation of pension payments if a retiree takes on a part time job.

Conditions for early withdrawal from the labour market

The Pension Insurance Act of January 2014 raised the statutory retirement age from 65 to 67 and the early retirement age from 60 to 62. Under the new rules, early retirement cannot be taken without penalty until 41 years of service have been completed and before 60 years of age. Pensions under certain “special schemes” that are above a certain threshold have been temporarily cut by 10%, and indexed to GDP growth. New rules covering disability pensions have been introduced, and the occupational rehabilitation system has been changed. Beneficiaries of disability pensions must now undergo a compulsory medical assessment every three years, and are subjected to random control assessments.

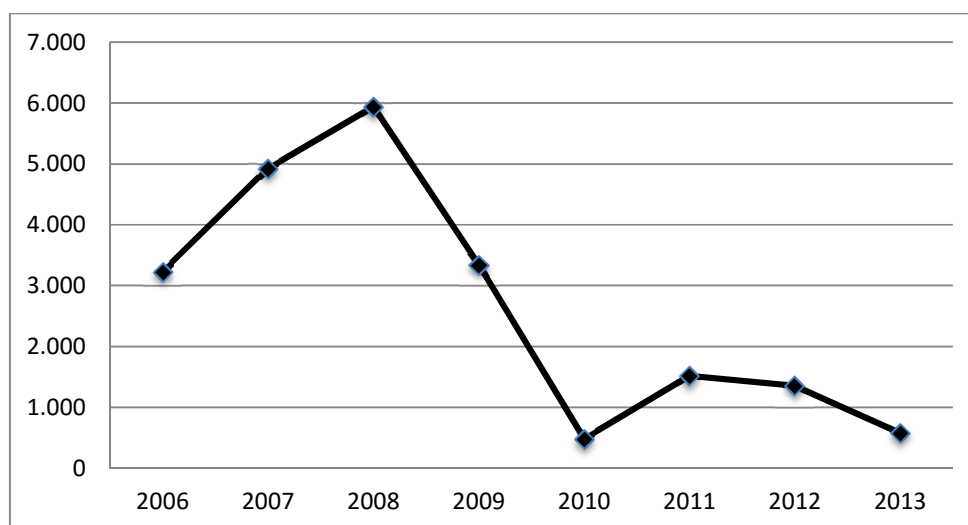
Employment protection legislation

A first phase of labour market reform that was completed in 2013 focused on fixed-term employment contracts, and on shortening and simplifying the procedures for collective dismissal. Employers can now take on workers under fixed-term contracts that last for more than three years. Procedures for dismissal during the probationary work period were relaxed so that a probationer can be fired without cause. New rules introduced in January 2014 have made it easier for an employer to dismiss a worker, and have increased working time flexibility through the introduction of flexible part-time contracts.

ATTRACTING FDI

During the pre-crisis boom period, new foreign direct investment to Croatia reached a high point of US\$6 billion in 2008. Since then, as in most other peripheral European economies, the inflow of FDI has come to an end (see Figure 3). The supply of foreign capital has diminished as a consequence of the economic crisis and investors are more concerned to reduce risk by investing in safer options such as cash and government bonds of safe countries.

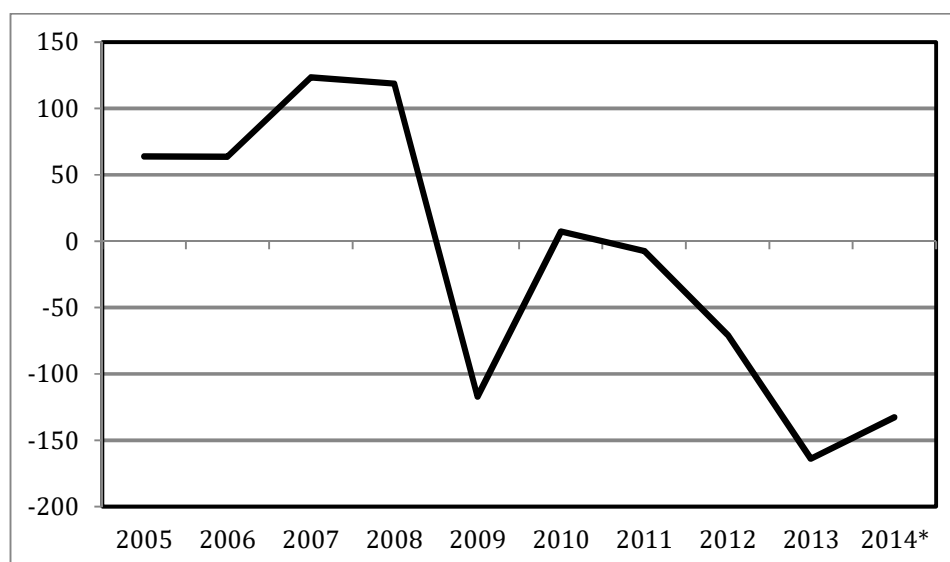
Figure 3: Foreign direct investment flow (US\$ million)



Source: UNCTAD online data

Along with the reduction of the inflow of foreign investment, foreign investors already in the country have become less willing to reinvest their profits in order to expand capacity and increase productivity. As can be seen from Figure 4, profit reinvestment by foreign investors turned negative after the onset of the crisis in 2009, indicating that substantial sums were actually leaving the country rather than being reinvested in the economy. The outflow of foreign investor profits began to relent in 2014, perhaps indicating the beginnings of a return of confidence, possibly due to a lagged positive effect of Croatia's EU membership.

Figure 4: Foreign investors' reinvestment of profits (€ millions)



Source: Croatian National Bank online data. Note: data for 2014 are preliminary

In order to promote foreign investment, the government introduced a new foreign investment Law in 2012. The new law reduced the minimum initial investment amount and created special conditions for micro-entrepreneurs; introduced a new investment category for investments in high value-added activities; increased the subsidies for job creation; provided special treatment for investment projects that created more than one hundred new jobs; and changed the method of calculating the amount of the initial investment. Despite the enactment of this law, foreign investment continued to plunge in 2013. There have been some signs of a recovery in the first half of 2014, but this has probably been due more to Croatia's entry into the EU than to the provision of special financial incentives and privileged market conditions for foreign investors.

CONCLUSIONS

Overall, the Croatian government has had a rather dismal record in relation to the management of the economy, which has continued to languish in recession for a far longer time than almost any other European country. By 2014, the economy had suffered from six years of recession, unemployment had been continually increasing, and few economic indicators had shown positive news. While the onset of the economic crisis can plausibly be placed on outside factors, principally the shock induced by the global financial crisis and subsequently to the spillover effects of the eurozone crisis, the inability of the Croatian economy to recover from these shocks indicates serious problems of a deep-seated structural nature, and that government policies have not yet been sufficiently effective.

The Milanović government came to power in 2011. Its first budget was formulated in 2012, by which time the economy had already been in recession for three years. In 2013, Croatia joined the European Union and shortly thereafter was placed into the EU Excessive Deficit Procedure, which involved the imposition of economic policies from Brussels, over-riding domestic policy decisions. Therefore, it could be argued that the new government has only been responsible for two of the five years of recession.

The principal reason for the recession has been the decision to impose pro-cyclical fiscal consolidation on an economy hard hit by the global crisis. This approach was adopted by the Kosor government in 2010 at the instigation of the IMF and was continued almost without alteration, apart from a few mild redistributive measures, by the Milanović government. With EU membership looming, and the advice of the European Commission to proceed in line with the general policy of austerity adopted by the eurozone countries, it is not altogether surprising that the new government did not take an alternative approach. Fiscal space also had to be created to afford the significant EU membership fee²⁷. The entry into the Excessive Deficit Procedure has only reinforced the emphasis on fiscal consolidation.

Alongside fiscal consolidation, policy makers have stressed the importance of structural reforms designed to make the supply side of the economy more flexible, in the hope of stimulating economic growth. These have involved placing restrictions on social benefits, raising the pension age, encouraging pensioners to take up part time employment, increasing penalties for early retirement, tightening criteria for receipt of disability benefits, extending the maximum period of fixed term employment contracts and making it easier for employers to dismiss probationary workers. The aim of making the labour market more flexible has been to enable a positive employment response in case of an economic upturn. Unfortunately a flexible labour market can also have the opposite effect during an economic slowdown, magnifying the extent of job losses. Supply-side policies are unlikely to have a positive effect in conditions where aggregate demand is insufficient to bring the economy to a

²⁷ See Economic and Fiscal Policy Guidelines 2014-2016, Ministry of Economy, Zagreb, p. 4

position where capacity constraints are beginning to bite. From that point onwards a more flexible labour market and a more flexible economy can have the effect of releasing the supply constraints that might otherwise hold back growth. However, after five years of recession, it can be expected with some certainty that the Croatian economy is far away from its full capacity constraint. The danger of continuing with such a policy will be that the capacity constraint actually shrinks to meet the lower level of aggregate demand, and that the lower level of output and productivity engendered by the long recession may become a permanent feature of the Croatian economy.

Special incentives to attract foreign investors were introduced in 2012 but had minimal impact on the flow of such investment, which fell even further in the subsequent year. There have been some signs of a recovery in investment in early 2015, most likely due to the positive effect on investor confidence of Croatia's entry into the EU. If this continues, it may go some way to offset the decline in productive capacity caused by the long recession.

When the Milanović government came to power in 2011, it held a fairly progressive policy aim to rekindle economic growth and create a more equal society. This was to be achieved through an investment programme to raise capacity and improve productivity, and some redistribution to the lower wage earners that would boost consumption and aggregate demand. Unfortunately, in the priority given to fiscal consolidation few of these plans came to fruition. While these aims remain a valid policy option for emerging from the recession, they are unlikely to be fulfilled within the scope of the EU's Excessive Deficit Procedure. One must hope that growth resumes in the EU, and that this will lift the Croatian economy along with it, and also that the capacity of the economy to respond to such a future opportunity will not have been too much diminished by the policies adopted over the last five years by successive governments. However, the continuing crisis in the eurozone and its most recent symptom in the default on IMF loans by the Greek government, suggest that it may be some time before economic growth resumes in the eurozone. Croatia, along with other economies in the South East Europe that have been badly affected by the eurozone crisis, should consider greater reliance on their own resources and improved mechanisms of regional cooperation with neighbouring countries, rather than waiting passively to be lifted by the rising tide of eventual economic recovery in the EU.

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RUSSIAN – EU TRADE RELATIONS: PROBLEMS AND PROSPECTS

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ABSTRACT

The paper is dealing with the problems and prospects of the Russian – EU trade relations. The authors are evaluating the mutual trade development through the issue history while considering dynamics, balance, commodity structure and other features. The paper important task is to identify the above mentioned development reasons, factors and motivations. It is not always easy to find out why the specific trend appears in the investigated issue. The authors are mainly focused on the development during the modern period. Since the USSR dissolution time the European Union is the number one trade partner for Russia, on the other hand Russian Federation is the third most important partner for the EU. During 2014-15 the mutual trade relations are suffering hard times due to the negative impact of the crisis in Ukraine and sanctions regime.

Keywords: Russian Federation (Russia), the USSR, Western Europe, the European Union (the EU), trade relations, export, import, trade turnover, trade balance, commodity structure, crisis in Ukraine, sanctions.

JEL classification codes: F1, F13, F14

HISTORICAL BACKGROUND

Russian – EU trade relations have very long history. Starting from the first Russian national state (Kievskaya Rus' (Kievan Rus')) foundation in IX century the country have established trade relations with Western and Central European nations. It is important to mention that geographic location has played great role the above mentioned process. Being the closest neighbors Russia, on one side, and Nordic counties, Poland, Lithuania, other Baltic nations, Hungary, German states, other European counties, on other side, have obvious reasons to trade due to the low transportation costs. Location in the Eastern part of Europe makes Russian territory to be the most convenient transit space for transportation of goods from the Baltic and North sea regions to Byzantine Empire, Balkans and Near East.

Figure 1. Transit route “Iz Varyag v Greki” (from Vikings to Greeks) map.
The route is marked by the purple and blue lines



Source: <http://en.wikipedia.org/wiki/Crimea>

The famous transit route “Iz Varyag v Greki” connected Russia with the major trading nations in Europe. Already in the Medieval Age Russian – European trade commodity structure have been based international labor division based on absolute advantages. Since the foundation Russia has been the largest European nation due to the size of territory. This factor provides to the country the biggest agricultural and forest land and, so ability to produce a lot of cereals, flax, honey, wax, furs, wood, tur (resin), other natural resources and farming products. All these items have been exported to European countries. In exchange Russia have been imported metals, ferrous, non-ferrous, precious metal products, tools, arms glassworks, wool and other fabric.

Later Russian – European trade development had similar features. Russia has continued to supply western neighbors with natural resources and agricultural products. Religious and political contradictions made substantial problems for mutual trade increase. Series of wars with German Teutonic and Livonic knight Orders, Sweden, Poland, Lithuania, and attempts to re-Christianized Russia and convert its population from Orthodox to Roman-Catholic church led to all kind of mutual contacts limitation including the trade ones. Because at the mid of XIII century Russia has lost access to the Black sea and at the beginning of XVII century also has lost access to the Baltic sea the country suffered inability to use the most convenient way goods transportation to and from European neighbors.

Situation has been changed at the beginning of XVIII century after first successful battles of the Northern War and the city and sea-port of Saint – Petersburg foundation. Peter the Great (the first Russian Emperor) has made great push towards the extensive trade development with Western European nations as major national priority. Since that mutual trade volumes have started to grow much faster. Generally speaking the trade commodity structure has not been changed. Russia continued to export natural resources and agricultural products and import metal products, textile and other consumer goods. Since XIX century and until XIX century beginning the minerals (metals, metal ores, crude oil) start to play more and important role in Russian export. Import from European countries has become more and more dependent on machinery and chemical products. After the Socialist revolution in 1917 and during the Civil war (1918-1920) Soviet Russia practically stopped to trade with western neighbors. But the start of New Economic Policy (NEP) in 1921 led to the mutual trade re-introduction. Soviet Russia (the USSR since 1922) needed machinery for industrialization and in exchange exported to Europe minerals and agricultural products. Since the second half of 1940s and until the end of the Soviet period in 1991 Central and Eastern European nations – COMECON members were absolute leaders among the USSR major trading partners. Export to that group of countries has included mainly minerals, forestry and machinery, import has been based on consumer goods, machinery, agricultural and chemical products. COMECON members share in Soviet trade has been equal to 60-65%²⁸. The next most important trading partners of the USSR after the COMECON were Western European nations (mainly the EEC/EU members). To these countries the USSR supplied mainly minerals and some other traditional products (forestry). Import to largest content has been based on machinery, chemical, agricultural products and consumer goods.

Post-Soviet trade relations (1992-2000)

After the USSR dissolution Russian Federation has started the new stage in its relations with the European Union. In 1989 COMECON-members share in Russian (the USSR) trade was 55.8%, but already in 1992 – the same countries group share went down to 23.7%. Since 1992 the EU has become the most important trading partner for Russia. The European Union nations share in Russian foreign trade turnover went up to the level of 37.2%. The EU-Russia export and import development be considered through Tables 1 and 2.

²⁸ <http://istmat.info/node/9322>, <http://dic.academic.ru/dic.nsf/bse/129040/%D0%A1%D0%A1%D0%A1%D0%A0>

Table 1. Russian export regional shares in 1992-2000 (%)

	1992	1994	1996	1998	2000
Developed economies	45,8	52,9	47,0	49,9	48,2
Incl. EU	38,3	35,2	32,1	32,6	35,6
Developing economies	8,4	8,5	12,3	11,5	13,9
CIS	21,9	22,3	18,7	19,2	13,4
Central-Eastern Europe	17,3	11,8	14,8	14,6	17,4

Source: Goskomstat, <http://stat.customs.ru/>

Table 2. Russian import regional shares in 1992-2000 (%)

	1992	1994	1996	1998	2000
Developed economies	54,5	50,0	47,1	50,8	44,7
Incl. EU	38,8	39,8	34,4	36,1	32,8
Developing economies	11,6	7,8	7,5	9,5	8,4
CIS	13,1	29,1	31,6	25,9	34,4
Central-Eastern Europe	10,8	12,2	8,6	8,9	7,2

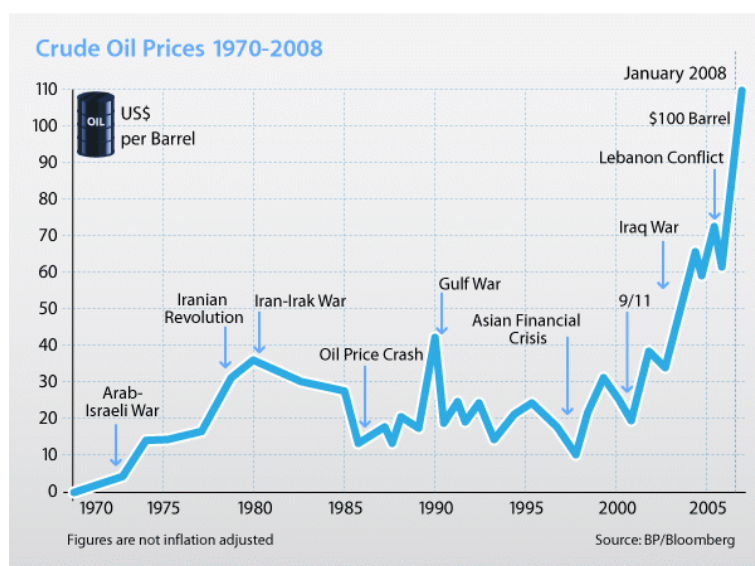
Source: Goskomstat, <http://stat.customs.ru/>

It is clear to see that the EU share in Russian foreign trade has not been growing significantly during the 1990-s. It is also clear that the EU share in Russian export during 1992-2000 went down from 38.3% to 35.6%, and the EU share in Russian import during 1992-2000 went down from 38.8% to 32.8%. The Central-Eastern European nations (the majority of which later have become the EU-members) share during the same period also went down in the case of import to Russia (from 10.8% in 1992 to 7.2% in 2000), but went up not significantly in the case of export from Russia (from 17.3% in 1992 to 17.4% in 2000). Negative trends appeared even despite EU enlargement in 1995 EU enlargement when Austria, Finland and Sweden had become the member-states. Major reasons for the mutual trade decline have been dealing with Russian economy negative growth in 1990-s and drops of the international oil, gas (based on oil) and metal prices during the decade (See Figure 1). The Partnership and Cooperation Agreement has been the framework of the EU-Russia relationship for more than a decade. It was signed in 1994 and entered into force on 1 December 1997.

Russian - EU trade commodity structure in 1990-s have been based on international labor division both parties advantages and disadvantages. Being rich in natural resources Russia traditionally exported to the EU crude oil, natural gas, metals, metal ores, other minerals, unprocessed wood. While having developed machinery, chemical industry and other industries with the high level of value added the EU exported to Russia transport, industrial and other machinery, office equipment, chemical products, consumer goods and processed food items. In 1994 fuels share in Russian export was equal to 42.2%. In 1998 it went down to 35.1% mainly to the drastic international oil price drop(See Figure 1).. But even after that fuels remain as the most important export item. The second rank in Russian export to the EU commodity structure had belonged to the industrial goods (among which ferrous metals played the most significant role) with the share of 21.3% in 1994 and 23.9% in 1998 respectively. The third most important items of Russian export to the EU were minerals excluding fuels while having the share of 8.4% in 1994 and 11.3% in 1998 respectively. The share of machinery in Russian export to the EU was very little 2.3% in 1994 and 1.8% in 1998 respectively. Food items had played similar low role with the share of 1.7% in 1994 and 2.2% in 1998 respectively.²⁹

²⁹ Eurostat, Goskomstat, <http://stat.customs.ru/>

Figure1. International crude oil price 1970 - 2008 (US\$ per bbl)



Source: BP/Bloomberg, <http://www.zerohedge.com/news/2014-12-15/what-america-does-not-understand-about-russia-oil>

The EU export to Russia commodity structure in 1990-s was almost absolutely opposite to the one of import from Russia. The leading position had belonged to the machinery with the share of 39.5% in 1994 and 37.7% in 1998 respectively. The second rank in the EU export to Russia commodity structure had belonged to the industrial goods with the share of 25.1% in 1994 and 28.7% in 1998 respectively. Food items have been also very important for the EU export to Russia with the share of 22.3% in 1994 and 17.4% in 1998 respectively. Chemical products had the fourth rank with the share of 8.7% in 1994 and 11.1% in 1998 respectively. Importance of fuels and other minerals for EU export to Russia was obviously minimal with the share of 0.5% in 1994, 0.4% in 1998 (fuels) and 1.6% in 1994, 2.4% in 1998 (other minerals) respectively.³⁰

Russia - EU trade relations in 2000-s

To consider trade between Russia and the European Union in 2000-s it is worth to mention that the EU membership was subject of changes few times during the last ten years. Very important change took place in 2004 due to the fact of the EU enlargement towards East and South. On the 1st of May that year ten new countries with a combined population of almost 75 million joined the EU. The European Union formed an economic area with 450 million citizens and includes three former Soviet republics (Estonia, Latvia and Lithuania), four former COMECON-members (Poland, the Czech Republic, Hungary and Slovakia), one former Yugoslav republic (Slovenia) and two Mediterranean islands (Cyprus and Malta). Because the number of Central-Eastern European nations had become the EU members trade Russian with the EU had grown intensively. After of the transformation from the EU-15 to the EU-25 the big portion of Russian trade with Central-Eastern Europe has become Russia – EU trade. The next enlargement took place in 2007 when Bulgaria and Romania have become the 26th and 27th members of the European Union. That fact also led to intensive Russia – EU trade growth but less significantly compare to 2004. The last so far EU enlargement after Croatia became

³⁰ Eurostat, Goskomstat, <http://stat.customs.ru/>

the 28th EU member country on the 1st of July 2013 made even smaller positive impact towards Russia – EU trade growth.

Of course the growing number of the European Union members was not the only factor of Russia – EU trade development. During the observed period the trends were mainly positive. The most important data dealing with Russia – EU trade development shown at the Table 3.

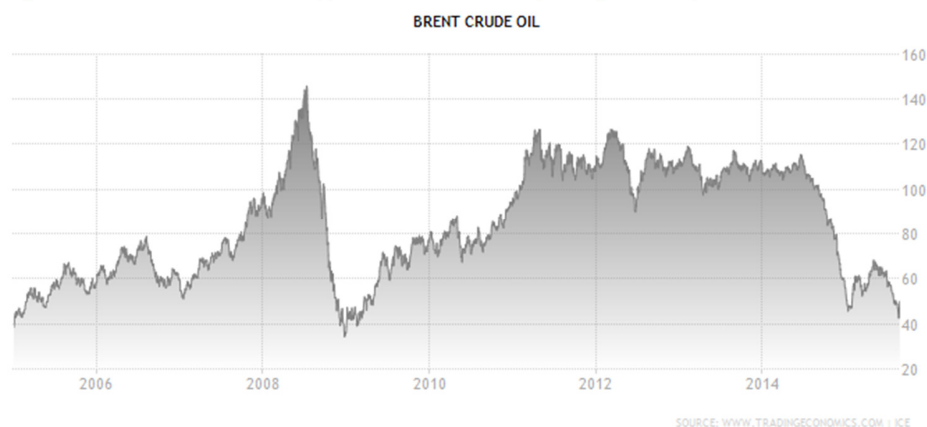
Table 3. Russia - EU trade in 2000-2013 (Euro bn)

	Russian export	Russian import	Trade turnover	Trade balance
2000	63.78	22.74	86.52	41.04
2001	65.88	31.60	97.48	34.27
2002	64.49	34.42	98.91	30.07
2003	70.69	37.21	107.90	33.48
2004	83.95	46.03	129.98	37.92
2005	112.59	56.70	169.29	55.89
2006	140.89	72.31	213.20	68.58
2007	144.27	89.13	233.40	55.14
2008	178.29	104.84	283.13	73.45
2009	118.12	65.58	183.70	52.53
2010	160.70	86.13	246.84	74.57
2011	199.92	108.35	308.27	91.56
2012	213.21	123.26	336.47	89.95
2013	206.50	119.80	326.30	86.70

Source: Eurostat

Statistics provided by Eurostat at the Table 3 shows that Russian – EU trade relations during 2000-2012 experienced steady growth with the only one exception in 2009. The above mentioned trends had been based mainly on Russian economy growth in 2000-Jan.-Aug. 2008 and in 2010-2012. Decline in the 2008 2nd H – 2009 have been obviously provoked by Global crisis and its impact towards international oil prices (See Figure 1 and 2). Crude oil and other minerals prices went down due to the drop in demand in all major importing economies affected by Global crisis. International oil price has become Russian economy growth major indicator. In 2000 - Aug. 2008 (See Figure 1) and in 2010-2012 (See Figure 2) oil prices generally have been rising and making positive impact to Russian export and economic growth.

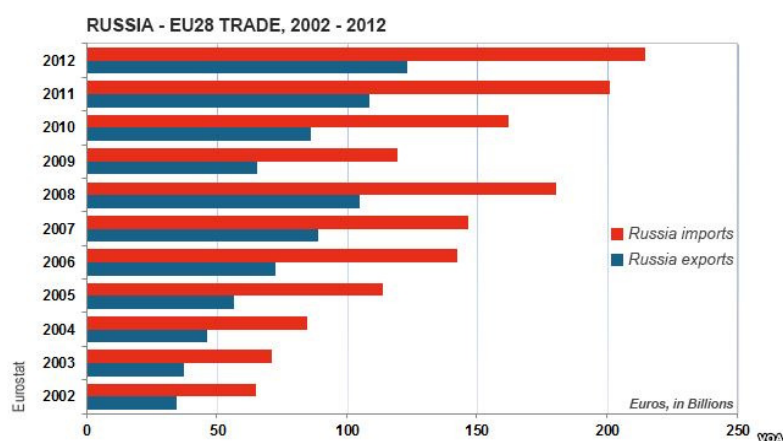
Figure 2. Brent crude oil price 2006 – 15 (US\$ per bbl)



Source: <http://www.tradingeconomics.com/commodity/brent-crude-oil>

National economy growth influenced increase in spending, and higher demand on the foreign made goods. Being the major exporter to the Russian market the EU could enjoy bigger volume of export earnings during most of 2000-s. In 2000-2012 Russian import from the EU went up by almost 5.5 times. At the same time substantial increase in oil, gas and other important Russian export items prices led to EU import from growth by 3.3 times and the EU trade balance deficit by two times during 2000-2012. Another mutual trade growth factor especially in 2004-2005 and in 2007 was dealing with the above mentioned EU enlargements. Russia – EU export, import and trade balance development in 2002-2012 could be witnessed in more clear form at the Figure 3.

Figure3.

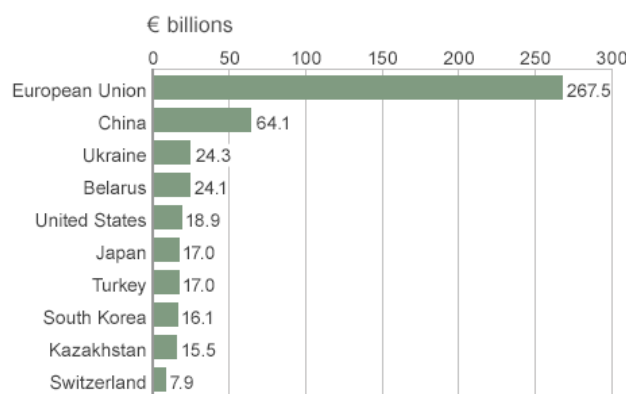


Source: Eurostat

During all 2000-s the EU remained as the Russian number one trading partner in both: export and import. The EU share in Russian trade turnover has grown up from the level of less than 37% in 2000 to level of 52.7% already in 2006. In the next two years the EU share has stabilized and in 2008 was equal to 52.3%. ³¹ Global crisis made some negative impact and in 2009 the EU share has declined to 49%. After the EU share has stabilized and got very limited and gradual decreases to the level of 48% in 2010 and increases to 49% in 2011. In next year 2012 another little decline appeared - to 48.7%, but in 2013 again has reached the level of 49.4%. The EU outstanding role among Russian Top – 10 trading partners in 2012 is shown at the Figure 4.

Figure 4.

Russia's top trading partners 2012



Source: Eurostat

³¹ <http://www.eubusiness.com/topics/trade/homepage/russia>

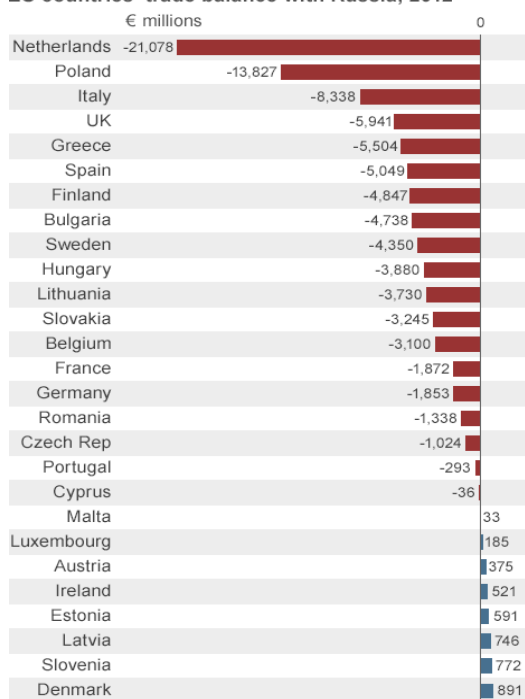
As it has been already mentioned Russian export to the EU (EU import from Russia) have always been higher compare to the EU export to Russia (Russian import from the EU). In 2013 in Russian export the EU share was 54.3%, but in Russian import the EU has played relatively minor role with the share of 41.9%.³²

Russian share in the EU import went up from the level of 6.4% in 2000 to the level of 11.4% in 2008. Export represented about 70% of Russia – EU trade turnover in 2008. Due to Global crisis impact Russian share in the EU import has decreased in 2009 to the level of 9.8%, but since 2010 the indicator stated to grow again and went up to the level of 12.3% in 2013. Since 2004 Russia has become as the 3rd EU import origin country. In 2012 Russia outstripped the USA and has got the 2nd place after China only.³³

Russian share in the EU export went up from the level of 2.7% in 2000 to the level of 8.0% in 2008. In 2009 Global crisis led to the indicator decrease to level of 6.0%. During 2010- 2011 Russian share in the EU export increased again – to 7.1% level. But in 2012-2013 some decrease appeared again and the indicator became equal to 6.9%. That makes Russia the 4th EU major export partner after the USA, China and Switzerland.³⁴

In 2012 among the EU27 Member States, Germany (37.9 bn euro or 31% of EU exports) was by far the largest exporter to Russia, followed by Italy (10.0 bn or 8%) and France (9.1 bn or 7%). Germany (39.8 bn or 19% of EU imports) was also the largest importer, followed by the Netherlands (29.4 bn or 14%), Poland (21.6 bn or 10%) and Italy (18.3 bn or 9%). Trade balance of every EU member with Russia in 2012 presented at the Figure 4. Most EU member states show trade deficits with Russia, the largest in 2012 being the Netherlands with a -21bn euro deficit. The highest surpluses were recorded by Denmark and Slovenia.³⁵

Figure 5.
EU countries' trade balance with Russia, 2012



A negative figure shows more imports than exports

Source: Eurostat

³² http://www.ved.gov.ru/monitoring/foreign_trade_statistics/monthly_trade_russia/

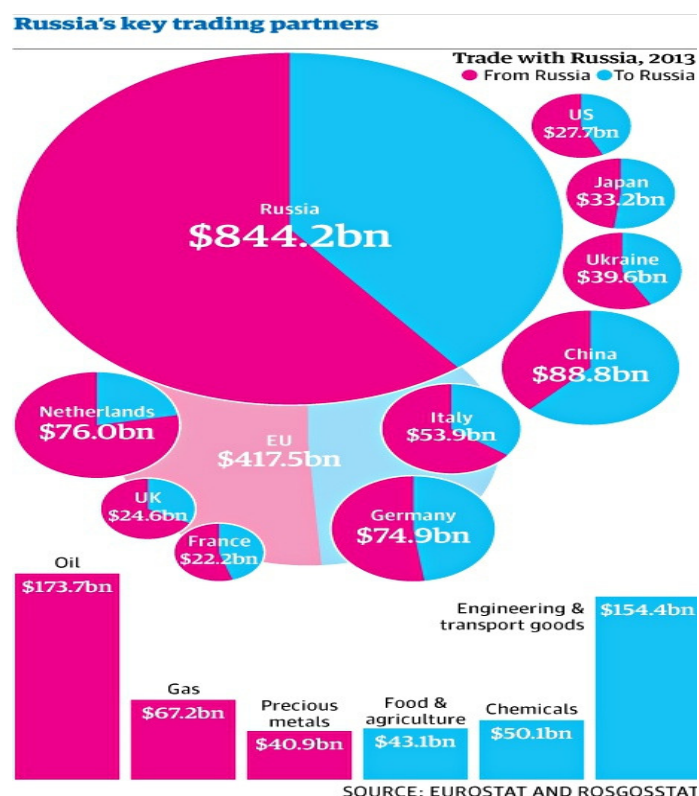
³³ *ibid*

³⁴ http://www.ved.gov.ru/monitoring/foreign_trade_statistics/monthly_trade_russia/

³⁵ <http://stat.customs.ru/>

Among the EU member – countries Germany traditionally played the most important role, but in 2013 the Netherlands outstripped Germany according to the Russian trade turnover. Ranking of the Russia's top trading partners including the EU members in 2013 is shown at Figure 6.

Figure 6.



Russia - EU trade commodity structure in 2000-s

Russia - EU trade commodity structure in 2000-s has very similar features to the one in 1990-s. Above mentioned international labor division based on natural advantages and disadvantages led to obvious trade commodity structure composition. Natural resources continue to form Russian export major part, manufactured goods with high value added represent the most EU export significant part.

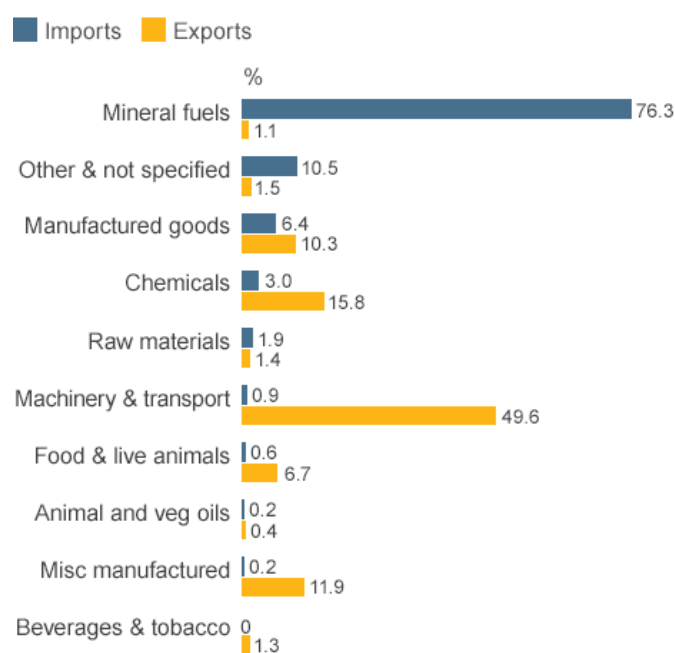
In 2000 fuels share in Russian export to the EU has been equal to 56.1%. In 2008 it went up to 69.5% to very large extent due to the steady international oil price growth (See Figure 1). But even after the price drop since August 2008 (See Figure 2) till February 2009 fuels remain as the most important export item with share of 74.3% as the result of the year 2009. Fuels role in Russian export to the EU continue to rise and reached the level of 76.3% in 2012. The second rank in Russian export to the EU commodity structure had belonged to the industrial goods (among which ferrous metals played the most significant role) with the share of 11.4% in 2000, 7.9% - in 2008 and 7.59% - in 2012 respectively. The third most important items of Russian export to the EU were minerals (raw materials) excluding fuels while having the share of 5.7% in 2000 and 2.9% in 2008 respectively. In 2012 this item role has decreased to the level of 1.9%. The minerals share decline led to gradually increasing chemicals share (3.9% - in 2000, 3.0% - in 2008 and the same level - in 2012). The share

of machinery in Russian export to the EU was very little 1.7% in 2000, 1.0% - in 2008 and 0.9% in 2012 respectively. Food items had played similar low role with the share of 1.1% in 2000, 0.5% - in 2008 and 0.8% - in 2012 respectively³⁶.

The EU export to Russia commodity structure in 2000-s was very similar to the one in 1990-s and almost absolutely opposite to the one of import from Russia. The leading position had belonged to the machinery with the share of 36.9% in 2000 and the record level of 50.8% in 2008. After little decrease machinery share in 2012 become equal to 49.6%. The second rank in the EU export to Russia commodity structure belonged to other manufactured (industrial and consumer) goods with the share of 30.0% in 2000, 24.6% - in 2008 and 22.2% - in 2012 respectively. Chemical products had the third rank with the share of 14.4% in 2000 and 13.2% in 2008 respectively. In 2012 this item share reached the level of 15.8%. Food items have been also relatively important for the EU export to Russia with the share of 12.4% in 2000 and 7.2% in 2008 respectively. In 2012 live animals, food, oils, beverages and tobacco share went up to the level of 8.4%. Importance of fuels and other minerals for EU export to Russia was obviously minimal with the share of 0.5% in 2000, 0.6% in 2008, 1.1% in 2012 (fuels) and 3.1% in 2000, 1.5% in 2008, 1.4% in 2012 (other minerals) respectively. Russia - EU export - import commodity structure in 2012 has shown at Figure 7.

Figure 7.

EU imports from and exports to Russia



Source: Eurostat

The year 2013 has not changed Russia - EU trade commodity structure to any substantial extent. In Russian export to the EU the share of fuels became equal to 77.7%, manufactured goods classified chiefly by materials – 6.9%, chemical products – 3.1%, minerals – 1.8%, other items – 7.9%. In the EU export to Russia the share of machinery has become equal to 47.4%, manufactured (industrial and consumer) goods – 23.0%, chemical products – 16.8%, food and live animals – 7.3%.³⁷

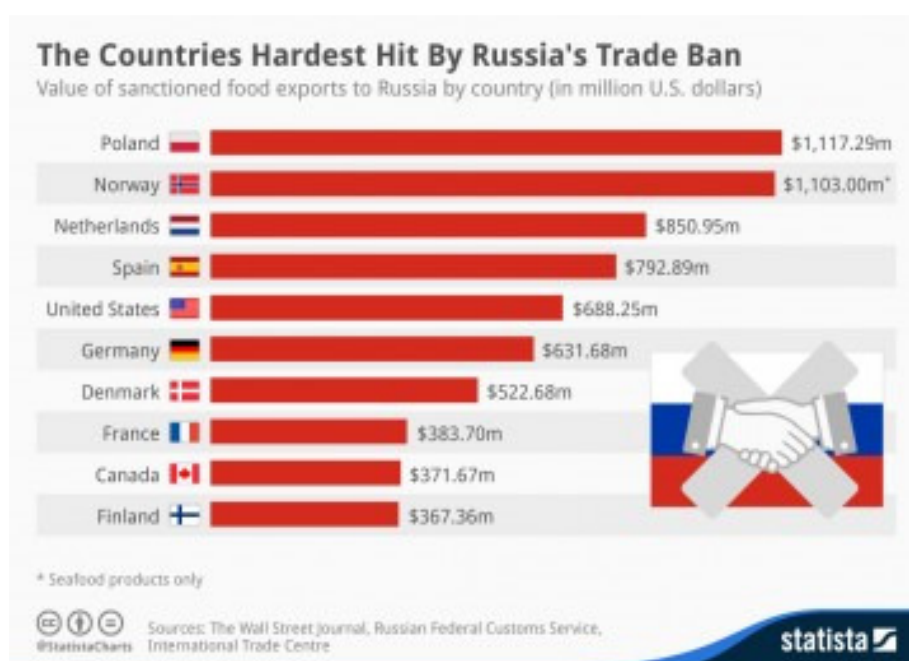
³⁶ Eurostat, Goskomstat, <http://stat.customs.ru/>

³⁷ http://trade.ec.europa.eu/doclib/docs/2006/september/tradoc_113440.pdf

Current state of trade relations

Since the first quarter of the year 2014 Russia - EU trade development started to be damaged by crisis in Ukraine. Political contradictions and misunderstandings led to mutual convictions and negative impact towards trade. First EU sanctions against Russian officials or individuals have been introduced in March 2014. They have not been directly limiting the trade, but resulted in business atmosphere deterioration and provoked trade development negative trend. The EU imports from Russia decreased by over 9.0% during the first three months of 2014 compared with the same period last year, according to Eurostat. The volume of Russian imports to the 28 countries of the European Union reached €49.1 billion in March, while the aggregated figure stood at €54.4 billion in the first quarter of 2013. At that time, the EU in 2013 only had 27 members, making this year's drop even more significant. Unfortunately Russia - EU trade development after the 2014 first quarter continue to get worse. Political contradictions and misunderstandings level has grown. The EU, the U.S and other Western nations have imposed another two rounds of economic sanctions on Russia. The third round sanctions included a number of the EU export limitations (defense related items, equipment for oil and gas sector, etc.). As the respond Russia has banned the EU (together with the US, Canada, Norway and Australia) made food items including meat, fish, dairy products, fruits, vegetables. Possible negative impact to the EU and other Western national economies due to the Russian ban has shown at the Figure 8.

Figure 8.



It is clear that the EU farmers and other food producers are among the major Russian ban victims. The biggest expected damages in volumes should be suffered by Poland. But while considering the share of Russian market for the specific EU food exporting countries it is clear that Finland should lose 33% of own agro-export, Lithuania – 32%.³⁸

³⁸ Eurostat

But even before the above mentioned ban introduction Russian trade with the EU as the whole and major member- countries has declined. According to Federal Customs Service the European Union's share in Russia's foreign trade dropped to 49.3% in January-July 2014 compare to level of 50.2% in the same period of the previous year.³⁹ Of course Russia – EU trade also suffered the negative impact of international crude oil price drop (See Figure 2). But mutual sanctions and trade wars in 2nd H 2014 –2015 1st Q continuation led to even more significant drop in Russian – EU trade volumes. As the result of the year 2014 mutual trade turnover went down by 8.8% (Russian export to the EU has dropped by 12.3%, at the same time import from the EU has been decreased by 13.5%).⁴⁰ The biggest drop appeared in the import of cars and agricultural products from the EU to Russian Federation. For example food import went down by 44%.⁴¹

Russia's trade turnovers with the top trading partners among the EU member-countries in January-July 2014 have been decreased compare to the same period of 2013. The Netherlands with US \$45.1 billion - down by 0.1%, Germany (US\$41.2 billion) - down by 0.2%, Italy (US\$30.2 billion) - down by 2.2%, Poland (US\$14.7 billion) - down by 3.2%, and the Great Britain (US\$12.3 billion) - down by 6.8%. At the same China with the US\$51.8 billion turnover experienced increase of 4.6%, Turkey (\$18.4 billion) - up by 1.5%, the Republic of Korea (\$16.2 billion) - up by 14.3%.⁴² At the end of the year 2014 the EU member-countries share of Russian trade turnover had decreased to even lower level (48.2% compare to 49.6% as the result of the year 2013).⁴³ Instead of the EU members Russia has already increased own trade and probably enough will deal more with Asian, Latin American and the CIS nations. In 2014 China has gotten bigger share in Russian trade turnover (11.3% compare to 10.5% as the result of the year 2013). The similar trends have appeared in the cases of Republic of Korea (3.5% instead of 3.0% in 2013), Turkey (4.0% instead of 3.9% in 2013) and some other nations.⁴⁴ In many cases China and some over Asian nations have been able to gain advantages through the additional room appeared due to the drop in the EU export to Russia. For example, in 2014 due to the imposed sanctions Russian import of potato from the EU went down by 27%. At the same time China has increased potato export to Russian market by 35%. Import of Israeli made potato in 2014 went up by 30%.⁴⁵ Of course, not only the sanctions regimes are hampering the EU - Russian foreign trade. At the end of the year 2014 the international oil price and the ruble exchange rate were at the lowest since the 2009 levels and made practically impossible to put mutual trade development trend into positive directions.⁴⁶

Situation in the 2015 1st Q has not changed. The EU share in Russian foreign trade has shrunk to the level of 45.4% (down from the level of 49.7% as the result of 2014 1st Q).⁴⁷ Significant decline (over 4 per cent points of share lost) could be explained by few factors involvement. Mutual sanctions are still providing substantial negative impact towards the EU - Russian foreign trade. One more traditional factor (the international oil price) also is influencing the issue. Low oil prices of the major export item are limiting the possible value of Russian export to the EU and possible national currency (ruble) revaluation and, so ability to increase the import of those products which are not in sanctions lists.

Russian Federation has expanded its presence in the Asian fuel markets since 2009. Oil transportation capacities have grown in Siberia, streamlining Russia's crude oil exports to its Asian partners. The initial phase of the Eastern Siberia-Pacific Ocean oil pipeline construction was completed in 2009, and expanded to the Pacific coastline by 2012 to reach maximum capacity by

³⁹ FCS <http://stat.customs.ru/>

⁴⁰ http://trade.ec.europa.eu/doclib/docs/2006/september/tradoc_113440.pdf

⁴¹ <http://top.rbc.ru/economics/14/04/2015/552d0fd49a794720d2d765bc>

⁴² FCS <http://stat.customs.ru/>

⁴³ http://customs.ru/index.php?option=com_content&view=article&id=20494:-2014-&catid=125:2011-02-04-16-01-54

⁴⁴ http://customs.ru/index.php?option=com_content&view=article&id=20494:-2014-&catid=125:2011-02-04-16-01-54

⁴⁵ <http://stat.customs.ru/>

⁴⁶ http://www.gks.ru/wps/wcm/connect/rosstat_main/rosstat/ru/

⁴⁷ http://customs.ru/index.php?option=com_content&view=article&id=20494:-2014-&catid=125:2011-02-04-16-01-54

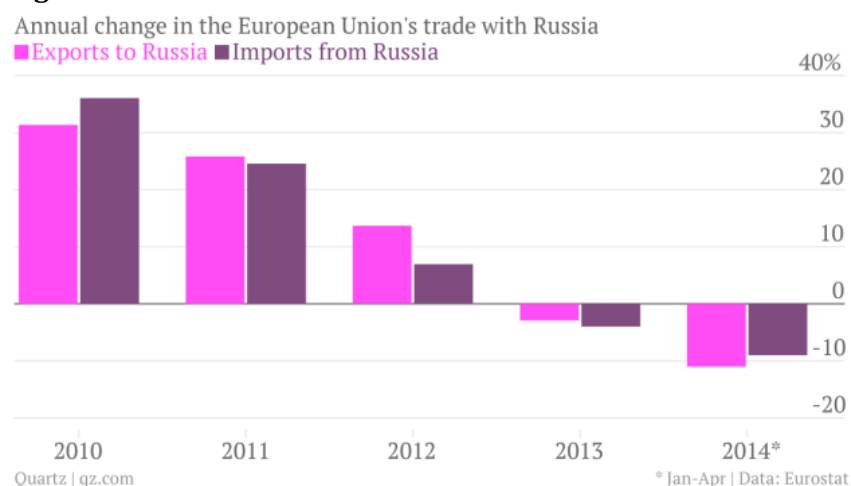
2015. China has taken the permanent position of the second largest consumer of Russian oil during the past two years, swiftly outrunning major European consumers. China imported 8.2 million tons of Russian crude oil in the third quarter of 2014, or 16.2% of the total non-CIS exports. Oil exports to South Korea have also significantly expanded in 2004-14, peaking at 3.2 million tons in the third quarter of 2014. Oil exports to Japan reached 2.1 million tons in the same period, placing it in the top-10 importer list. Given the deteriorating relations with European partners, Asian markets are becoming increasingly important for Russia and new contracts with China are critical for further growth⁴⁸. Situation with the natural gas supply to China and other Asian nations is not convenient as in the case of oil. Now Japan and to minor extent R. of Korea and China are getting Russian liquefied natural gas (LNG). This opportunity is limited by Russian LNG export low capacity due to the only one LNG producing plant existence. Plans to build gas pipeline towards Chinese territory agreed on May the 9th 2015 now has been reconsidered. Actual implementation will be delayed until 2021 instead of 2019.

CONCLUSION

Transportation costs optimization is pushing traders to cut the distances and makes trade between neighbors obviously more efficient. Being the closest neighbors Russia and the European Union have natural reasons to be important trading partners to each other. Historic background provides logical base for Russia - EU trade steady development. Trade traditions, developed business -cultural links, relatively high level of trust and understanding among businessmen make easier mutual trade.

International labor division based on natural advantages and disadvantages led to obvious Russia - EU trade commodity structure composition. Being rich in natural resources Russia could cover the significant demand share for these items in the EU member-countries. Russian demand on machinery and other manufactured goods to very large extent is covered by exporters from the EU. Besides favorable factors there are the ones which are hampering Russia - EU trade. Russian export and so export earnings and ability to import too heavily dependent on international oil price. The price decline obviously led to trade volumes decrease. Political contradictions, sanctions and trade wars in 2014 provided negative impact to Russia - EU trade development. Declining mutual trade growth rates in 2013-2014 presented at the Figure 9.

Figure 9.



⁴⁸ <http://www.ceicdata.com/en/blog/russian-crude-oil-industry-and-export-patterns-2014#sthash.VmIUvBhP.dpuf>

There are alternatives. Politically damaged trade with the EU is pushing Russia to deal more with other regions. Growing shares of trade with China, other Asian and some other nations already appears.

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POST CRISIS GLOBAL SHIFTS: DETERMINANTS, POLICIES AND EXIT SCENARIOS

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ABSTRACT

In this paper the authors try to identify the characteristics of the fifth Kondratieff wave as a compass for orientation in the ongoing process of the global transformation. Using the framework of the theory of long waves, they will diagnose the phase of the contemporary business cycle and answer the question what is actually going on: crisis or prosperity? In this context, the determinants of the crisis, considering opinions of the modern distinguished economists (Krugman, Stiglitz, Bernanke, Romer and others) will be interpreted.

Another important controversy is related to the role of the modern economic policies in the “dosing of the breakdown” i.e. in the process of transformation of the boom into “quasi boom”. Therefore, in this paper the concepts of monetarism, rational expectations, supply side economics and the portfolio selection will be analyzed. The ideological matrix of these policies is in their adjustment to the national specific characteristics of the cycle with one single aim: creating and maintaining of a profitable climate for capital investment.

At the end, on the basis of defined short and long term tendencies of economic activity authors draw a conclusion and make anticipation of the possible post-crisis scenarios for global shifts.

Keywords: economic crisis, global shifts, business cycle, economic concepts, capitalistic system

JEL classification codes: O1, O3, E6

THE EXPLANATIONS OF ECONOMIC SCIENCE ABOUT THE CONTEMPORARY GLOBAL CRISIS

The contemporary financial crisis, that occurred in 2007 in the USA and 2008 in the EU, has preoccupied the scientific community in seeking for answers for its reasons and as well as for the exit solutions for revitalization of the financial markets and the production systemes in the developed countries. The contemporary global financial crisis has transformed into economic crisis and it has started to be treated as a crisis of an insufficient consumption by the administration offices of the most of the countries and especially by the American ones. Subsequently, Keynes as the theoretician of the insufficient consumption is in the spotlight again. Following his studies, a number of distinguished economists as Krugman (2006, and 2007), Stiglitz (2007) and Mishkin (2009) have identified the contemporary crisis as a crisis of an insufficient consumption. Opposite of them, a smaller number of economists, as Taylor (2009) and Rogoff (2008), have considered that an aggregate over absorption was preceded the crisis and it is crisis's fundamental determinant.

Bearing in mind the findings of distinguished economists for contemporary crisis, we may infer that the insufficient consumption they explain on the following way:

- The insufficient consumption is caused by the low level of private and investment consumption regarding the gross national product;
- The insufficient consumption, is primarily caused by the wrong monetary policy (i.e. restrictive monetary policy);
- The insufficient consumption in the model of two classes (labour - capital) is an insufficient consumption of the workers;
- In the model of three classes (labour – entrepreneur – rentier), the insufficient consumption is a consequence from the insufficient consumption of the capitalists.

As stated above, we may conclude that distinguished economists (in particular, Krugman and Stiglitz) do not consider decline of the rate of marginal efficiency of capital (ret of profit) as a reason for the crisis. Even more, some of the economists deem that the economic crisis in 21st century, especially in the USA and the EU, is not possible due to the effects of so called 'new economy' and deep and developed financial markets (Krugman, 2009).

Taylor (2009) notes that a traditional explanation, as a main reason for the creation of financial crisis in the past 100 years has pointed out the excesses - mostly the monetary excesses which create the 'boom-bust' cycle. In the last crisis in the USA, firstly, it was a 'boom' on the real estate market, and then a 'bust' which resulted in the financial disturbances. So, Taylor (2009) suggests that the 'cheap money' policy as a stimulator for excessive demand stabilizes markets.

The 'more popular' is the thesis for efficient markets, according to which the financial crisis is not possible to exist, and thus, the financial instability and over indebtedness can not be a reason for a crisis. Contradictions in the modern explanations for the crisis have purpose to defocus the attention from the real economic issues such as:

- How it is possible a economy to have long-term and permanent deficit in the balance of payment, while the insufficient consumption is identified as a reason for the crisis?
- How it is possible in some economy due only to the changed expectations the value of assets to decrease rapidly?
- Why in some economy investments sharply decrease, except in a case when such decline is due to the decreasing of the profit rate?
- What is the reason for decreasing of the profit rate? Is it the insufficient demand or maybe overheated economy as suggested Marx and Keynes?
- Why modern economists do not consider the loan and the trade with loans in the analysis, because from the one side, they change the fundamentals of the classical economics and increase the indebtedness, and from the other side, loans are one of the main sources of private and investment consumption.

Borrowing from the external sources allows the hyper-absorption in the economy, and this process precedes the crises and the downfall in the economy. So, the insufficient consumption is a consequence from previously overheated economy which results in the decrease of the rate of profit.

Obviously, Marx was right when he claimed that an appearance of everyday life changes, but the dominations of the capitalistic mode of production in the global economy remain the same.

It doesn't matter whether the system is analyzed as a model with two or as a model with three classes as a new appearance of the capitalism, throughout the implosion of the financial markets, the ascertainment that "*Lupus pilum mutat, non mentem*"⁴⁹ remains valid. In the modern multiplied structure of capitalism, influenced by the dominant role of the financial capital and financial markets, the rate of profit remains to be the main driving force and its declining tendency in the current circumstances has big macroeconomic implications in the globalized economy.

⁴⁹ A wolf can change his coat but not his character.

Marx was preoccupied with the contradictions of social and economic processes. However, in their development the crucial role has the scientific and technological progress. In fact, the imputation of this determinant in the analysis is widening the horizon of the scientific research and by using the Kondratieff theory for the long wave as an X-ray illustration in order to understand the essence of economic, social and political processes in the modern world.

THE KONDRATIEFF THEORY FOR THE LONG WAVES AS A TOOL FOR DIAGNOSING THE PHASE OF THE CURRENT CYCLE

Beside the fact that the Kondratieff theory is not often use as a theory for elucidation of economic crises (causes and effects), yet it may offer a logical framework for clarification of the current economic performances of developed countries and in general for the global economic tendencies⁵⁰.

Basically, the Kondratieff theory for the long waves (K-waves) gives an insight for the long-term version of the fluctuations in the economic activity. Business cycles have shorter period of time for changing the phases of prosperity, recession, depression, and recovery. Instruments of monetary and fiscal policies are the main tools for managing the phases through the cycle. But, the long K-waves are created and are determined by the technological innovations and inventions (Smihula, 2009) and they lasting on average 60 years⁵¹.

Thompson (2005) unambiguously indicates that development of the new technologies is the basis of the long K-waves, while loans and bank (financial) institutions have central role in managing the distinct cycles of the long waves. This is due to the fact that new technology spurs economic growth, new initiatives and risk taking. Today, according to Thompson's study (2005) we are in the fourth phase of the fifth K-wave, i.e. the phase of the 'deep winter'. In the middle of 2013 the 'recession' phase was moved into 'depression' phase of the cycle and it should last until approximately 2017-2020⁵² (see graph 1).

⁵⁰ Kondratieff published his theory in the report 'Long waves in economic life' (1926). Kondratieff's study covered the period 1789 to 1926 and was focused on prices and interest rates.

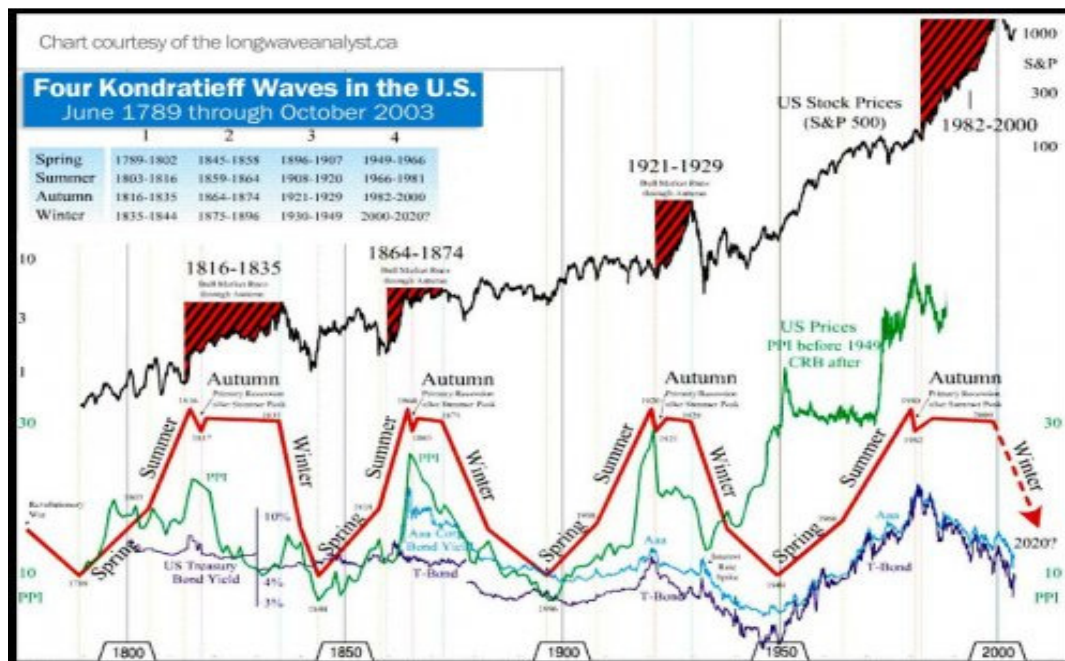
⁵¹ The chronological line of technological revolutions defines the following Kondratieff waves:

- The First wave of industrial revolution (1780-1840): the age of coal and steam;
- The second wave (1840-1890): age of railways and mass production;
- The third wave (1890-1940): the second industrial revolution, the age of electricity and the beginning of the technical revolution;
- The fourth wave (1940-1980): the age of electronics and microelectronics and beginning of the scientific - technological revolution;
- The fifth wave, i.e. the current wave has begun in 1980 and it is the age of information and telecommunications (the so called information and telecommunications revolution).

These waves in the modern economy were reinforced by Kondratieff, and then they were confirmed by Schumpeter and his fellows (Duijn (1983)).

⁵² A Kondratieff wave is composed of four distinct phases of social and economic transformation. The first phase, so called spring is the period of inflationary growth, i.e. period of prosperity accompanied by the mild inflationary tendencies. During this time unemployment falls, productivity rises, prices are relatively stable and accumulation increases. The second phase, so called summer is the period of stagflation or mild recession, when the excess capital produces a shortage of key resources and the economy enters a period of low growth rates and approaches to its production possibilities frontier. During this time, inflation significantly rises, output dramatically drops, and unemployment rapidly rises. The severe recession occurs as a consequence of an imbalances forced upon the economy's real limitations. The third phase, so called autumn is the period of the deflationary growth (plateau period). The economy becomes consumption oriented and excesses of war conflicts along with fiscal liberalism cause and illusion of stabilization in the economy. The inflated price structure along with the increased consumption produces a rapid increase of debt. The fourth phase, so called winter, is the period of depression characterized with the sharp contraction of economic activity. The exhaustion of the previously accumulated wealth forces the economy into a period of sharp reduction of expenditures. During this period the economy restructures, consolidates and prepares for the new prosperity phase based on new technological innovations and inventions.

Graph 1: The Long Waves in the USA (1789-2003)



Source: Cristopher Quigley (2012): Kondratieff Waves and the Greater Depression of (2013-2020), Financial Sense: Applying Common Sense to the Markets, 02/24/2012; <http://www.financialsense.com/contributors/christopher-quigley/kondratieff-waves-and-the-greater-depression-of-2013-2020>

At the beginning of the 2000, the changed price structure along with the increased consumption (due to the exhaustion of the accumulated wealth in the previous 30 years) caused the economy to enter a period of mild prosperity with low but positive growth rates. The economy became consumption oriented. The excess war conflicts along with the fiscal liberalism were creating an illusion of stabilization of the economic activities in the developed countries (e.g. the USA and the EU economies). The implosion of financial markets unrealistically encouraged the expectations for positive growth. From the other side, the inflated prices and increased consumption resulted in significantly increased debts of the countries (mostly in the weaker periphery economies). The exhaustion of the previously accumulated wealth forced developed economies into a period of sharp retrenchment and was creating pessimistic expectations among investors⁵³. The contractions of economic activity and the fall of the profit rate which followed the collapse of the financial markets even more have amplified the pressure for restructuring and consolidation of developed economies. According to Smihula (2009), technological progress and innovations are integral and constant part of the new wave of prosperity. Namely, the fall of the rate of return on the 'new innovations' to the level of the rate of the return in traditional sectors marks the beginning of the new technological revolution, the new technological wave.

Albeit technological innovations are spatially concentrated in the developed economies their diffusion to the rest of geographical areas has strongly shaped the geopolitical and economic map of the world. The so far experience shows that the growth and prosperity period is one of political

⁵³ The collapse of the financial markets in 2007 resulted in sharp decline of the value of the indices Dow Jones Industrials and NASDAQ in average for more than 60% of their value in 2000.

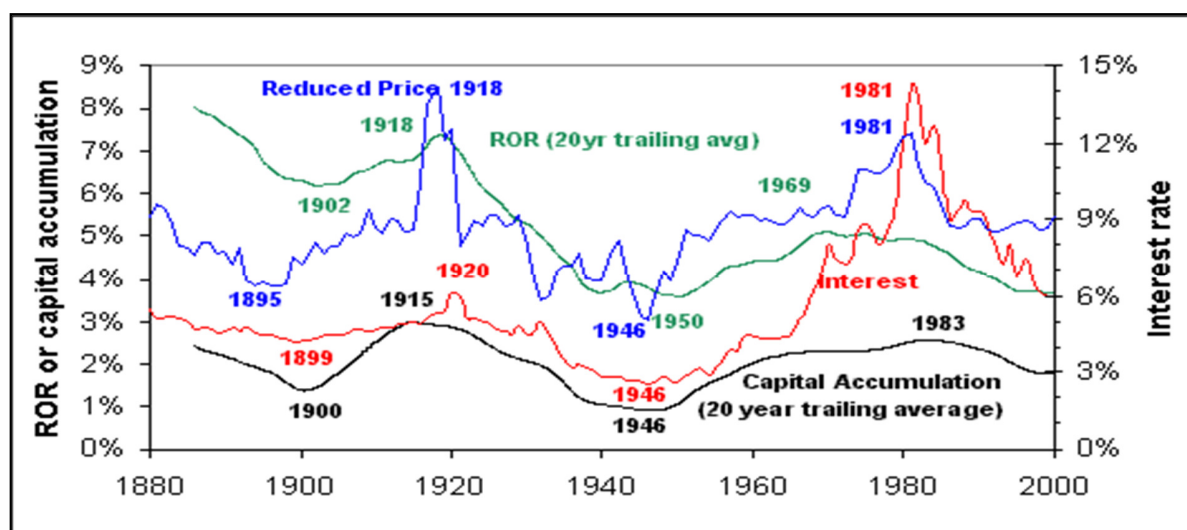
stability of the formed alliances too. Through the period of recessions the old alliances were challenged. Some of them failed and new alliances were formed.

So, technological cycles are unavoidable. The causes of the crises are the same, but their manifestation is in accordance with the characteristics of the current social and economic setting. K-waves are the waves of the prosperity and the fall of one generation, one social and economic ambience.

THE CONCEPT OF THE MODERN ECONOMIC POLICY IN FUNCTION OF MANAGING THE DEBT CRISIS

Nowadays, the world is confronted with the threat from the most severe economic collapse. It might be said that the economic policy of the USA has induced and tightened the economic crisis in the developing countries but also in the countries from developed part of the world (e.g. Japan, the EU and China). However, the thesis that in terms of commodity production the American economic policy is painful but inevitable cure for the economy when it reached the peak of the cyclical and structural crisis in 'the long Kondratieff wave' is also valid. The main issue in the distinct phases of the cyclical development of the economy is how with economic measures to create preconditions for profitable investments, in particular when the economy is in stagflation. The Kondratieff theory confirmed the thesis that most stable variable in the macroeconomic system is the rate of return (the capital accumulation), which in the distinct phases of the wave keeps its value (see graph 2).

Graph 2: The Rate of the return in the USA economy in the period (1880-2000)



Source: http://www.kwaves.com/kond_overview.htm

The modern economic policy combines and exploits the knowledge of different economic doctrines in achieving that goal (the stable value of the rate of return of the capital). Our research portfolio suggests that modern economic policy is built on postulates of the monetarism, the theory of rational expectations, supply side economics, the theory of portfolio selection and the Keynesianism⁵⁴.

⁵⁴ (i). Monetarism: high interest rates are used against inflation and along with these preconditions for low real interest rates should be created.

The hybrid concept of economic policy (the so called MRSPK – concept) de facto is synthesis of measures of different macroeconomic theories and it has marked the American antiinflation policy since 1980s and the antiinflation policy of the International Monetary Fund (188 member countries) too. Implementation of the hybrid concept has the main purpose to preserve capitalistic mode of production and its dominance in the world.

Actually, the synthesis of different knowledge of economic policy results in a strategy which is focused on the primary goal such as price stabilization (foreign exchange rates) as a prerequisite for creation of profitable ambiance for capital mobility. Hence, the economic policy has a perverted role in the economic system, i.e. instead to be a regulator of the business cycle in the national economy; it is a represent of the strategy which continuously integrates the economies in the global market regarding the model of neocolonial division of labour. In this way, drawing a thread by thread of the new knowledge of economic doctrines a new surrogate policy has been created which is focused on managing the debt crisis and solving the problems of solvency and liquidity as a key issue. Consequently, the fundamental premises of general equilibrium are derogated.

Economic policy of the USA and the EU, as a hybrid version, is situated in the framework of expansive monetary policy (cheap money policy), expansive fiscal policy (high public expenditures) and state interventionism (inflationary money supply) for saving the transnational companies, banks and even the whole states (e.g. the EU). The diseconomies of such policy measures are absorbed through the crises, regional conflicts and wars.

However, the question 'how did we get here?' is still unanswered.

The trust in the power of the financial alchemy⁵⁵ and unlimited possibilities for expanding of consumption resulted in significant discrepancies at all levels of the macroeconomic equilibrium (global, regional, and national). The net capital inflow was the magic residual by which a distorted structure of the economy was balanced. As a result, the speculative perception was created that *ex nihilo* might create the substance. The beginning of the fall of the marginal rate of capital efficiency marked the new episode of the global crisis scenario. The entire political and intellectual establishment of American economy has faced with the most severe economic crisis and it created a rescue package of financial measures of around 700 billion USA dollars. This is the biggest financial intervention that has happened since the beginning of the capitalistic market economy⁵⁶.

After the state intervention of the Congress in the USA, in the same situation in 2015 came the European economy. The European Commission created the so called Juncker investment plan (of 315 billion EURO). The purpose of the financial injection is capitalization of banks and to support the real sector as a way to stabilize the banking system, to improve expectations regarding the region's

(ii). The theory of rational expectations (RATEX): The monetary policy should be strictly determined in implementation of antiinflation policies because the entrepreneurs and general public have lived with inflation for a long time.

(iii). The Supply-Side economics: in order to stimulate an investment cycle, the scope of the state intervention should be reduced along with lower corporate tax rates.

(iv). The theory of portfolio selection: considering stable macroeconomic conditions the owners of capital allocate resources from investments in real estate into investments in industrial or financial assets.

(v). Keynesianism: Increasing money supply results in decreased interest rates and lower real wages. So, the favorable conditions for profitable investments are created. These investments primarily start to realize through the increased government consumption (expenditures).

⁵⁵ The most important phase of the process of globalization was the liberalization and deregulation of the trade with financial derivatives which was a strong impetus for mobility of the capital. The capital markets split up from the capacity of the real sector and we have ended up in the scenario of 'casino economy' with high unemployment, business crises and risk for wars. Regarding some estimations, the speculative pyramid on the capital market is 14 times bigger than the real production. Due to the deepest and most developed financial markets, the USA and the EU are the biggest users of the benefits of the speculative pyramid. So, the core of the capitalism has reached the privilege in the global system of debt pyramid to create growth and development without covering (the USA's debt is estimated on 19 trillion USA dollars).

⁵⁶ The Congress' plan for the state intervention would cope with three Keynes' traps (the liquidity trap, the expectations trap and the trap of capital marginal efficiency).

stability and to increase the marginal efficiency of capital. All these activities should result in consolidation of the distressed European monetary system.

Subsequently, the financial injections in the economic system made by the institutional creditors FED and ECB for bridging the liquidity and solvency problems opened the following issues and dilemmas:

- The financial packages induce the asymmetric concentration and centralization of capital through “the focus of the additional investment should be in the area of infrastructure, notably broadband and energy networks, education, research and innovation as well as transport infrastructure in industrial countries....” (EU, 2014). In fact, through the process of reconfiguration of the infrastructure and of the scientific and research axis they have an intention to reestablish the comparative and competitive advantages of the American-European supremacy on the eve of the new technological wave. In this context one issue is still opened, i.e. what are the perspectives of the speculative subsidizing of the ‘development’ cycle.
- The new dynamics of injection of monetary liquidity will induce faster monetary growth regarding the financial resources and the real production (which is going to decrease). This will intensify inflationary tendencies in the economy. Consequently, the stabilization programmes will be implemented by using the monetary schemes for compression of cost inflation i.e. through crating deflationary processes in the production, consumption and employment in the periphery countries.
- The financial rescue packages are a form of capital redistribution among the financial markets (i.e. capital-surplus countries) and the consumption markets (i.e. capital-deficit countries). Modern global capitalism creates money by which revitalizes the market of financial speculations. As a result of this process the gap between the growth of capital (mostly speculative) and the labour (entrepreneurship production) is deepening.

Today, the world is placed in the last phase of the “Down Grade”, and using the scientific scruple of Kondratieff’s analysis, we may say that one insight is more than obvious and that is that every financial dog on the Wall Street knows that economic policy of the FED and the ECB go bust, and this is not a matter of “if” but when” (Quigley, 2012).

CONCLUSION: POST-CRISIS SCENARIOS OF GLOBAL SHIFTS

One of the most intriguing characteristic of the winter phase of the K-waves is the specter of factors that provoke extremisms of any kinds (religious, national - chauvinistic, and social) which might be transformed into wars and terrorism (see table 1).

Table 1: Summery of the accepted phases in The USA since 1784

Spring (expansion)	Summer (recession)	Autumn (plateau)	Winter (depression)
1784-1800	1800-1816 (War of 1812)	1816-1835 (‘Era of Good Feelings’)	1835-1844 (Mexican American War)
1845-1858	1859-1864 (American Civil War)	1864-1874 (Reconstruction)	1875-1896 (Spanish American War)
1896-1907	1907-1920 (world War I)	1920-1929 (‘Roaring 20’s’)	1939-1945 (World War 2)
1949-1966	1966-1982 (Vietnam War)	1982-2000 (‘New World Order’)	2000-? (War on Terror? Or?)

Source: http://www.kwaves.com/kond_overview.htm

In fact, it is a massive process of redistribution of the debt cake which brings the retrograde course of the history. The ancient Mayans knew of the inevitability of the cycle and took steps to mitigate its effects (although ironically in the end it did not save them).

Hence, the main challenge of the authors of this paper is to identify the possible scenarios for solutions after the big economic, social and political earthquake. Actually, they try to actualize the dilemma: "How the new wave of technological innovations will start, in which kind of social and economic context, and who will take the position of a leading economic force?" But firstly, another question should be elaborated i.e. "do the anticipations for future processes might be analyzed through the prism of the determinism of technological progress?" It might be wrong to glorify expectations from post information-technical revolution or to build visions for 'information society', 'new man' and new better world'. These illusionistic scenarios do not offer a realistic approach for solutions of the modern problems. Therefore, current processes in the world economy should be observed through the prism of the neoliberal model of capitalism, as a dominant model in the current social and economic circumstances.

Considering the current economic and political dogmatism we may infer that the following scenario is ongoing. The big amount of financial subsidies and the new regulation without changes in the economic and political platform will result in a bigger asymmetry of the concentration and centralization of the capital in the global arena. The mega capitalism is the new world order, where mega corporations and mega banks are the main actors. Supported by the one world government their role is to transform the position of the worker into the object of the cybernetic system with primary function to intensify profit generation. The mega capitalism should reestablish the capital-labour relations with less state interventionism. Realization of this vision of mega capitalism creates several risks and obstacles in the process of cleaning the debt balances which were accumulated in the period of the "irrational exuberances", such as following:

- A risk from implosion of the financial market. One of the best experts of the financial industry – George Soros unambiguously suggested from the potential risk of adverse trends on the financial market. Their impact depends from the phase of the 'boom-bust' cycle, and the outcome of the adverse process might be quite disastrous (Soros, 2007).

In fact, the adverse trend has started as a process of discounting the value of assets, which is not a political fiction but new reality of global capitalism which roots are in the leverage economics. A number of financial crises had happened in the end of 1990s (Southeast Asia, Russia, Brazil, and Mexico) and in 2007 the crisis has shaken the USA and in 2008 has split over the EU. Nowadays, there is a process of reconfiguration of the networks of capital, the energy infrastructure, the security systems and technology⁵⁷. Within the process of discounting of financial crisis, the regional conflicts (Africa, the Middle East, and Ukraine) are the sequences of the financial implosion as a process of grounding within the physical limits of the cycle.

- Another risk is the final struggle among the pure form of the neoliberal capitalism and the social-market capitalism. The conflict is a product of the functional integration of the capital i.e. a process of reducing of the distortions from non-economic sources and relief the capital from the accumulated social baggage (an acquired characteristic of the development of capitalism with a human face). Therefore, the bulldozer of the neoliberal capitalism has situated the epicenter of the illness in the EU and it has started the battle for reduction of the social rights of workers and public sector. Considering the democratic capacity of the EU it

⁵⁷ The most radical process of reconfiguration is one of the reconfiguration of economic relations on the Euro-Asian continent which is realized with the war in Ukraine. The Russian embargo has cut off one of the most prosperous axis of the development of a new technological wave which would realize as a symbiosis of the German scientific and technological supremacy and Russian low-priced and extensive resource base. This process is explicitly reflected on the dichotomy in the energy infrastructure and tracing the new energy streams the Russian "Turkish stream" and Euro-American "Transatlantic stream".

brings a potential risk of conflicts (social and political turmoil, terroristic attacks and etc.). If these conflicts escalated, the reforms and innovations in the EU would stop and it would exhaust the potential for growth of the American mega capitalism (which is highly depended from the performances of the global economy and in particular from the European economy). The big dilemma for the EU is that does the model of social state will capitulate before the model of market state? Ending of this dilemma will have far-reaching consequences for civilization because it is a matter of destruction of the centuries old concept of multidimensional sustainable development based on principles of territorial cohesion⁵⁸.

- The corporate global development opens the crucial conflict with the national state. Transnational corporations found the magic formula for enrichment: capitalism without work plus capitalism without tax. The main obstacle for enrichment of TNC is a national state, which is transformed into mega state due to the process of functional integration of global capital and creation of a single market⁵⁹. A national state was developing its appetites under the Keynesian model of management with public consumption and it has mutated in the pathological form of political structure – the budget state. The national financial funds are exhausted by the enormous borrowing of state using the efficient instrument of issuing of government bonds. A result of this tendency is a reduced ability of governments to manage the national economies. Contours of such processes are worldwide evident⁶⁰. In fact, the new wave of history confronts us with the situation where national governments will not be able to repay their debts or to pay for services for their citizens (social, pension and health insurance). So, the state will minimize its form and scope in the economy, and it will fulfill its minimum functions through renting the collective infrastructure capacities for highest price. Hence, the collapse (or transformation) of a national state opens the Pandora's Box with number of questions: Who would take care for the human rights? How the social security system (which is the inner obligation of the national state) would be guaranteed when the global poverty is increasing and wages are decreasing? If the process of collapse (or transformation) of the national state persisted, would arise new civil or religious wars accompanied with ecological catastrophes?

Therefore, the mega capitalism with free market and minimum state intervention creates social, cultural and political resistance towards the processes which irrationality underestimates the wisdom and humanity of the civilization.

Building the framework for the exit scenario of these processes should consider the following three concepts: to replace the present system, to reform the present system, and to diversify the present system.

⁵⁸ The EU is stuck in the process of regional convergence and cohesion. In practice, a market state is the primary manifestation of the EU's contradictions, represented through the functional integration of the capital which erodes the fundamentals of the unity of the member states. For this reason, the interests of Germany are in conflict with the interests of Greece, Spain, and Italy. Thus, the future of the EU is uncertain.

⁵⁹ The favorable treatment of transnational corporations in the national states can be described with the metaphor 'the cherry has a four bits: first for the best infrastructure, second for collecting different grants, third for the reducing the tax to the minimum extent, fourth the cost of unemployed'. So, opening national economy for the entrance of transnational corporations, the national states dig their own graves of decay, i.e. "in the poker play they are losing important part of taxes'. (Urh Bek, 2007).

⁶⁰ In Libya, the state institutions are replaced with tribal organizations that fight each other. Formation of the Islamic state that spreads its power over the Middle East has a potential to jeopardize the Old Continent. This extremely violent organization is forming rudimentary community forms (common kitchens, primary medical care, taxes collecting). The decomposition of the Ukraine is an ongoing process, accompanied with war conflicts and forming of parallel regional political structures. In the EU, the process of disruption of the power of a national state has escalated in the case of Greece, where the national state was stuck in the trap between the problem of indebtedness and painful reforms. Unfortunately, all indebted economies are facing with these problems.

The most radical exit scenario is the replacement of the present system. The contradictions of current system are approaching to the upper limits of the growth of capitalistic mode of production. For instance: (i) Development of production forces lead to declining of rate of profit, and such tendency adversely affects the growth path and usually wars are remedy to cure the system; (ii) Instead of development of production to customize to the needs of the society, the restrictions of production is determined by the appropriation of the unpaid labour ...i.e. to some extent by the rate of profit (Marx, Vol.3, p.208). The replacement of the present system, according to Hilferding's perceptions, is a road which in the post capitalism is paved with the expropriation of the expropriators. However, the transformation of the capitalism may occur as an evolutionary process where Marx's and Keynes's visions for a new society will give a chance.

The reform of the present system as an exit scenario is the most propagated solution by the scientific and political community. The intention is to form such an international economic architecture which will lead to more balanced distribution of the gains of growth and as well as of the debts. In this context, the most relevant is the need of redesign of the global financial system in terms of: (i) better risk assessment of creditors, (ii) reprogramming of nonperforming loans, (iii) international codex for debt suspension, and (iv) reformation of the WTO in terms of providing more fair access at the world market for the developing countries and rapidly growing economies (BRIC countries).

The time of crises and wars is a period for creation of preconditions for diversification of the modern world in a way where the outsiders may give a chance to participate in the upcoming technical revolution. The better repositioning of these countries would begin in the so called phase of application which it is expected during the period 2015-2020. The new possibilities are in the adaptation of future technologies such as: nanotechnology, biomedicine, biotechnology, pharmacy, and robotics. The growing performances of the Asian economies imply that a future shift in the world economic map is in favor of the Pacific region⁶¹ and diminishing the 200 years domination of the Northatlantics region. Stiglitz suggests that modern circumstances in the world do not reflect the current positions of states' forces in the international financial and monetary system 'but whereas the US and the Great Britain dominated the old Bretton Woods, today's global landscape is markedly different. Likewise, the old Bretton Woods institutions came to be defined by a set of economic doctrines that has now been shown to fall not only in developing countries, but even in capitalism's heartland'. Contemporary processes of transformation of oligopolistic position of the USA and the EU in the world monetary system and creation of new foreign exchange assets are amplified through the idea and strategy for forming of the Asian investment bank. On the eve of a new economic reality for designing the more stable and balanced global financial system, on sight are new economic alliances.

The new economic map would be shaped regarding the multi-pole and diversified model of development. The most important gains from the global economic shifts are the redistribution of growth on the basis of productive entrepreneurship and in favor of the wellbeing of the global citizen as a first premise of the global economy.

⁶¹ Peter Dicken, suggests that following processes hint the so called "Back to the future":

- The growth of Japan;
- The rapid growth of the Hong Kong, Singapore, Taiwan Indonesia, Malaysia, and Thailand;
- The big 'dragon' – China, as one of the main actor at the global market
- Economic potential of India.

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TRADE FACILITATION INDICATORS AND THEIR POTENTIAL IMPACT ON TRADE BETWEEN THE COUNTRIES OF SOUTH-EASTERN EUROPE

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ABSTRACT

In the last two decades it has been recognized that further liberalization of international trade is possible with undertaking trade facilitation measures. The effects that are expected from the measures in the field of trade facilitation show that they have greater influence over liberalization of trade than all other trade barriers, including tariffs. Trade facilitation refers to policies and measures aimed at reducing trade costs by improving efficiency at each stage on the international trade chain.

In this paper we base our analysis on previous OECD findings and analysis of trade facilitation indicators for assessing relative economic and trade impact of specific trade facilitation measures on one hundred and seven countries at various stages of development. We plan to make the same analysis but only for the countries of South-Eastern Europe. In the analysis we plan to include all CEFTA-2006 members, except Moldova, and other countries which are part of this region: Bulgaria, Romania and Greece.

Previous research in this field has shown that enhancing certain customs and administrative barriers between the countries of South-Eastern Europe can have positive impact over trade. For example, a 10 percent reduction of the costs for trade may lead to an approximately 10 percent increase in export, while a 10 percent reduction of the time at the border may lead to a 5.5 percent increase in export.

In this study we plan to construct twelve trade facilitation indicators (TFIs) that correspond to the main policy areas under negotiations at the WTO. The indicators are composed from seventy eight variables, whose values are drawn from publicly available data. We plan to use these indicators in gravity model in order to estimate the impact of those policy areas on trade volumes between the countries of the region.

The use of individual trade facilitation indicators should also enable countries to better assess which trade facilitation measures deserve priority.

Keywords: trade facilitation, South-Eastern Europe, trade costs, trade volumes, gravity model.

JEL classification codes: F10, F14, F15.

INTRODUCTION

Trade facilitation is the field where further liberalization can be achieved and possible trade growth can be obtained. All countries agree that undertaking measured in this field can be beneficial for increasing their trade and the trade of their partners. The concept of trade facilitation under the auspices of the WTO refers to “measures for expediting the movement, release and clearance of goods, including goods in transit”(WTO, 2014).

The growing importance of trade facilitation is acknowledged with the signing of the new Agreement on Trade Facilitation at the WTO Ministerial Conference held in Bali in December 2013.

In November 2014 WTO members adopted a Protocol of Amendment to insert the new agreement in Annex 1A of the WTO Agreement. The Trade Facilitation Agreement will enter into force once two-thirds of members have completed their domestic ratification process.

The Trade Facilitation Agreement contains three sections: the first refers to measures that countries can undertake to facilitate the movement of goods in international trade, the second refers to special and differential treatment provisions for developing country members and least-developed countries, and the third section contains institutional arrangements and final provisions (WTO, 2014). The measures for trade facilitation have been organized in twelve articles numbered in the first section, as follows: publication and availability of information; opportunity to comment information before entry into force, and consultations; advance rulings; procedures for appeal or review; other measures to enhance impartiality, non-discrimination and transparency; disciplines on fees and charges imposed on or in connection with importation and exportation and penalties; release and clearance of goods; border agency cooperation; movement of goods intended for import under customs control; formalities connected with importation, exportation and transit; freedom of transit; and customs cooperation (WTO, 2014 pp. 1-20).

Based on the negotiations that were conducted before the signing of the WTO Trade Facilitation Agreement OECD has undertaken work to develop Trade facilitation indicators (TFIs) and measure their relative economic and trade impact on trade flows and trade costs in WTO member countries. The work was conducted in two phases. The first phase was conducted in 2011 by constructing twelve Trade facilitation indicators for twenty five OECD members and Hong Kong, China (Moise, Orliac and Minor, 2011, pp. 5-7). The second phase of the OECD work continued in 2013 by constructing sixteen Trade facilitation indicators for all WTO member countries and observers. The number of indicators has increased because of the development of four transit-specific indicators for taking account of transit trade which is of significant issue for developing landlocked and transit countries. The analysis was conducted for one hundred and seven countries at various stages of development, of which ninety-six were WTO members and eleven WTO observers (Moise and Sorescu, 2013, pp. 5-9).

The goal of this paper is to measure the impact of Trade facilitation indicators on bilateral trade flows for the countries in South-Eastern Europe in the most recent period (2008-2012). We use the OECD data base for the values of the Trade facilitation indicators for these countries⁶² and apply them in augmented gravity trade model to estimate their impact on bilateral trade flows.

In this paper we analyze a selected group of countries from the region of South-Eastern Europe (SEE). We included five countries which are currently members of the CEFTA-2006 agreement: Albania, Bosnia and Herzegovina, Macedonia, Montenegro and Serbia.⁶³ Moldova is excluded although it is a CEFTA-2006 member since it shares only a small portion of trade with the above mentioned countries. As a part of the geographical region of South-Eastern Europe we included Bulgaria, Croatia, Romania and Greece although they are EU members and by some indicators are much better off than the other countries in the group. Namely, the geographical closeness and border-sharing can be enhancing factors for increasing mutual trade.

The paper is organized as follows. The next section presents the existing literature on gravity models with particular emphasis on the selected group of countries from the SEE region. In Section 3 we explain the empirical model and its specifications used for the analysis, as well as the input data. Section 4 discusses the empirical results of the different specifications of the gravity model. In the last section we highlight the main conclusions from the results in order to give future prospects for trade policy directions for these countries.

⁶²The values for the indicators are obtained from OECD and are calculated for the most recent period with the latest information available.

⁶³Only Kosovo is not included due to non-existing data in the UN Comtrade Database.

LITERATURE REVIEW

Starting with Linder (1961), Tinbergen (1962) and Linnemann (1966), gravity models have been extensively used in international trade literature. The basic form of gravity models describes bilateral trade as directly related to the economic size of the two countries involved and inversely related to the transportation between them, as measured by the distance between their economic centers. Augmenting the basic relationships led to further insights on the effect of other factors on international trade. With regard to the other factors, four variables are commonly added (Cheng and Wall, 2005): common language, common border, accession to free trade arrangement and common territory in the past (such as the countries of former Yugoslavia or the former Soviet Union).

Gravity models are the workhorse for applied international trade researchers because of their simplicity and high explanatory power. Leamer and Levinsohn (1995) argue that the gravity model has produced some of the clearest and most robust empirical findings in economics. However, its use does not come without potential problems. The main one is defining the specifications that will be estimated. Traditionally, gravity models have been largely based on intuitive ideas as to which variables affect trade. More recently, however, a number of “theoretical” gravity models have been developed, which use various micro-founded theories of international trade to develop gravity-like models (Shepard, 2012). They are based on technological differences (Ricardian model), factor endowments (Heckscher-Ohlin model), emphasize the importance of monopolistic competition and increasing returns to scale (Helpman and Krugman model) or capture the multilateral resistance relationships (Anderson and van Wincoop model).

The literature confirms frequent application of these models in the Central and Eastern Europe (CEE) region, where the most influential studies include Hamilton and Winters (1992), Baldwin (1994), Havrylyshyn and Al-Atrash (1998), Kaminski, Wang and Winters (1996), Jakab, Kovács and Oszlay (2001), Egger and Pfaffermayr (2003), Fidrmuc and Fidrmuc (2003) and Bussiere, Fidrmuc and Schnatz (2005).

The literature on the implementation of gravity models in the SEE region is rather scarce. Christie (2002; 2004) suggests significant differences between actual and potential trade, both within the SEE region and between the SEE region and developed countries, mainly due to the lack of transport infrastructure. Damijan, de Sousa and Lamotte (2006) analyze the trade liberalization in the SEE countries and estimate the impact of tariff and nontariff barriers on exports of manufactured goods. They find that nontariff barriers exhibit larger effects on trade and also conclude that preferential trade agreements between SEE countries will have a limited impact on their mutual trade since their trade potential has already been reached. Bjelić, DragutinovićMitrović and PopovićPetrović (2013) focus on one part of the SEE region, i.e., Western Balkans countries (countries in the SEE region that are still not EU members) and explore the effects of nontariff measures on intraregional trade, as well as on their exports to the EU as their main export market. Their analysis indicates that technical barriers to trade significantly reduce Western Balkans trade with the EU. Tosevska-Trpcevska and Tevdovski (2014) have applied gravity model to measure the influence of certain customs and administrative barriers on trade between the countries of South Eastern Europe. They found that 10 percent reduction of the costs both in importer and exporter countries may lead to an approximately 10 percent increase in export, while a 10 percent reduction of the time at the border both in importer and exporter countries may lead to a 5.5 percent increase in export (Tosevska-Trpcevska and Tevdovski, 2014).

THE EMPIRICAL MODEL AND DATA

First we explain the empirical model used to measure the influence of the trade facilitation indicators on trade. In the second part we explain the data used in the model.

The Empirical Model

The empirical model contains panel data of nine selected countries from South-Eastern Europe and trade flows among them in the period 2008-2012 (360 balanced panel observations). We use gravity model based on specifications proposed by Moise et al. (2011) and Moise and Sorescu (2013). The log-linearized form is:

$$\ln EXP_{ijt} = \beta_0 + \beta_1 \ln Dis_{ij} + \beta_2 LANG_{ij} + \beta_3 BORD_{ij} + \beta_4 YUM_{ij} + \beta_5 TFI_{X*} + \lambda_t + \varepsilon_{ijt} \quad (1)$$

Subscripts i , j , and t indicate respectively exporting country, importing country, and year. The variables are as follows: EXP_{ijt} is the exports from country i to country j expressed in millions of US dollars, Dis_{ij} is the geographical distance between the main economic centers of countries i and j , $LANG_{ij}$, $BORD_{ij}$ and YUM_{ij} are dummy variables, and TFI_{X*} is the variable referring to specific trade facilitation indicator. The variable $LANG_{ij}$ is a dummy variable equal to 1 for countries that share a common language and 0 otherwise, $BORD_{ij}$ is a dummy variable equal to 1 for countries that share a common border and 0 otherwise, and YUM_{ij} is a dummy variable equal to 1 for countries that were part of the ex-Yugoslav market and 0 otherwise.

The variable TFI_{X*} is geometric average of the TFI_X indicators:

$$TFI_{X*} = \sqrt{TFI_{X_i} \cdot TFI_{X_j}} \quad (2)$$

where X is the specific trade facilitation indicator (A, B, ..., L). Since we analyze in total 11 trade facilitation indicators, we run 11 regressions with the form specified in (1).

The Data

The analysis is based on annual data for the trade exchange. The source for exports data is the UN Comtrade Database, except for data on Macedonia in 2008, where the source is International Trade Statistics of the National Bank of Macedonia. Data on GDP are from the World Bank Database. Data on geographical distance between the economic centers of two countries are from the website <http://www.worldatlas.com>.

Data for the Trade facilitation indicators is obtained electronically and directly from OECD. For countries outside the OECD area the analysis is based on TFIs latest available data as of January 2013 and the set of TFIs as constructed in "Trade Facilitation Indicators: The Potential Impact of Trade Facilitation on Developing Countries Trade" (OECD Trade Policy Working Papers, No. 144, 2013). For OECD countries (Greece), the analysis is based on country replies received by June 2010 and the set of indicators as constructed in "Trade Facilitation Indicators: The Impact on Trade Costs", (OECD Trade Policy Working Papers, No. 118, 2011).

The construction of the Trade facilitation indicators has been done by reorganization of the trade facilitation measures mentioned in the twelve articles in the Draft Consolidated Negotiating Text and later included in the twelve articles of the new Agreement on Trade Facilitation. The reorganization has been done by taking into account similarities between measures and areas where further distinctions were warranted. For the needs of the second phase of research four additional trade facilitation indicators have been developed for developing landlocked and transit countries but the countries of South East Europe were not included in that analysis. For the purposes of this paper and the analysis of the nine South-Eastern European countries we use the following twelve trade facilitation indicators:

- A. Information availability;
- B. Involvement of trade community;
- C. Advance Rulings;
- D. Appeal Procedures;

- E. Fees and charges;
- F. Formalities – Documents;
- G. Formalities – Automation;
- H. Formalities – Procedures;
- I. Border agency cooperation – internal;
- J. Border agency – external
- K. Consularization;
- L. Governance and Impartiality (Moise and Sorescu, 2013, pp. 8-9).

The indicator Information Availability refers to publication of trade information, including information on internet and the establishment of enquiry points. The indicator involvement of the trade community measures the intensity of consultations between the government and the traders. The indicator Advance rulings refers to the existence of prior statements by the administration to requests from traders concerning the classification, origin, valuation method, etc. applied to specific goods at the time of importation and to the rules and procedures applied to these statements. The next indicator, Appeal procedures measures the possibility and modalities to appeal administrative decisions by border agencies. Fees and charges is an indicator that explains the disciplines on the fees and charges that countries apply to import and export transactions. Formalities – Documents is the indicator that measures the simplification of trade documents, the harmonization in accordance with international standards and the acceptance of copies by separate countries. The indicator Formalities – Automation refers to the electronic exchange of data, the application of automated border procedures and the use of risk management techniques in the countries. The following indicator, Formalities – procedures refers to applying streamlined border controls, the establishment of single windows concepts as one point for submission of all required documents for trade, the application of post-clearance audits, and the introduction of authorized economic operators programs. The indicator Border agency cooperation – internal refers to the cooperation between various border agencies within the same country and the indicator Border agency cooperation – external refers to the cooperation between the border agencies of neighboring and third countries. The indicator Consularization refers to the imposition of consular transaction requirements. This indicator has been abolished in the analysis of the countries of South East Europe as these countries don't impose consular transaction requirements in trade transaction and this measure has also been abounded in the text of the new Agreement on trade facilitation. The last indicator on Governance and impartiality has been added by the OECD, and is not contained in the new Agreement on trade facilitation. This indicator refers to customs structures and functions, to their accountability, internal system audit and ethics policy.

In table 1 we give an overview of the values of the Trade facilitation indicators for the countries in South-East Europe.

Table 1. Trade Facilitation Indicators (TFIs) for the countries in South-East Europe

	TFI_A	TFI_B	TFI_C	TFI_D	TFI_E	TFI_F	TFI_G	TFI_H	TFI_I	TFI_J	TFI_L
Albania	1.600	2.000	2.000	1.667	1.750	1.000	0.750	1.133	2.000	1.667	1.857
Bosnia and Herzegovina	1.111	0.500	1.833	1.200	1.750	1.500	1.000	1.154	2.000	0.000	n.a.
Bulgaria	1.800	1.500	1.857	1.500	1.250	1.500	1.000	1.467	1.500	0.667	1.714
Croatia	1.900	2.000	1.857	1.333	1.000	1.167	1.750	1.615	2.000	0.000	1.429
Greece	1.308	0.750	1.325	2.000	0.667	1.200	2.000	0.300	1.000	1.000	1.000
Macedonia	1.900	2.000	2.000	1.667	2.000	1.833	2.000	2.000	2.000	1.667	1.857
Montenegro	1.900	n.a.	1.800	1.833	2.000	2.000	1.000	n.a.	2.000	n.a.	n.a.
Romania	1.800	1.000	2.000	1.500	1.750	1.833	1.750	1.571	1.000	0.667	1.857
Serbia	1.833	0.500	n.a.	1.286	n.a.	2.000	1.667	1.250	2.000	n.a.	n.a.

Source: OECD

The scores for the indicators have been obtained by following multiple binary schemes where the top score is 2 and it corresponds to the best performance or best result. The indicators, themselves, have been computed from seventy eight (78) different variables obtained from different data sources: questionnaire from the Global Express Association (GEA) compiled in Global Express Association Customs Capabilities Report, World Trade Organization Trade Policies Reviews, Countries Customs websites and Customs Codes, data from the World Bank Doing Business indicators, section on Trading across Borders, data from World Bank Logistic Performance Index (LPI), data from the World Economic Forum (WEF) Global Competitiveness Report (GCR), Institutional Profiles Database (IPD) and other sources like OECD Directorate for Financial Affaires – Administrative Barriers Reports for CEFTA parties (Moise and Sorescu, 2013, pp. 52-54).

EMPIRICAL RESULTS

The panel data gravity model is used to estimate the impact of trade facilitation indicators on trade in the selected group of countries in the SEE region. The estimates are made in Stata based on random effects model specifications. We employ the random effect panel model because it allows us to include the time invariant variables in the analysis such as distance, common language, shared language, participation in the ex-Yugoslav market and the trade facilitation indicators.

Moise et al. (2011) argue that usage of the trade facilitation indicators for the latest year available (in our case 2012 year) in the panel model (in our case covering 2008-2012) is appropriate since they could be viewed as relatively stable over time.

Table 2 presents the results of the gravity model specification that includes trade facilitation indicator: A. Information availability (*TFI_A*). As expected, there is positive influence of this indicator on SEE countries bilateral exports. The results imply that a 10 percent increase of the information availability trade facilitation indicator may lead to an approximately 3.2 percent increase in bilateral export, ceteris paribus. This result is significant on 10% level.

Table 3 presents the results of the gravity model specification that includes trade facilitation indicator: B. Involvement of trade community (*TFI_B*). As expected, there is positive influence of this indicator on SEE countries bilateral exports. The results imply that a 10 percent increase of the involvement of the trade community trade facilitation indicator may lead to an approximately 2.9 percent increase in bilateral export, ceteris paribus. This result is significant on 10% level.

Table 4 presents the results of the gravity model specification that includes trade facilitation indicator: C. Advance Rulings (*TFI_C*). The results imply that this trade facilitation indicator is not statistically significant.

Table 5 presents the results of the gravity model specification that includes trade facilitation indicator: D. Appeal Procedures(*TFI_D*). As expected, there is positive influence of this indicator on SEE countries bilateral exports. The results imply that a 10 percent increase of appeal procedures trade facilitation indicator may lead to an approximately 4.2 percent increase in bilateral export, ceteris paribus. This result is significant on 10% level.

Table 6 presents the results of the gravity model specification that includes trade facilitation indicator: E. Fees and charges (*TFI_E*). The results imply that this trade facilitation indicator is not statistically significant.

Table 7 presents the results of the gravity model specification that includes trade facilitation indicator: F. Formalities – Documents (*TFI_F*). The results imply that this trade facilitation indicator is not statistically significant.

Table 8 presents the results of the gravity model specification that includes trade facilitation indicator: G. Formalities – Automation (*TFI_G*). As expected, there is positive influence of this indicator on SEE countries bilateral exports. The results imply that a 10 percent increase of

formalities – automation trade facilitation indicator may lead to an approximately 5.5 percent increase in bilateral export, ceteris paribus. This result is significant on 10% level.

Table 9 presents the results of the gravity model specification that includes trade facilitation indicator: H. Formalities – Procedures (*TFI_H*). The results imply that this trade facilitation indicator is not statistically significant.

Table 10 presents the results of the gravity model specification that includes trade facilitation indicator: I. Border agency cooperation – internal (*TFI_F*). The results imply that this trade facilitation indicator is not statistically significant.

Table 11 presents the results of the gravity model specification that includes trade facilitation indicator: J. Border agency – external (*TFI_J*). As expected, there is positive influence of this indicator on SEE countries bilateral exports. The results imply that a 10 percent increase border agency – external trade facilitation indicator may lead to an approximately 2.5 percent increase in bilateral export, ceteris paribus. This result is significant on 10% level.

Table 12 presents the results of the gravity model specification that includes trade facilitation indicator: L. Governance and Impartiality (*TFI_L*). The results imply that this trade facilitation indicator is not statistically significant.

Table 2. Empirical Results of Gravity Model Specifications for Information Availability Trade Facilitation Indicator

lnexp	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
DISTANCE	.0021598	.0007738	2.79	0.007	.0006148	.0037048
LANG	.5911273	.7381002	0.80	0.426	-.8825374	2.064792
BORD	2.692913	.476789	5.65	0.000	1.740973	3.644853
YUM	.0570994	.5138302	0.11	0.912	-.9687957	1.082994
TFI_A	.3163777	.1825445	1.73	0.088	-.0480842	.6808396
_cons	.7529192	.8569113	0.88	0.383	-.9579595	2.463798

Table 3. Empirical Results of Gravity Model Specifications for Involvement of trade community Trade Facilitation Indicator

lnexp	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
DISTANCE	.0021656	.0007838	2.76	0.007	.0006006	.0037305
LANG	.5683696	.7468983	0.76	0.449	-.922861	2.0596
BORD	2.709494	.4826252	5.61	0.000	1.745902	3.673086
YUM	.0741058	.5201212	0.14	0.887	-.9643498	1.112561
TFI_B	.2862861	.1694508	1.69	0.096	-.0520332	.6246055
_cons	.7865199	.8513372	0.92	0.359	-.9132297	2.48627

Table 4. Empirical Results of Gravity Model Specifications for Advance Rulings Trade Facilitation Indicator

lnexp	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
DISTANCE	.0022032	.0007795	2.83	0.006	.0006468	.0037596
LANG	.5562931	.7426869	0.75	0.457	-.9265292	2.039115
BORD	2.704062	.4815319	5.62	0.000	1.742653	3.665472
YUM	.1169997	.5140906	0.23	0.821	-.9094152	1.143415
TFI_C	-1.897825	1.342017	-1.41	0.162	-4.577248	.7815987
_cons	5.027495	2.486231	2.02	0.047	.0635749	9.991415

Table 5. Empirical Results of Gravity Model Specifications for Appeal Procedures Trade Facilitation Indicator

lnexp	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
DISTANCE	.0021568	.0007751	2.78	0.007	.0006093	.0037042
LANG	.592068	.7387437	0.80	0.426	-.8828813	2.067017
BORD	2.685627	.4779494	5.62	0.000	1.73137	3.639884
YUM	.0622287	.5138929	0.12	0.904	-.9637915	1.088249
TFI_D	.4215933	.2471197	1.71	0.093	-.0717972	.9149838
_cons	.6246841	.9100057	0.69	0.495	-1.192201	2.441569

Table 6. Empirical Results of Gravity Model Specifications for Fees and charges Trade Facilitation Indicator

lnexp	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
DISTANCE	.0022361	.0007696	2.91	0.005	.0006996	.0037727
LANG	.58287	.7397594	0.79	0.434	-.8941073	2.059847
BORD	2.721625	.4760919	5.72	0.000	1.771076	3.672173
YUM	.0806967	.5135034	0.16	0.876	-.9445459	1.105939
TFI_E	.62183	.380235	1.64	0.107	-.1373336	1.380994
_cons	.3213056	1.062234	0.30	0.763	-1.799513	2.442124

Table 7. Empirical Results of Gravity Model Specifications for Formalities – Documents Trade Facilitation Indicator

lnexp	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
DISTANCE	.0021968	.0007721	2.85	0.006	.0006553	.0037383
LANG	.5881676	.7393019	0.80	0.429	-.8878963	2.064232
BORD	2.703353	.4769893	5.67	0.000	1.751014	3.655693
YUM	.0719646	.5136562	0.14	0.889	-.9535832	1.097512
TFI_F	.7133445	.4270332	1.67	0.100	-.1392549	1.565944
_cons	.427064	1.00176	0.43	0.671	-1.573014	2.427142

Table 8. Empirical Results of Gravity Model Specifications for Formalities – Automation Trade Facilitation Indicator

lnexp	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
DISTANCE	.0021428	.0007775	2.76	0.008	.0005904	.0036951
LANG	.5893495	.739114	0.80	0.428	-.8863393	2.065038
BORD	2.682549	.4787038	5.60	0.000	1.726786	3.638312
YUM	.0606445	.5145796	0.12	0.907	-.9667468	1.088036
TFI_G	.555311	.3301143	1.68	0.097	-.1037835	1.214406
_cons	.7323879	.8746874	0.84	0.405	-1.013982	2.478758

Table 9. Empirical Results of Gravity Model Specifications for Formalities – Procedures Trade Facilitation Indicator

lnexp	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
DISTANCE	.0022617	.0007792	2.90	0.005	.0007059	.0038175
LANG	.5451319	.7490076	0.73	0.469	-.9503101	2.040574
BORD	2.763336	.4810186	5.74	0.000	1.802952	3.723721
YUM	.1056606	.5201884	0.20	0.840	-.932929	1.14425
TFI_H	.8927916	.5838372	1.53	0.131	-.272877	2.05846
_cons	.2098308	1.156995	0.18	0.857	-2.100184	2.519845

Table 10. Empirical Results of Gravity Model Specifications for Border agency cooperation – internal Trade Facilitation Indicator

lnexp	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
DISTANCE	.0022115	.0007728	2.86	0.006	.0006684	.0037545
LANG	.5790704	.7403502	0.78	0.437	-.8990865	2.057227
BORD	2.718132	.4769693	5.70	0.000	1.765832	3.670432
YUM	.0775102	.5146108	0.15	0.881	-.9499434	1.104964
TFI_I	.4225304	.2645568	1.60	0.115	-.1056744	.9507352
_cons	.501137	.9932849	0.50	0.616	-1.48202	2.484294

Table 11. Empirical Results of Gravity Model Specifications for Border agency – external Trade Facilitation Indicator

lnexp	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
DISTANCE	.0021087	.0007806	2.70	0.009	.0005502	.0036672
LANG	.5896354	.7420844	0.79	0.430	-.8919839	2.071255
BORD	2.666665	.4814639	5.54	0.000	1.705392	3.627939
YUM	.0442505	.5172599	0.09	0.932	-.9884923	1.076993
TFI_J	.2466923	.1266376	1.95	0.056	-.0061479	.4995324
_cons	.9341362	.7731515	1.21	0.231	-.6095106	2.477783

Table 12. Empirical Results of Gravity Model Specifications for Governance and Impartiality Trade Facilitation Indicator

lnexp	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
DISTANCE	.0018693	.000831	2.25	0.029	.0002039	.0035346
LANG	.5297116	.7091365	0.75	0.458	-.8914297	1.950853
BORD	2.622133	.4688531	5.59	0.000	1.68253	3.561736
YUM	-.1089462	.514085	-0.21	0.833	-1.139195	.9213031
TFI_L	1.497405	3.854831	0.39	0.699	-6.227848	9.222659
_cons	-.2217174	6.618257	-0.03	0.973	-13.485	13.04157

The results presented in tables 2-12 indicate that sharing common border and distance have positive influence on bilateral trade in SEE, while membership in the ex-Yugoslavian market and common language have not statistically significant influence on SEE bilateral export.⁶⁴

CONCLUSION

The aim of this paper was to analyze the significance of certain Trade facilitation indicators on trade between the selected group of countries in South-Eastern Europe. The model specifications have shown that only 5 indicators of 11 measured have positive influence on trade in the analyzed period.

The results have shown that the indicators *Information availability*, *Involvement of the trade community*, *Appeal procedures*, *Formalities – Automation* and *Border Agency cooperation – External* are statistically significant on a 10% level of export. If we look more closely into the indicators and the variables from which they are constructed we can observe the specific trade facilitation measures that appear to have significant influence for increasing countries' export. The indicator *Information availability* is directly linked to the need for increased transparency of trade regulations. It is comprised from several variables like: establishment of a national Customs website, publication of rate duties, establishment of enquiry points, possibility to ask questions to Customs, information on import and export procedures, prior publication of all border procedures, rules and examples of customs classification and agreements with third countries related to these issues and transparency of government policymaking.

The indicator *Involvement of the trade community* is comprised from trade facilitation measures that indicate the possible involvement of the trade community by consultations and comments and by identifying targeted stakeholders into preparing trade related laws and regulations. The other significant indicator is *Appeal procedures* and it refers to a number of basic characteristics of the appeal system in the countries, such as transparency, fairness, accessibility, timeliness and effectiveness of the applicable rules and of outcomes. A well-functioning appeal procedures mechanism ensures transparent application and enforcement of the legislation by the Customs administration and related agencies.

The indicator *Formalities-Automation* covers a series of very important dimensions of trade facilitation, including the application of automated procedures, the possibility for electronic interchange of documents and the application of risk management procedures. The last significant indicator appears to be the indicator *Border Agency cooperation – External*. This indicator measures the alignment of working hours of neighboring border crossings, the possibility for development and sharing of common facilities and possibility to perform joint customs controls.

The results obtained from the analysis should be taken into consideration by the individual countries when preparing future trade policy directions. This means that the countries from South-Eastern Europe should place more attention on undertaking measures and policies that have shown to be significant for improving export (trade) flows.

Another aspect that arises from this analysis is the direction that can be used for setting future CEFTA-2006 prospects. All transition periods for trade liberalization and tariff reduction between CEFTA-2006 members have elapsed and future trade benefits can only be obtained by undertaking trade facilitation measures and reducing customs and administrative procedures. Since most of these countries are small, import dependent and landlocked, undertaking trade facilitation measures,

⁶⁴ It should be noted that in the dummy variable we specify the existence of a common language only in a few cases. However, some pairs of countries do not have a common language, but similar languages to an extent that this does not create a significant obstacle in business contacts (for example: Croatia and Serbia, Serbia and Macedonia, Croatia and Macedonia, or Macedonia and Bulgaria). These effects are approximated by two other dummy variables: participation in the ex-Yugoslav market and common border.

especially by reducing certain customs and administrative procedures, can be the most feasible way to promote export and mutual trade.

The results from this paper can only be considered as indicators for the direction and relative importance of different trade facilitation measures on trade. They, nevertheless, indicate that improving the efficiency of certain customs and administrative procedures and undertaking trade facilitation measures can facilitate trade and help promote export growth and mutual trade.

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SUSTAINABILITY OF EU CONVERGENCE BASED ON EXCHANGE RATE ANCHOR DURING CRISIS AND POST CRISIS PERIOD

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ABSTRACT

To cope with competitive pressures and market forces within the EU in the medium-term, the SEE6 needs to address important challenges through determined implementation of structural reforms. Progress with structural reforms can help for macroeconomic stability, for example, by reducing the structural external deficits. Also it helps nominal convergence, as the productivity realizes the improvement of competitiveness and helps disinflation by maintaining low unit cost. So in terms of macroeconomic convergence for SEE6 countries and the case of Macedonia, EU membership requires convergence of the Macedonian economy with that of the EU in realistic conditions, indicating income per capita and economic structure, and in nominal terms, meaning convergence of prices, inflation and interest rates.

Because of the fact that Southeastern European countries rely mainly on exchange rate anchors to reduce inflation, the appreciation of the real exchange rate among countries in the region is significant, although it is slightly lower when compared to countries in the EU member states. As a result, these countries suffer from loss of competitiveness. This can be clearly seen from the movements of the deficit on their current account, which are important in all these countries. Using the exchange rate as anchor for inflationary expectations, on long run have been effective so far, producing a low and stable inflation rates. However, in periods of low inflation and deflationary pressures, exchange rate anchors do not allow sufficient space for fiscal and monetary stimulus. In this respect, policy makers are under following dilemma: to deviate from exchange rate anchor and increase the space for fiscal and monetary stimulus; to accelerate structural reforms and competitiveness and on short run deepen the recessionary pressures; and to increase foreign debt and thus increase scope for fiscal and monetary stimulus while preserving the exchange rate anchor. All three scenarios are analyzed in this paper.

Economic policies can be instrumental for growth in the near- and the medium-term in SEE6. On the fiscal side, sustained reform effort is needed to address structural rigidities in the budgets of SEE6. Priorities include: changes in the composition of public expenditure toward investment and away from wages, public expenditure targeting and prioritization as well as improvements in revenue collection and the broadening of the tax base, among others. On the monetary policy side, with regional inflation at a very low 1.2 percent and big output gaps remaining, some scope for short-term easing of monetary conditions exist, especially in those countries where deficits have begun to decline. Above facts and real situations are our challenges for making analysis and contribution in this area.

Keywords: EU, convergence, SEE6, structure reforms, Macedonia
JEL classification codes: F150.

INTRODUCTION

According to literature, the macroeconomic policy of the new EU member states, is facing with two main challenges. The first is to manage the continued and rapid process of future real economic convergence, which will come with high real GDP and productivity growth rates and large capital inflows. The second challenge is to achieve the degree of nominal convergence required to enter into

European Monetary Union (EMU). These two challenges are not unrelated, such as rapid growth and large capital inflows can make it difficult to realize nominal convergence, i.e., there are good reasons to think that the real convergence would be easier to manage for some countries, if they were allowed to adopt the euro immediately. Both challenges are mainly associated with fiscal policy: managing capital inflows, because fiscal policy can absorb some of their demand effects, nominal convergence, because the sustainability of public finances is part of the requirements for entering EMU.

MACROECONOMIC CHALLENGES FOR COUNTRIES OF SOUTH-EASTERN EUROPE

Like many countries in the early stages of transition, South-eastern European countries rely mainly on exchange rates to reduce the inflation. In many countries, exchange rate helps to reduce the inflation to lower single digits since 2004. Albania's managed float and informal inflation targeting were also successful in keeping inflation low, while in Romania, inflation, although declining under the managed float, remains close to double digits. Since 2000 Serbia has shifted between nominal and close to real exchange rate targeting (with important regime shifts in early 2003 and 2005).

Inflation first declined with the exchange rate anchor, but an increasing external deficit prompted a shift to a managed float in 2003. However, inflation resurged, as suppressed administrative prices were readjusted and growing euroization contributed to an increased pass-through from the exchange rate to prices. The regime shifts may also have adversely affected monetary policy credibility, as indicated by the growing euroization. The exchange rate anchors and sluggish structural reform put pressure on competitiveness. Fixed or nearly fixed exchange rates can lead to unsustainable real appreciation and loss of competitiveness, unless fiscal and incomes policies remain tight and structural reforms boost productivity. For example, in Serbia, the exchange rate anchor in 2002 became unsustainable as large real wage increases and slow structural reforms eroded competitiveness and increased the external deficit. Pressures for real appreciation in the region also arise from the large inflows of foreign currency. The evolution of EU export market shares also suggests that Macedonia may have lost competitiveness, while most others have increased their share in the EU market. The real effective exchange rates data (REER) show a large appreciation in Bulgaria, Romania, and Albania in recent years, which at least in the former two is likely to reflect changes in market fundamentals in terms of increased productivity. In the remainder of the SEE, there is no clear trend with real appreciation and the REERs have remained relatively flat in the past few years.

Southeastern Europe can draw experience from recent new EU member states with monetary framework during accession. Exchange rate regimes during accession had shown different variations, which indicate the importance of fundamentals and associated policies in the implementation and achievement of macroeconomic stability⁶⁵. Some of the larger recent EU members gradually moved from exchange-rate-based stabilizations to more flexible monetary policy as transition progressed. South-eastern Europe has very lower speed of reforms and lower growth rates. Related to this, capital inflows to the region are very smaller and have shown greater dispersion between countries.

Regardless the exchange rate regime, the appreciation of the real exchange rate among countries in the region is significant, although it is slightly lower when compared to countries in the EU member states. As a result, these countries suffer from loss of competitiveness. This can be clearly seen from the movements of the deficit on their current account, which are important in all these countries. For example, the current account deficit in 2007 ranged from 3.1% of GDP in Macedonia to

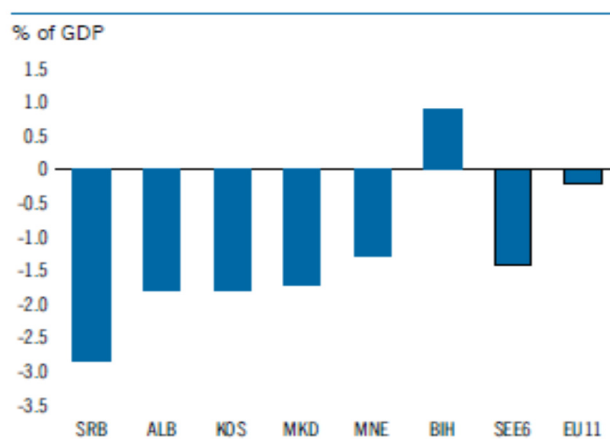
⁶⁵ Schadler, S., P. Drummond, L. Kuijs, Z. Murgasova and R. van Elkan (2005), "Euro Adoption in the Accession Countries: Vulnerabilities and Strategies", in S. Schadler ed. *Euro Adoption in Central and Eastern Europe: Opportunities and Challenges*, IMF.

36.2% of GDP in Montenegro⁶⁶. Using the exchange rate as hope for inflationary expectations have been effective so far, producing a low and stable inflation rates. In terms of high import dependence and the relatively slow implementation of structural reforms realized in increased export potential, contributed to the importance of high trade deficit, which was largely financed by high private transfers.

CONVERGENCE OF MACEDONIA AND SEE6 - ECONOMIC CONDITION AND RECOVERY

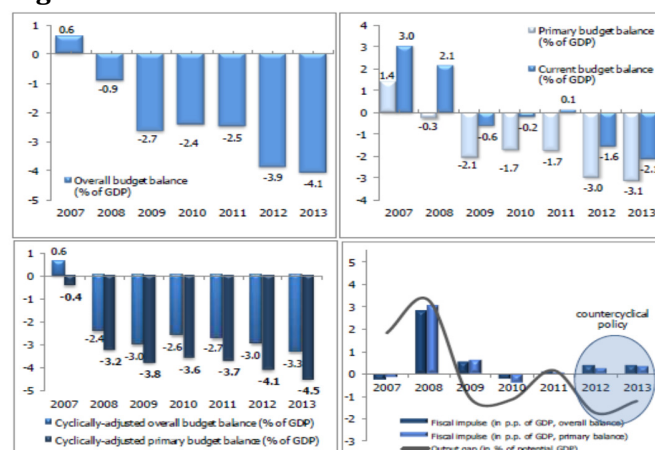
Most countries have seen declines in revenue as a share of GDP (Figure 1) and international trade taxes have performed especially badly. Receipts from international trade taxes declined by an average of 0.5 percent of GDP between 2009 and 2013, associated with shrinking imports. Albania and Montenegro were hit especially hard by falling VAT receipts, suffering declines by 0.5 percent of GDP and over 1 percent of GDP respectively relative to 2009 levels as a result of slow or negative economic growth. Only in Bosnia and Herzegovina did revenues increased slightly largely due to the success of the Indirect Tax Authority.

Figure 1. Change in Revenues, 2009–13



Source: World Bank staff calculations.

Figure 2. Fiscal indicators for Macedonia



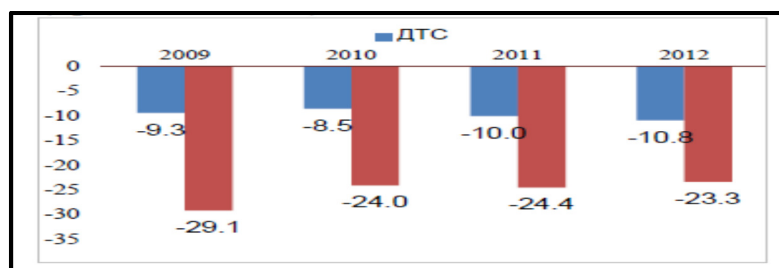
Source: Ministry of Finance of the Republic of the Macedonia and NBRM calculations.

⁶⁶ European Commission (2007), *The EU Economy 2007 Review, Moving Europe's Productivity Frontier*.

The analysis of the discretionary changes in the fiscal policy suggested further countercyclical policy. The total structural deficit increased to 4.5% from 4.1% in 2012, amid simultaneous increase also in the structural primary deficit from 3% in 2012 to 3.3% in 2013 (Figure 2)⁶⁷. Consequently, as in 2012, a positive fiscal impetus was given, which, according to the structural primary balance was slightly higher than in 2012. If the analysis includes the output gap, than the fiscal policy was countercyclical also in 2013. Financing of the budget deficit on a net basis in 2013, was done through auctions of government securities, and the rest of the required net inflows was provided from external sources. Reports also showed that also in 2013 there was a trend of increased borrowing through government bonds versus the moderate reduction of the borrowing through Treasury bills.

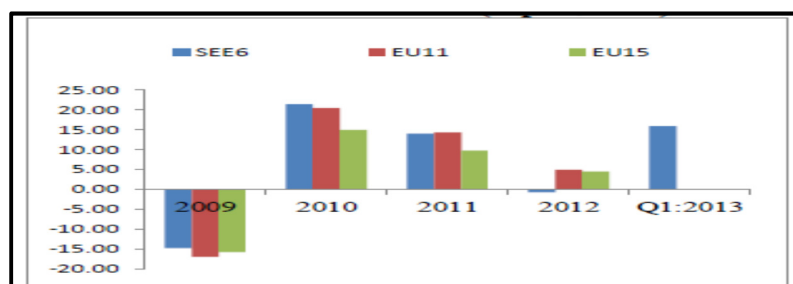
Due to the close economic ties, external factor in SEE6 highly correlated with development of events in the EU. In 2012 SEE6 experienced a drop in trade, current account deficits, FDI and transfers. In the first quarter of 2013 exports is driven by FDI and the improved economic performance of the EU. While current account deficits and trade balances deteriorated in 2012, in the first quarter of 2013 they registered reverse. Reducing the demand for EU goods SEE6 led to a decline in the region which began in 2011 and continued in 2012 (Fig. 3 and 4).

Figure 3. Current account deficit and trade balance SEE6 (percentage of GDP)



Source: IMF, World Bank

Figure 4. Export growth (%)



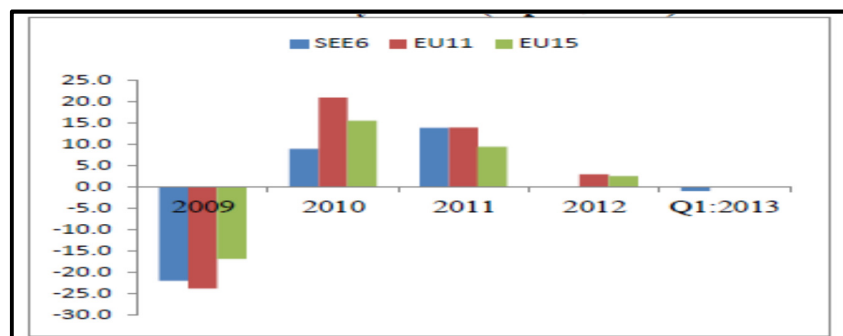
Source: IMF, World Bank

From the first quarter of 2013, exports are likely to improve in future for the entire region. Imports remained unchanged in 2012 and fell again in the first quarter of 2013. Movements in terms of trading, also play a major role in explaining the growth trends of imports through SEE6. Prices for energy imports fell sharply in 2009 and increased significantly in 2010, while in 2011 remained at the same level in 2012 and declined in 2013. In Macedonia, the imports in the second half of 2012 was falling faster, because domestic demand and industrial production continued to decline which is

⁶⁷ NBRM (2013), *Annual Report*.

an example for the first quarter of 2013 too(Fig. 5), mainly due to weak domestic demand and economic activity.

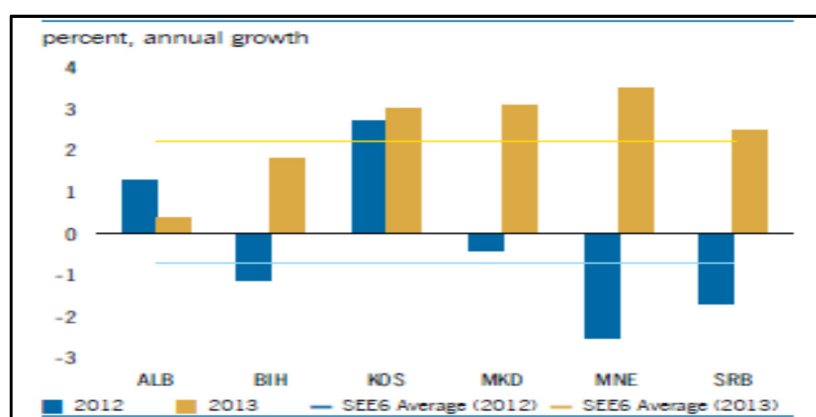
Figure 5. Import growth (%)



Source: IMF, World Bank

The SEE6 countries exited from recession in 2013 with economic growth supported by the recovery in high-income countries, particularly those in the European Union (EU). After a 0.7 percent decline in 2012, the average real GDP of SEE6 grew 2.2 percent in 2013 (Figure 6). All six SEE countries marked positive growth, with growth at or exceeding 3 percent in Kosovo, FYR Macedonia and Montenegro. Only in Albania did economic growth slow in 2013 compared to 2012, though it remained positive. External demand for SEE6 exports was the key driver of this growth recovery, reflecting an improving European and global economy.

Figure 6: Growth in SEE6, 2012-13

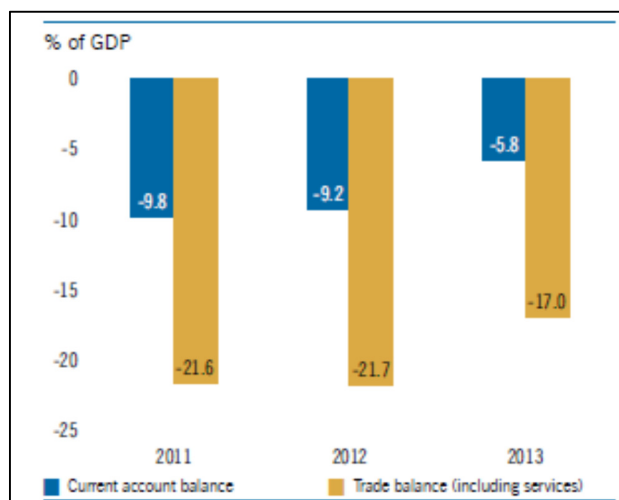


Source: National statistics offices, and World Bank.

An export-led recovery combined with depressed domestic demand resulted in a significant narrowing of current account imbalances in all SEE6 countries. The increases in exports and the declines in imports lowered the trade deficit of SEE countries by 4.7 percent of GDP and the current account deficits by 3.4 percent of GDP in 2013 (Figure 7, Figure 8). Exports to the EU grew strongly, especially in Bosnia and Herzegovina, FYR Macedonia, and Serbia. Montenegro's and Kosovo's share of exports to the SEE region increased. Manufactured goods were the largest share of exports from SEE6 followed by machinery and transport equipment. Jointly they comprised over 60 percent of

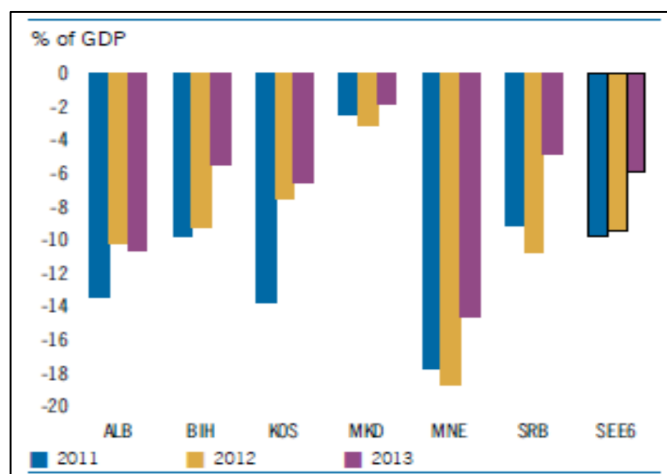
exports in 2013 in the region. The major increase in 2013 came from export of machinery and transport equipment from Serbia. Exports in FYR Macedonia grew also on the back of machinery and transport equipment as well as chemical materials. Mineral fuels exports were quite significant in Albania and Montenegro, while base metals were around a quarter of exports from Kosovo in 2013.

Figure 7: SEE6 Current Account and trade & Service Balances



Source: Central banks, IMF WEO, and World Bank.

Figure 8: SEE6 Countries' Current Account Balance



Source: SEE6 Central Banks

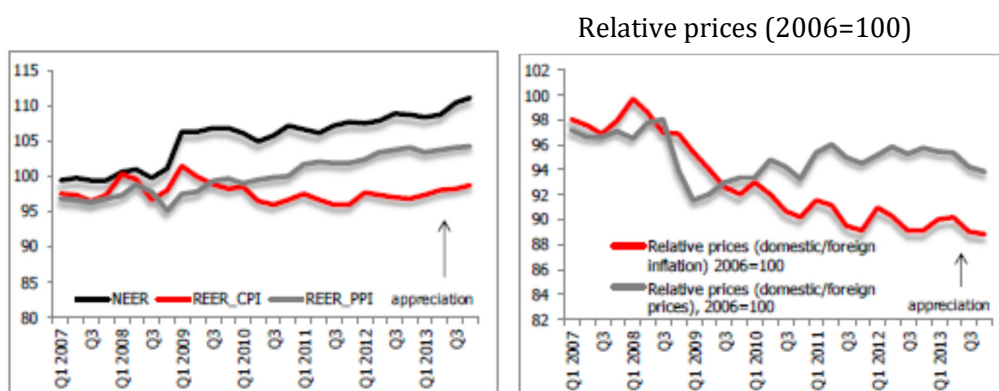
The reports by NBRM showed improved performance in the current account in 2013 due to the improved balance of goods and services, amid reduced net inflows in current transfers and higher net outflows in income⁶⁸. The reduction in the trade deficit by 3 percentage points of GDP was mainly

⁶⁸ NBRM (2014) *Recent Macroeconomic Indicators*, Review of the Current Situation.

caused by a narrowing of the energy deficit, although the non-energy had the same, however significantly milder effect. The individual components of trade registered divergent movements. Exports, driven by the enhanced activity of the new capacities in the economy with foreign ownership, registered an annual growth of 3.2%, while the reduced demand for energy products and the annual decline in energy prices reduced the import component, causing an annual decline of 1.5%. Divergent movements in exports and imports caused stagnation of total foreign trade on annual basis.

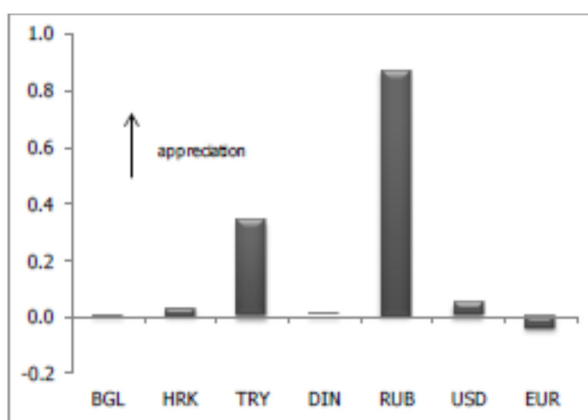
The exports of the companies from the industrial development zones were the most important driver of Macedonian exports in 2013, increasing their resilience, amid still unfavorable global conditions that caused a decrease in the exports of the metal industry. Also, increased exports of new companies were sufficient for offsetting the significant decline in the exported petroleum products, caused by the simultaneous reduction of the exported quantities and lower export prices. Price competitiveness indicators of the Macedonian economy showed a negligible appreciation of the Denar in 2013. The CPI-deflated real effective exchange rate rose by 0.9%, while the PPI-deflated REER recorded an annual appreciation of 0.4%. The change was entirely caused by the movement of the nominal effective Denar exchange rate, as a result of the appreciation of the domestic currency against the Russian Ruble and Turkish Lira, with favorable slower movements of domestic relative to foreign prices.

Figure 9. NEER and REER (CPI and PPI, 2006=100)



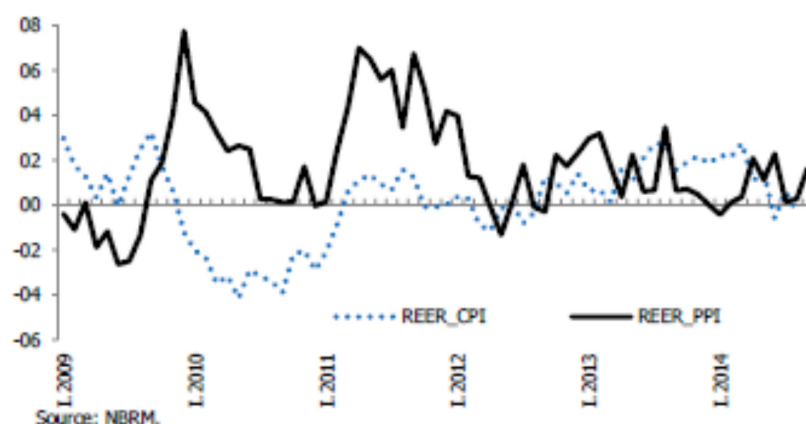
Source: NBRM

Figure 10. Contribution to the annual change of NEER of the Denar (in percentage points)



Source: NBRM

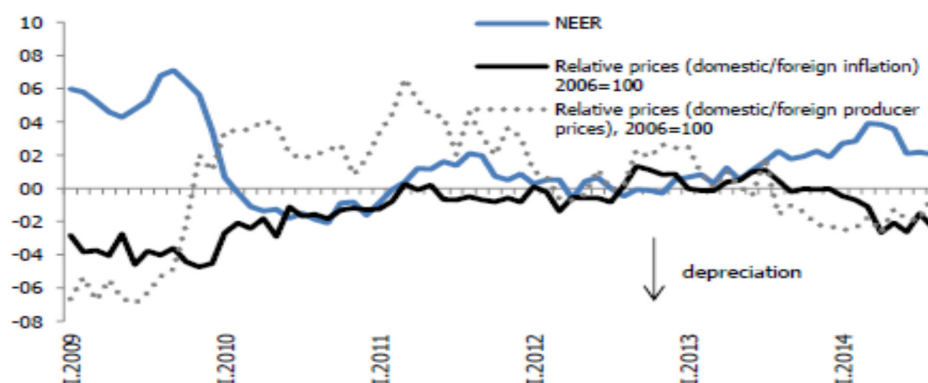
Figure 11. REER annual changes, in %



Source: NBRM

In August 2014, price competitiveness indicators of the domestic economy registered divergent movements on an annual level. When this is compared with the same month of the 2013, the REER deflated by consumer prices depreciated by 0.3%, while the REER deflated by producer prices appreciated by 1.6% on an annual basis.

Figure 12. NEER and relative prices annual growth rates, in %

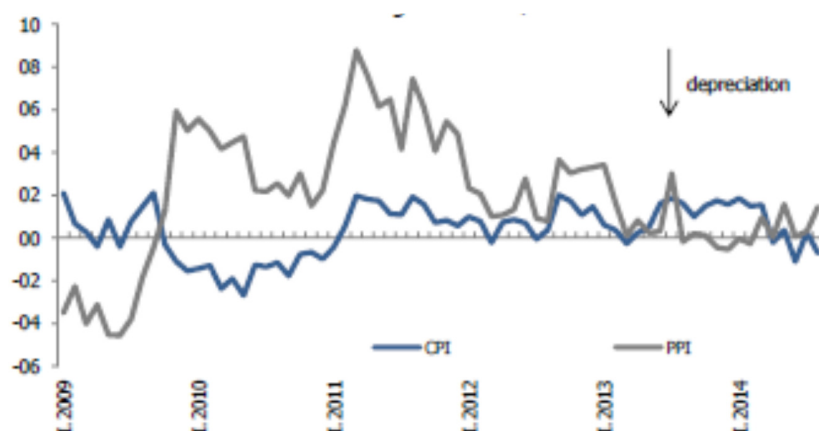


Source: NBRM

Depreciation of the Ukrainian hryvnia, Russian ruble and Turkish lira against the denar had a influence for the further appreciation of the nominal effective exchange rate by 2% on an annual basis, and this caused upward pressures on both REER indices⁶⁹. The growth of foreign consumer prices and as faster growth in foreign versus domestic prices of industrial products, led to a decline in relative prices by 2.3% and 0.4%.

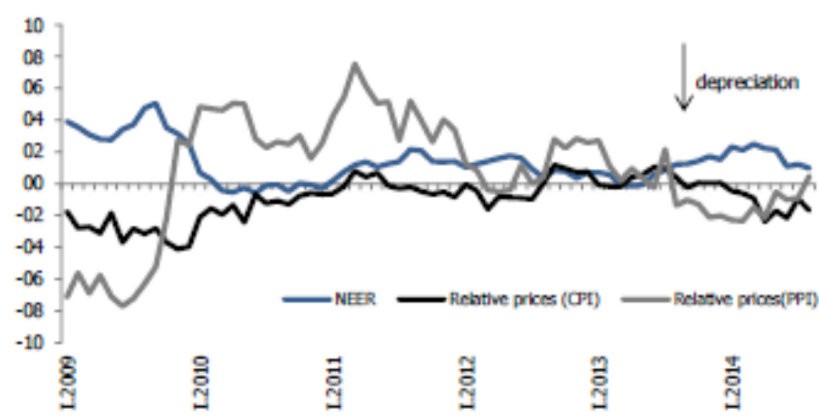
⁶⁹ NBRM (2014) *Recent Macroeconomic Indicators*, Review of the Current Situation.

Figure 13. REER, excluding primary commodities annual growth rates, in %



Source: NBRM

Figure 14. NEER and relative prices, excluding primary commodities annual growth rates, in %



Source: NBRM

The movement of the REER, excluding primary commodities, indicates similar movements in the domestic price competitiveness. The REER deflated by producer prices appreciated by 1.5%, while the REER deflated by consumer prices depreciated by 0.7% on an annual basis. Figure 13 shows that due to decline in domestic prices, relative CPI registered an annual decline of 1.7%. Also, relative prices of industrial products recorded a growth of 0.5%, driven by higher domestic prices. NEER appreciation continued in August 2014, annual change driven by the depreciation of the Turkish lira and the Serbian dinar against the denar.

Economic policies can be instrumental for growth in the near- and the medium-term in SEE6.

On the fiscal side, sustained reform effort is needed to address structural rigidities in the budgets of SEE6. Priorities include:

- changes in the composition of public expenditure toward investment and away from wages,
- public expenditure targeting and prioritization as well as
- improvements in revenue collection and the broadening of the tax base, among others.

On the monetary policy side, with regional inflation at a very low 1.2 percent and big output gaps remaining, some scope for short-term easing of monetary conditions exist, especially in those countries where deficits have begun to decline.

However, caution needs to be exercised in the economies with flexible exchange rates to ensure that these do not come under pressure. In terms of financial sector policies, addressing the high NPLs would be critical to ultimately restoring the growth of credit and supporting entrepreneurship and job creation.

The region that provides greater long-term rate of real economic growth, and sustainable GDP growth based on profitable production with sufficient export content has a better chance of attracting foreign capital. Namely, international investors rightly expect to achieve high rates of return on invested capital in that region enjoying long-term sustainable economic growth. Thus, the trend of the movement of the real exchange rate euro / dollar mostly affect the sustainable rate of real economic growth, which is associated with net capital flows.

Financial stability and the efficient allocation of macroeconomic level appear in each economy as an indirect product of successful political coordination. Variables such loans, the cost of funds and the real exchange rate are not aim of any instrument; transparency limits the extent to which they could be involved in decisions. The experiences of this region confirmed that alternative monetary and fiscal regimes, giving adequate political support, can provide very well low inflation. Much more difficult for assessment are the risk characteristics of the regimes.

In Southeast Europe, the conspirators for fixed and floating regime can easily underestimate the dangers which monetary policy are facing with during pre-assessment period.

- ✓ Hard pegging is linked with the region with credible policy management, and they insulate the economy from shocks to the nominal exchange rate. But they may accelerate the expansion of non-hedging borrowing in foreign currency, and they put a high premium on the flexibility of the real sector in terms of shocks.
- ✓ Meanwhile, the dynamics of inflation can question the early adoption of the euro as an exit strategy from that pegging. Flexible exchange rate facilitates the adjustment, and as part of a coordinated political effort can help in slowing the growth of risk in the balance sheet items. But to the extent that such risks are created over time, these modes offer no more than qualified safety valve in case of exogenous or policy caused shocks.
- ✓ Regarding the stability of the money, i.e. price and exchange rate stability, in Maastricht Treaty is guaranteed that the stability of the price level is the main priority of monetary policy in the Euro area. What will be the actual performances of the monetary policy of the ECB does not only depend on the formulation of monetary policy objectives but also from the real sector movements in the economy.
- ✓ It can be estimated that the real effects of monetary policy will be influenced by two conflicting groups of real factors. The increasment of competitiveness of the society will act to strengthen the internal and external power of the euro, and therefore the attractiveness of the euro as an international currency too. On the other side, there is a potential danger that may arise from low rates of economic growth combined with pressures in the direction of large fiscal deficits, which were associated with lower rates of growth and a greater participation of old population.
- ✓ The challenge of managing rapid financial convergence is something that calls for risk-averse macroeconomic policies. But it also depends to a large extent by strong structural policies. Structural reforms are key to strengthening the tradable sector and other productive activities, but also in providing capacity for sharing resources between sectors and generally adjustment to the economy over time.
- ✓ The process of real convergence should has balanced path of economic growth, with manageable external current account and real exchange rate dynamics during the

convergence, as well as adequate capacity for adjustment in the medium term. Challenges for fostering sustainable growth and preserving financial stability on the road to EU accession, are with full complementarity.

- ✓ What can be concluded from the first aspect of the monetary framework which is best suited for managing the real and nominal convergence on the road to the euro, starts exactly from the view that inflation targets seem to have a better set of available tools than those that peg for managing the process of convergence with balance towards adopting the euro.
- ✓ The main risk for targeters are excessive fluctuations in exchange rates, but if the policies are aimed at macroeconomic stability, the probability to make this reality is reduced. Then, the possibility danger is excessive appreciation of the nominal exchange rate, which is likely to lead the country toward expensive interventions or reduction of domestic interest rate that could fuel a credit boom. Options are limited for those who peg.

Leaving hard pegging before adopting the euro brings danger of losing the confidence and depreciation of the currency, which can create a deep recession in negative effects on the debt of households and firms in the country (where the debt is high euroized), as in the Baltic countries. If the output is well communicated as a transition step towards early adoption of the euro, the recession may not occur or would be mild, in the country would become better positioned to contain inflation. Here the danger is that the appreciation of the nominal exchange rate can shift and leads to loss of competitiveness or worsening already weak competitive position. Therefore, the risks of leaving highly pegged should be carefully measured prior to considering such an action. Well-timed and well prepared step of revaluation on "pegging" may be another option to consider if the competitiveness is not in question. The risks here are the positive effects on wealth of the euroization debt and would increase demand at a time when current accounts are already high in these countries.

WHAT FACTORS WILL LIKELY DRIVE THE ECONOMIC CONVERGENCE MACHINE IN SEE6 IN 2015? IS THERE CONVERGENCE PROJECTION FOR SEE6 AND MACEDONIA IN 2015?

The main goal of National Bank of Republic of Macedonia is the maintenance of the price stability. In this way, the National Bank is committed to applying strategy of maintaining stable nominal exchange rate against the Euro.

The role of the exchange rate as a nominal anchor derives from the characteristics of the domestic economy, as a small and open economy that is highly dependent on the import of primary commodities. Also, Macedonian exchange rate can be used as an instrument for export performances of the country.

Macedonian policymakers should create policy with several aims focused on exchange rate policy because:

- A competitive real exchange rate provides an incentive for exports
- The impact of exchange rates on trade should be seen in the context of continued integration of supply chains
- Exports generally include high import content and impact of foreign currency-exchange appreciation or depreciation on any finished product because it is complex. If the depreciation of the exchange rate makes its exports of finished products "cheaper", it makes imported components "expensive" for domestic producers.
- Maintaining growth and reducing the unemployment in a small and open economy such as Macedonia depends from improved performance of exports.
- Improving the performance of exports can help to preserve macroeconomic stability by closing the gap in the current account to avoid wasting supplies and to stop the growth of external debt.
- Improving performance requires improving export competitiveness.

- An outward oriented, market-friendly trade regime, which emphasizes the dismantling of import controls and tariffs (permitting access to inputs at world prices), and streamlined bureaucratic procedures, *i.e.* export and import procedures, modern customs administration and efficient value added tax administration will facilitate exports, including from SMEs.

According to the expectations from reports by NBRM, the inflation will slow down also in 2015, when it will approach the historical average and equal 2%. Also, in 2015, it is expected that the current public investments will continue, and as there are expectations for new infrastructure projects⁷⁰. It is estimated that these developments in the export sector and the strengthening of investment activity will create positive transmission effects on both the labor market and the expectations, and thus be a factor for further increase in the household consumption. It is expected that the GDP growth in 2015 it would speed up even more and reach 4.4%. Given the high openness of the economy, the risks to the projected growth continued to result from the global environment and developments in the external environment.

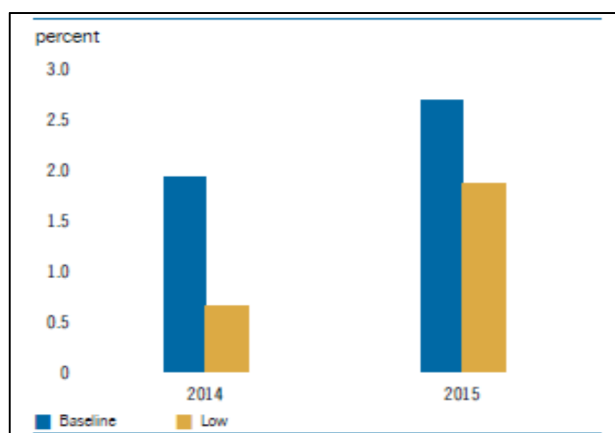
By the end of 2015, the credit growth is projected to accelerate and it would reach 8.5%. Projections for 2015 show that the external position can provide further increase in the foreign reserves and their maintenance at appropriate level. In addition, in 2015, widening of the current account deficit by 5.7% of GDP is expected, mainly due to the fall in private transfers. Despite the moderate deterioration on the current account, it is estimated that its negative balance will be fully financed by capital inflows, mainly coming from foreign direct investment and external borrowings for infrastructure projects. It is expected that the foreign direct investments will gradually increase in 2015 at 4.5% of GDP, respectively. In 2015, prudent fiscal policy is expected, with gradual consolidation of the budget deficit and relatively stable level of public debt. The fiscal policy is important factor that influence the monetary policy setup, while the adequate coordination of these policies is crucial for creation and maintenance of the macroeconomic stability. After the risen level in 2013, the budget deficit is expected to fall gradually and it would range about 3% of GDP on a medium run. Hence, in 2015, it would equal 3.2% of the GDP. The primary budget deficit should be equal 2.2% of the GDP in 2015, respectively.

SEE6 growth in 2015 is expected to accelerate to 2.6 percent on average. All six SEE economies are expected to contribute to the increase in growth rates as external demand firms up and domestic demand begins to recover. Albania, Bosnia and Herzegovina, Kosovo and Serbia are all projected to have higher or the same growth in 2015 than in 2014. In 2015, SEE6 economies are projected to grow slightly slower than the average for the EU11 countries (2.6 percent compared to 2.7 percent growth for EU11). These external and domestic risks, if they materialize, will affect negatively the prospects for growth in the SEE6 countries and slow the nascent economic (Figure 15)⁷¹. In an extreme case of major deterioration of economic conditions driven by the materialization of above risks, SEE6 output growth in 2014 would less than halve (to 0.6 percent) of the baseline projection (of 1.9 percent). In 2015, growth would drop by a third (to 1.7 percent) from the baseline (2.6 percent).

⁷⁰ NBRM (2014) *Recent Macroeconomic Indicators*, Review of the Current Situation.

⁷¹ IMF (International Monetary Fund). 2012b. *International Financial Statistics*. Washington.

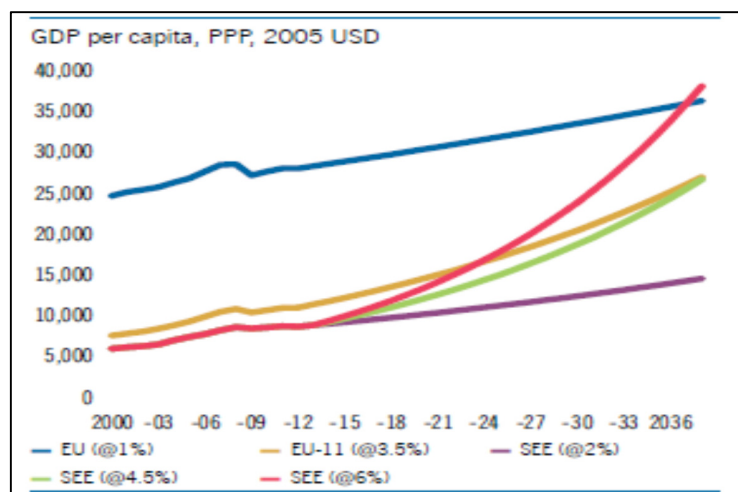
Figure 15: SEE6 Real GDP Growth Rate under Baseline and Low Case Scenarios



Source: World Bank staff

A recent analysis focuses on EU member countries and shows that expanding the growth potential through structural reforms in a stable macroeconomic environment drives strong income convergence. Translated to the SEE6, it means that removing structural rigidities in the macroeconomic policy mix, increasing global integration, improving the economy's productive potential and competitiveness, enhancing skills and labor productivity, and strengthening institutions would ultimately contribute positively to income growth and convergence.

Figure 16: Income Convergence



Source: World Bank staff.

Boosting incomes in the medium to longterm with the aim of converging with EU standards will mean not only maintaining the pace of reforms—but also converting reforms benefits into robust and equitable economic growth. Both of these are proving challenging. The reform pace appears to have slowed during the financial crises. Countries will need to take advantage of the economic rebound to relaunch the reform and convergence processes. There is evidence suggesting that improvements in the business climate should be broad rather than targeted toward specific sectors, as growth and employment creating firms tend to be young and dynamic, but not concentrated in any

particular sector. Improving trade links in terms of logistics, institutions and regulations will be important to take advantage of the EU market. In addition, governments need to provide reliable and streamlined processes that guarantee EU safety standards are met for exporting firms, particularly for agricultural exporters. Improvements in governance standards—including the rule of law—will be closely linked to the EU integration process. But reforms required by the EU will also help to boost economic growth in SEE6 countries.

Such reforms are essential to boost labor demand, reduce unemployment, address the challenges driven by demographic changes and improve prosperity for all in SEE6. Increasing employment is essential to reduce poverty and to bring about shared prosperity in SEE6. Since the major source of income for most households is through selling labor, increasing employment opportunities and ensuring that workers have the skills necessary to take advantage of these opportunities are essential to increase the income generation capacity of the entire population.

ACCEPTANCE OF THE EURO: PRESSURE FOR EARLY DATE OR ACHIEVEMENT HIGHER LEVEL OF REAL CONVERGENCE?

Leaving hard pegging before adopting the euro brings danger of losing the confidence and depreciation of the currency, which can create a deep recession in negative effects on the debt of households and firms in the country (where the debt is high euroized), as in the Baltic countries. If the output is well communicated as a transition step towards early adoption of the euro, the recession may not occur or would be mild, in the country would become better positioned to contain inflation.

Here the danger is that the appreciation of the nominal exchange rate can shift and leads to loss of competitiveness or worsening already weak competitive position. Therefore, the risks of leaving highly pegged should be carefully measured prior to considering such an action. Well-timed and well prepared step of revaluation on "pegging" may be another option to consider if the competitiveness is not in question. The risks here are the positive effects on wealth of the euroization debt and would increase demand at a time when current accounts are already high in these countries.

So, when we focus on the question about the time of the adoption of the euro, there is two options: making pressure for early date or obtaining a greater real convergence?

The question for optimal time of adopting the euro must be resolved. Potentially, the most difficult criterion of nominal convergence criteria is inflation. This is because approximation means convergence of price level that can be achieved either through higher inflation or exchange rate appreciation.

The control of the authorities in these two areas is limited because of the unrestricted flow of capital and related restrictions on domestic monetary policy. Quitting tools of exchange rate policy could be a problem. If the approximation related to the factors that feed inflation, as convergence of structural price level and low level of financial deepening that moves demand for credit, is still strongly present in the economy, the loss of foreign exchange policy could lead to increased destructive cycles and derail the smooth process of convergence, such as difficulties related to Latvia to cool the overheating economy. This is because it seems easier to keep the appreciation of the real exchange rate inherent in the process of approaching a greater or lesser balance by allowing the nominal exchange rate to appreciate than keeping inflation in balanced direction after leaving all flexibility, however limited it is, independent from monetary policy. If overheating of the economy leads to a loss of competitiveness and slow growth, it is difficult to recover through wage and price disinflation after denying the independence of monetary policy in the euro area, as it is known experience of Portugal.

It does not mean that it is easy to keep the nominal exchange rate at direction of equilibrium appreciation in current conditions of free movement of capital and globalized financial markets. These questions further develop their own assessment of the advantages and disadvantages of:

- 1) the efforts of early adoption of the euro and address the risks of higher inflation and the need to regain competitiveness without available tool – exchange rate or
- 2) delay of membership in the euro zone and its advantages as addressing the risks that arise from the volatility of the exchange rate.

This dilemma could be analyzed from the perspective - where is the country in the process of convergence? If the gaps are closed to GDP per capita and the price level is still pretty high and the speed of convergence is on satisfactory level, the country will have difficulties in controlling inflation in the monetary union. Consequently, it could be proposed to postpone the adoption of the euro until reducing the gaps or differences. From the reports and studies can be concluded that all new members in terms of traditional optimal currency area, their stance should not be an obstacle in adopting the euro. Empirical studies show that membership in the monetary union promotes synchronization of business cycles and financial integration.⁷² New researches show that the strength of the endogenous variables in the euro zone is strengthened by the fiscal discipline embodied in the supervisory structure of the EU by reducing the possibility of specific fiscal shocks⁷³.

CONCLUSION

Wich are the results of conducting reforms for speeding up the economic convergence?

The analysis show that large potential gains could be reaped from structure reforms. Reports identificate that Euro-area GDP could be around 6% higher after ten years if Member States adopt measures to halve the gap vis-a-vis the average of the three best-performing Member States in each of the reform areas considered. When the structural reform will be successful implemented, it promises growth of the economy. Growth effects are significant and higher growth potential can also stimulate investment demand and help to restore investment to pre-crisis level. Analyzing reforms it could be noticed that reforms that labour force participation yield the largest output effects in the short to medium run. Reforms relating to product markets can lead to large output gains. Structural fiscal reforms that shift the tax burden away from labour towards less distortionary taxes could be implemented relatively rapidly and boost employment and growth already in the short to medium run. Differences across countries mainly reflect where a country stands relative to “best performance” for different structural indicators. Performance gaps are particularly large in participation rates and tax structures, and reforms in these areas can deliver the largest effects. There are positive cross country spillovers of structural reforms, adding up to 10% to the gains in output in the long run. The demand effect boosts imports and supports trading partners’ growth, though this is partly offset by the competitiveness effect. Trade balance effects are relatively small and can turn negative where the demand effect dominates the competitiveness effect. Reforms lead to significant improvements in fiscal positions and can yield sizeable reductions in debt-to-GDP ratios in the medium/long term, alleviating the need for further consolidation measures and contributing to long-term debt sustainability.

How Macedonia could reach and sustain higher rates of economic growth thus speeding up the process of economic convergence too?

⁷³ Ferrando A., Baele L., Hördahl P., Krylova E. and Monnet C., „Measuring Financial Integration in the Euro Area“, ECB Occasional Paper, No. 14, 2004.

The researches offer options that include increase of the labor contribution to economic growth by raising labor participation and reducing unemployment. The second option means improvement of allocative efficiency. This understands promotion enterprise restructuring and reforming product market regulation as including regulation in the infrastructure sector. Next option is focused on deepening trade integration by promoting export-oriented FDI and developing the supply of exportable goods, meaning that Macedonia would need to integrate its logistics infrastructure. Accelerating the process of economic convergence will be supported by fostering technological progress. The recommendations are focused on policy-makers, inviting them to identify what policies are politically feasible and to be checked for their consistency with the overall objective of raising and sustaining economic growth.

Next, these strategies need to generate institutional requirements that are commensurate with the existing institutional endowment of Macedonia. This will lead to a near-term focus on deepening trade integration and fostering innovation, while measures related to expanding labor participation and employment could be adopted more gradually with a long-term perspective.

These measures would better position the country to fully benefit from EU Accession and to better manage the effects of the global financial crisis, by strengthening Macedonia's international competitiveness

- In addition to the policy measures directly recommended for deepening trade and fostering innovation, the following complementary policy initiatives would be required:
 - Advancing *enterprise restructuring* (privatization) and the promotion of stronger *market competition* (improving product market regulation and de-regulation).
 - Adjusting the *life long learning system* to market needs, encouraging *labor training* by firms, and improving the supply of (selected) skills by possibly reviewing *migration rules* for labor market segments where the skills-gap is binding.
- Political resistance to the trade and innovation measures associated to the proposed strategy is likely to be comparatively low, with the exception of enterprise restructuring efforts. *Compensatory policies* for workers negatively affected by enterprise restructuring should be considered.
- Preliminary evidence on the positive association between access to non-banking finance and total factor productivity suggests further examination of the role of non-banking financial institutions in the selection of investment opportunities and thus in fostering growth in Macedonia.

Summarizing, there are starting point to introducing high integration for structural adjustments and growth:

- 1. faster productivity and quality catching – up
- 2. faster wage catch-up
- 3. faster upgrading of commodity structure leading to a faster disappearance of asymmetries in income and price-elasticities
- 4. impact on invisible and income accounts: more trade and transport services (balance impact neutral); more tourism in both directions; more deficits in other services (here lies one of EU's comparative advantages; more personal transfers
- 5. impact on capital movements: more FDI and portfolio investment; easier access to credits and better conditions for debt servicing
- 6. greater pressure towards reducing the “undervaluation” of the national currencies: speed up of institutional changes and market functioning will increase convergence of price structures; more pressure to achieve a higher level of international purchasing power because of greater tourist flows and more imports; more pressure to achieve monetary stability and use of the nominal exchange rate as an anchor with the view of coming closer to the Maastricht criteria
- 7. greater openness of EU market.

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SUSTAINABLE DEVELOPMENT AND KNOWLEDGE-BASED ECONOMY: THE CASE OF SERBIA AND MACEDONIA

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ABSTRACT

Sustainable development is the key concept of the European Union and its candidate countries. It is the process where natural and physical factors for obtaining economic growth move toward knowledge, and also the process of achieving economic growth, social cohesion and environmental protection. The sustainable economic development process is aimed toward creating new jobs, decreasing unemployment, higher competitiveness and obtaining economic growth by using knowledge, innovation and education. Moreover, the poverty reduction and development of knowledge and skills are important objectives in this process. The Lisbon strategy and the Europe 2020 have set the goals - establishing knowledge-based economy and achieving sustainable development. The European Union wants to become the most competitive economy. A smart, sustainable and inclusive growth was set as the objective by the European Union. That is why most developed countries established their economic growth and development on knowledge-based industries. Developing countries share their goals. The purpose of this paper is to compare sustainable development and knowledge-based economy between two countries – Serbia and Macedonia. At the beginning of the paper, an overview of knowledge-based economy and sustainable development is given. Further, a summary of national sustainable development strategies in Serbia and Macedonia is shown. The three pillars of sustainable development – knowledge-based economy, social-economic conditions and perspectives and environmental protection are presented. Also, the importance of sustainable development planning is needed to meet the challenges of sustainable development. The fulfilments of implementation of national strategies are presented through comparative analysis. The paper also analyses the levels of competitiveness, sustainable development and knowledge-based economy. The comparison is made by the following indicators – The Global Competitiveness Report (WEF), the Sustainable Development Index (EU and UN) and the Knowledge Economy Index (the World Bank). The results show that Serbia and Macedonia should invest more and make more effort to obtain sustainable development and establish knowledge-based economy.

Keywords: Sustainable development, economic development, knowledge-based economy, competitiveness, Serbia, Macedonia

JEL classification codes: O11, O21, O57, P52

INTRODUCTION

In order to achieve economic growth and development, economies have to adapt to global tendencies and utilise their finite resources. They are trying to maintain development by utilising the resources rationally, saving them for future generations. This is the main concept of sustainable development. Sustainable development is achieved by economic development that includes environmental protection. Besides economic component, the concept comprises social - cultural and ecological components. The concept emphasises the humane aspect of development. That is why sustainable development includes economic goals, poverty issues, education, health care, environmental protection, human migration, urban overcrowding, social inclusion, etc. Sustainable development is defined as: "the ability to make development sustainable - to ensure that it meets the needs of the present without compromising the ability of future generations to meet their own needs"(WCDE, 1987).

Many countries conduct the process of sustainable development in accordance to the process of establishing knowledge-based economy. Some research studies maintain that sustainable development is the main goal of knowledge-based economy, while others maintain that knowledge-based economy represents a component of sustainable development. However, the two concepts are interrelated. Their harmonisation leads towards achieving better social results. Serbia and Macedonia are the countries of the Western Balkans that are also the EU candidate countries. They are trying to transform their economies to bring them in harmony with the global changes and meet certain criteria in order to become members of the EU. In this respect, besides achieving economic progress, it is necessary to achieve sustainable development and knowledge-based economy. The EU has developed EU sustainable development strategy. In order to conduct sustainable development and get it adjusted to the EU regulations, each country adopts its national sustainable development strategy. Lisbon Strategy and Europe 2020 are the strategies that encourage the establishment of knowledge-based economy. These strategies are directed towards increasing employment, competitiveness and growth. This paper will consider the following research questions: how are the strategies of sustainable development and knowledge-based economy implemented and what factors influence their realisation, i.e. whether the set strategy goals have been achieved. The aim of this paper is to analyse the progress of sustainable development and knowledge-based economy processes in Serbia and Macedonia.

The paper is structured as follows: the following section provides a theoretical overview of sustainable development and knowledge-based economy concepts. Section 3 presents national strategies for establishing knowledge-based economy and sustainable development. Section 4 is dedicated to comparative analysis of sustainable development and establishing knowledge-based economy in Serbia and Macedonia. Conclusions will be driven in the final section.

OVERVIEW OF KNOWLEDGE-BASED ECONOMY AND SUSTAINABLE DEVELOPMENT

Advanced EU economies established their growth and development on knowledge, which generates innovation. Innovation can be achieved by improving the protection of intellectual rights, financial sector development, improving the quality of education to a greater degree and macroeconomic stability (Transition report, 2008). Creating and improving knowledge, its transfer and spreading by education, has been connected to tertiary education and research and development. High-quality intellectual resources and their profitability are very important for a knowledge-based economy. Knowledge generates innovation, thus directing and determining the flow of intellectual development. Furthermore, knowledge and technological progress are related to decreasing budgetary deficit and policy deregulation, particularly in the finance sector, air traffic services and electric power sector.

However, not all economies dispose of the same level of resources. The gap in development between countries occurs for no other reason, but the differences in education, or knowledge, qualifications and skills of their population. Therefore, application of knowledge determined by technological change and innovation, has become an important factor in each economy development, and economy development is the main goal of many countries worldwide (Jednak et al., 2010). In 2000, the EU set the objective to establish knowledge-based economy and conduct sustainable development. All the member, candidate and potential candidate countries are obliged to adjust their strategies to the European strategies and to converge towards the goals set by the EU.

By establishing and developing knowledge-based economies, traditional resources for growth and development are becoming less and less important for the progress, while knowledge and innovation gain more and more importance. Competitiveness leads towards economic growth and prosperity by increasing the level of productivity. The countries that possess human capital, but whose productivity and growth depend to a lesser degree on natural resources invest in knowledge to improve productivity factors. Investing into knowledge, innovation and new technology attain to economic growth and development. Such tendency is present in the most developed economies of the world that mostly invest in research and development (Jednak and Kragulj, 2010). Well-developed economies transform themselves towards the knowledge-based sectors: a) education, b) research and development, c) art, the media, information sector and d) information technologies. Knowledge-based economy comprises economic activities and systems that directly establish creation, circulation and application of knowledge and information.

Since 2000, various economic reforms have been conducted in the EU. The Lisbon Strategy (2000) was set out in 2000 to help the EU create knowledge-based economy and make it the most competitive economy in the world by the year 2010. The key component of the Lisbon Strategy is the development and improvement of knowledge through bigger investment in education and professional improvement, as well as scientific and technological research and innovation. However, since many goals were not achieved, a mid-term review of the achieved goals and results of the Lisbon Strategy (2005), so called Kok's Report was conducted. According to the review, the goals were not achieved because they were too broadly defined and they were not harmonized among the member states in the sense of coordination, responsibility and priorities. The goals were set again, but basically, they were not much different from the previous ones. In order to achieve the goals, investments have to be made that will increase productivity and support application of knowledge and innovation, which are crucial for economic growth, and many positions have to be opened for highly-qualified professionals. Unfortunately, the reforms envisaged by the Lisbon Strategy had not been carried out until 2010, mostly due to external factors like economic crisis. Therefore, a new EU growth strategy was launched in 2010 – Europe 2020. The main objective set by the EU growth strategy –Europe 2020 is to make the EU a smart, sustainable and inclusive economy that will raise the level of productivity, employment and social cohesion (European Commission, 2010). According to this strategy, the EU should ride out the crisis by a smart, sustainable and inclusive growth. A smart growth is economy development based on knowledge and innovation. Sustainable growth promotes better resource efficiency, greener and more competitive economy, while the inclusive growth provides full employment in the economy that influences both social and territorial cohesion (European Commission, 2010).

The term *sustainable development* was first mentioned in the 1930s, and in 1987 in Rio, The World Commission on Environment and Development's officially defined the term. The concept connects the present to the future generations, since development should meet the needs of the present without compromising the needs of future generations to meet their own needs (Kragulj, 2014). Finite natural resources should be used today to a degree where they can provide economic growth, but they should also be sustained for the future generations to improve their quality of life. Therefore, the main concepts of sustainable development are: the concept of need and the idea of the limitations of our environmental resources' availability to meet our present and future needs (WCED, 1987). Thus, sustainable development is based on the sustainable possibilities for production. All

definitions state that the existing natural resources should not decrease. Efficient management of the existing natural resources and adequate knowledge can have positive effects on achieving sustainable development. Sustainable development implies a convergence between three main pillars: 1) *economic development* – includes economic sustainability, i.e. the possibility to maintain a certain level of economic production, 2) *social equality* - a state of affairs where a country indefinitely maintains a defined level of social well-being, while the gap between rich and poor social classes is being reduced, 3) *environmental protection* – the possibility to maintain a defined level of environmental quality and to conserve natural resources. Besides the above mentioned pillars, there are suggestions that two more should be added: cultural diversification (Hawkes, 2001, UNESCO, 2002) and political – institutional pillar (Commission on Sustainable Development, 1995; Djekic and Hafner, 2013). Therefore, it follows that sustainable development marks optimal balance between economic, social and environmental factor within institutional framework. Some organisations, depending on their activities and interests, prefer and support the development of one particular pillar, ignoring the other ones. Some institutions and countries regard economic growth as a foundation for all social spheres, while other institutions try to treat all three pillars equally, but lack of funds prevents them from total achievement of all the set goals. If any of the pillars functions out of balance it reflects on the functioning of the other ones. That is particularly noticeable during economic crisis.

The EU Sustainable Development Strategy and National Sustainable Development Strategies of Serbia and Macedonia

Lisbon Strategy and Europe 2020 that set their goals to increase competitiveness and build knowledge-based economy are focused on economic growth and creating new jobs, while the EU Sustainable Development Strategy has its focus on social and environmental issues. The strategies are mutually complementary in terms of creating sustainable development in the EU although with different emphases. Lisbon Strategy and Europe 2020 try to achieve sustainable development by increasing competitiveness, economic growth and employment. The EU Sustainable Development Strategy sees economic development as a possibility to achieve sustainable development. Of utter importance for the EU Sustainable Development Strategy is the quality of life, inter and intra generational inheritance and the cohesion of all the policies (Sterure and Gerger, 2010).

The EU Sustainable Development Strategy is used as a framework by the EU members and candidate countries, in conformity to which they adjust their public policies for achieving sustainable development. Moreover, the countries have their own national strategies that are adjusted to the EU Strategy. The first EU Sustainable Development Strategy was adopted in Gothenburg in 2001. According to this strategy the EU tends to improve the quality and standard of living for all people by connecting economic growth, environmental protection and social justice. In the course of time, this strategy, also called Gothenburg Strategy, had undergone certain changes, only to be revised in 2006. The revised strategy is focused on the EU taking measures to more efficiently fulfil the long-term obligation to achieve sustainable development. The goal of this strategy is to identify and develop activities that would help the EU create a sustainable community that will improve the long-lasting quality of life by efficient utilisation of resources, using ecological and social innovative potential of economy to achieve prosperity, environmental protection and social cohesion. The set goals should have been achieved by 2010. An integrated policy approach was suggested. It was based on better regulation of guiding principles for sustainable development in order to achieve the goals in the following fields: Climate change and clean energy, Sustainable transport, Sustainable consumption and production, Conservation and management of natural resources, Public Health, Social inclusion, demography and migration, and Global poverty and sustainable development challenges. In 2009, the Review of the EU Sustainable Development Strategy was adopted. The review emphasises that the EU

conducts sustainable development through a range of different policies. The EU has a leading role in fighting climate change and promoting low-carbon economy. Notwithstanding the positive results in carrying out sustainable development, certain fields did not make progress due to unsustainable trends. The Review measures the EU policies in the fields covered by the EU Sustainable Development Strategy and raises the question of coordination between this strategy and the Lisbon Strategy (European Commission, 2015).

The National Strategy for Sustainable Development Serbia 2008-2017 (NSSD) was adopted in 2008. According to NSSD (2008) the sustainable development pillars are: knowledge-based economy, economic and social issues and environmental protection. The goal of this strategy is to harmonize the three pillars. The main national priority and strategic objectives of sustainable development are: EU membership, competitive market economy development and balanced economic growth, human resource development and better employment, infrastructural development and even regional development, environmental protection and improvement and rational utilisation of natural resources. The strategy has been conformed to the principles of Johannesburg Declaration on Sustainable Development, UN Millennium Development Goals and European Sustainable Development Strategy. A set of internationally proven sustainable development indicators was chosen to measure the progress of achieving goals.

The National Strategy for Sustainable Development Macedonia 2009 – 2030 was adopted in 2009. The Republic of Macedonia identified several key priorities for its future development, where achieving EU membership can be considered as the overriding strategic policy objective. The Republic of Macedonia was granted applicant status in May 2004 and candidate status in December 2005. The European Partnership concluded in June 2004 provided main priority areas for further integration into the European Union and the development of a National Strategy for Sustainable Development (NSSD) was identified as a short-term priority. The NSSD should be a plan for the implementation of the recommendations set out in the conclusions of the UN World Summit on Sustainable Development in Johannesburg 2002 (Ministry of Environment and Physical Planning, 2009). The Constitution of the Republic of Macedonia enshrines the main philosophy of SD that recognises three SD pillars: the freedom of the market and entrepreneurship (economic pillar), humanism, social justice and solidarity (social pillar) and protection and promotion of the environment and nature (environmental pillar).

The introduction of sustainable development raises difficult management challenges. The integration of new values into policies and organisations is typically a function of leadership, planning, implementation, and monitoring and review. There is a need to restructure the existing processes, institutional arrangements and procedures according to individual countries' own needs, priorities and resources. Achieving sustainable development requires far reaching policy and institutional reforms and the involvement of all sectors, at all levels. The achievement of sustainability in national development requires a strategic approach, which is both long-term in its perspective and integrated or "joined-up" in linking various development processes so that they are as sophisticated as the challenges are complex (Kjosev and Eftimov, 2014).

METHODOLOGY

Realisation of knowledge-based economy will be evaluated using WEF Europe 2020 Competitiveness Index, WEF the Global Competitiveness Index and the World Bank indices: *Knowledge Economy Index* that is calculated based on the education index, innovation and ICT and economic incentive and institutional regime, and *Knowledge Index* that is calculated using the first three indices. The indexes are aggregate. The values of the indices can vary from 0 (lowest result) to 10 (highest result) (Jednak and Kragulj, 2010).

There is no unique indicator to measure the progress of sustainable development. Different institutions have developed their own indicators. The UN have their own methodology for sustainable development observation and measurement. Millennium development goals are incorporated into the UN sustainable development indicators. In 2006, Commission on Sustainable Developments (CSD) revised the indicators. There is a core set of 50 indicators that include 96 indicators of sustainable development. The indicators have been organized into CSD indicator themes: poverty; governance; health; education; demographics; natural hazards; atmosphere; land; oceans, seas and coasts; freshwater; biodiversity; economic development; global economic partnership; and consumption and production patterns. In this way the indicators cover the four pillars of sustainable development. The themes covered by economic development are: macroeconomic performance (GDP per capita and Investment share in GDP); sustainable public finance (debt to GNI ratio); Employment (employment-population ration, labour productivity and unit labour costs, and share of women in wage employment in the non-agricultural sector); ICT (Internet users per 100 population); R&D (gross domestic expenditure on R&D as a percent of GDP); tourism (tourism contribution to GDP).

The EU has developed a set of indicators that measure the levels of sustainable development of its members. They have organised them into ten main themes that cover more than hundred indicators, twelve of which have been chosen as the headline indicators (Eurostat, 2015). The main themes and the headline indicators for each theme are: 1) socio-economic development (headline indicator: growth rate of real GDP per capita), 2) sustainable consumption and production (headline indicator: resource productivity), 3) social inclusion (headline indicator: person at-risk-of-poverty or social exclusion), 4) demographic changes (headline indicator: employment rate of older workers), 5) public health (headline indicator: healthy life years and life expectancy at birth, by sex) 6) climate change and energy (headline indicators: greenhouse gas emissions; share of renewable energy in gross final energy consumption; primary energy consumption), 7) sustainable transport (headline indicator: energy consumption of transport relative to GDP), 8) natural resources (headline indicator: common bird index), 9) global partnership (headline indicator: official development assistance as share of gross national income), 10) good governance (no headline indicator). Serbia and Macedonia are the EU candidate countries and for that reason EU methodology will be used for the analysis of knowledge-based economy, competitiveness and sustainable development. Since not all the data about these two countries are provided by Eurostat, only the chosen indicators will be presented. The theme of socioeconomic development will be observed. Within the theme, the first degree indicators will be presented and some of the second and third degree indicators. The headline indicator, Growth rate of real GDP per capita, will be presented and followed by Total employment rate of persons aged 20-64, Total investments % of GDP and Total R&D expenditure.

Results and discussion

Serbia and Macedonia are conducting economic reforms that will help them achieve economic progress and EU membership. The reforms include establishing knowledge-based economy and sustainable development. Table 1 shows KEI and KI, and the position of Serbia and Macedonia as compared to five highest ranked countries with most developed knowledge-based economies.

Table 1. KEI i KI (KAM2012)

Rank	Country	KEI	KI	Economic Incentive and Institutional Regime	Innovation	Education	IKT
1	Sweden	9.43	9.38	9.58	9.74	8.92	9.49
2	Finland	9.33	9.22	9.65	9.66	8.77	9.22
3	Denmark	9.16	9	9.63	9.49	8.63	8.88
4	Netherlands	9.11	9.22	8.79	9.46	8.75	9.45
5	Norway	9.11	8.99	9.47	9.01	9.43	8.53
49	Serbia	6.02	6.61	4.23	6.47	5.98	7.39
57	Macedonia	5.65	5.63	5.73	4.99	5.15	6.74

Source: World bank, http://info.worldbank.org/etools/kam2/KAM_page5.asp

Serbia is ranked 49th and Macedonia 57th out of 146 countries. Serbia outranks Macedonia in the fields of innovation, education and ICT, while Macedonia is better ranked in Economic Incentive and Institutional Regime indicator. Serbia and Macedonia have the highest values of ICT sub-index. Such technologies are considered to be one of the factors that can influence economic growth in Serbia. Introducing new technologies and educating experts is more and more present in Serbia. The values of main and sub-indices are lower in Serbia and Macedonia as compared to the five highest ranked countries, so they should put some effort to reach the values of the developed countries.

Table 2 shows The Global Competitiveness Index and The Europe 2020 Competitiveness Index (WEF,2014) with values 1-7.

Table 2. Global Competitiveness Index and Europe 2020 Competitiveness Index 2014							
Country	GDP p.c. (In current €) 2013	Global Competitiveness Index		Europe 2020 Competitiveness Index 2014 (score 1-7)	Smart growth Sub-index	Inclusive growth Sub-Index	Sustainable Sub-index
		Rank (out of 114)	Score (1-7)				
Serbia	4,591	94	3.9	3.46	3.33	3.51	3.49
Macedonia	3,728	63	4.26	3.62	3.59	3.88	3.47

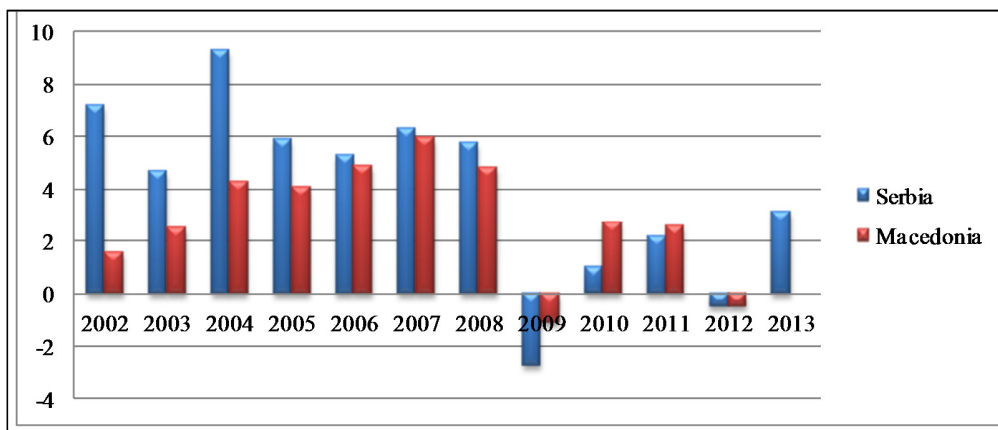
Source: The Europe 2020 Competitiveness Report 2014 and The Global Competitiveness Report 2014-2015

If Global Competitiveness index and its sub-indices are observed, Serbia and Macedonia belong to efficiency-driven economy i.e. second stage of development. They have fulfilled basic requirements for factor-driven economies (1st stage of development) and now they are on their way towards innovation-driven economies (3rd stage of development). The Global Competitiveness index shows that Serbia is ranked 94th and Macedonia 63rd out of 144 countries. Furthermore, the most problematic factors for doing business in Serbia are: inefficient government bureaucracy, access to financing, corruption, policy instability, government instability, and for Macedonia those are: access to financing, poor work ethic in national labour force, inadequately educated workforce, inefficient government bureaucracy and inadequate supply of infrastructure. They have to overcome these problems in order to achieve better competitiveness.

The WEF Europe 2020 Competitiveness Index (2014) uses a 1- 7 scale. In 2014, Serbia scored 3.46 and Macedonia 3.62. As compared to the neighbouring countries, Bulgaria and Romania, the index of Serbia is the lowest. Therefore Serbia needs to improve its competitiveness and conduct reforms, primarily by building institutional capacities within the country. Thus the productivity and employment increase, which inevitably leads towards better competitiveness. Along with trying to achieve smart growth, Serbia needs to undergo reforms to improve enterprise environment, digital agenda and education and training. In order to achieve inclusive growth, Rights in the labour market and Environmental sustainability have to be improved. Both Macedonia and Serbia need to improve Institutional capacity to achieve knowledge-based economy. Since 2010, Macedonia has set foundations for smart growth. It is necessary for Macedonia to improve ICT infrastructure, Education and training, Innovation and Environmental sustainability, Labour market (WEF Europe 2020 Competitiveness Report, 2014).

In the post-crisis period, certain countries have recorded growth, while others still do not show any tendency towards growth. Serbia and Macedonia registered a turn around from negative growth rates in 2012 (Serbia: -1 %, Macedonia: -0.4 %) to a positive growth rate in 2013 (Serbia: 2.6%, Macedonia: 3.1%) (World Bank data). However, although the two countries have recorded economic growth, they are still having problems with unemployment, low domestic demand and lack of funds. Figure 1 shows the movement of Real GDP per capita growth for Serbia and Macedonia. GDP per capita moved from € 2900 to € 4300 for the observed period. Serbia's GDP per capita is about 60% below EU average (28). GDP growth per capita until 2008 can be explained by a great influx of foreign capital, i.e. capital accumulation and total factor productivity. After the crisis Real GDP per capita has recorded growth, but external and fiscal vulnerabilities are still present. Lack of funds, slow influx of FDI and increased government debt are the problems that stand in the way of growth. The key factor of growth is domestic demand.

Figure 1. Real GDP per capita, growth rate and totals



Source: Eurostat

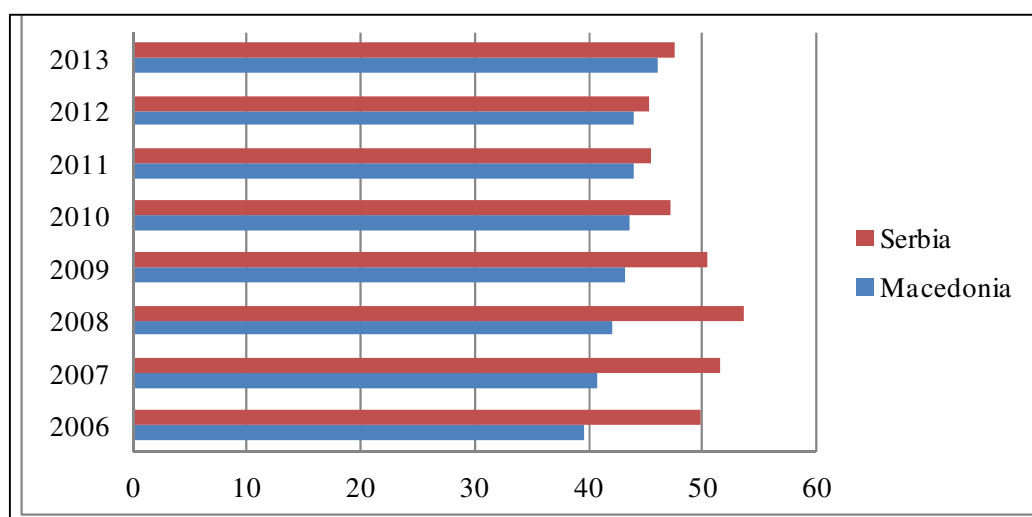
Both countries encounter the problem of unemployment. Employment indicator will be now discussed. The target for employment is 75%. Low employment recorded in Serbia and Macedonia stems from economic crisis and structural problems, including large emigration and brain drain. Total employment rate of persons aged 20-64 is available only for Macedonia, so Table 3 shows only the data for Macedonia and EU 28. During the observed period there was an increase in employment rate in Macedonia, but the percentage is still lower than in the EU. In 2002, employment rate in Macedonia was 45.1%. However, since 2006 employment rate has improved in Macedonia, and its highest value was recorded in 2013 – 50.3%.

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Macedonia	45.1	43.1	41.1	42.1	43.9	45	46.3	47.9	48.1	48.4	48.2	50.3
EU28	66.7	67.0	67.4	67.9	68.9	69.8	70.3	69.0	68.5	68.5	68.4	

Source: Eurostat

Figure 2 shows total employment rate (15-64 years) for Serbia and Macedonia. This employment indicator exists for Serbia. Employment rate is higher in Serbia than in Macedonia. After the Global Financial Crisis (2008) Serbia recorded a drop in employment, but since 2012 the employment rate has been increasing. During the crisis in Serbia, a drop in employment rate was greater than the fall in GDP. During the observed period, Macedonia recorded employment growth with no significant fluctuations.

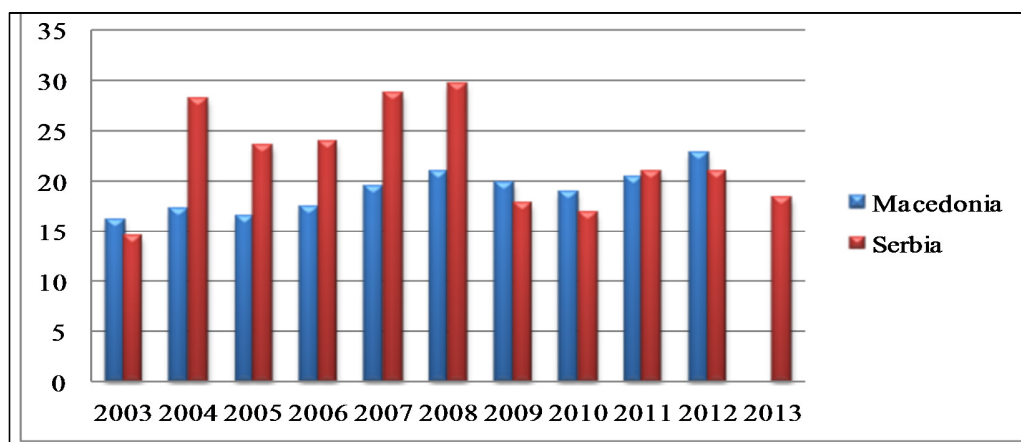
Figure 2. Employment rate (15-64 years), total (%)



Source: Eurostat

Employment and competitiveness depend on investment. Investment, especially FDI, had had a great impact on achieving growth in the pre-crisis period. Investment saving balance is disturbed. Savings are lower, especially after the crisis due to lower incomes. Neither Serbia, nor Macedonia has enough investment to stimulate economy. Since they lack their own capital funds, these two countries raise funds through loans and by attracting foreign investment. During the crisis there was an influx of capital, but when the crisis ended the influx decreased. Since 2010, a growth in investment has been recorded. Figure 3 presents total investment as % of GDP. If years 2011 and 2012 are observed, the growth resulted from increased investment in the household sector by 14.4% and business investment by 14.4 % as compared to the 2012, while government investments decreased by 6.4 %.

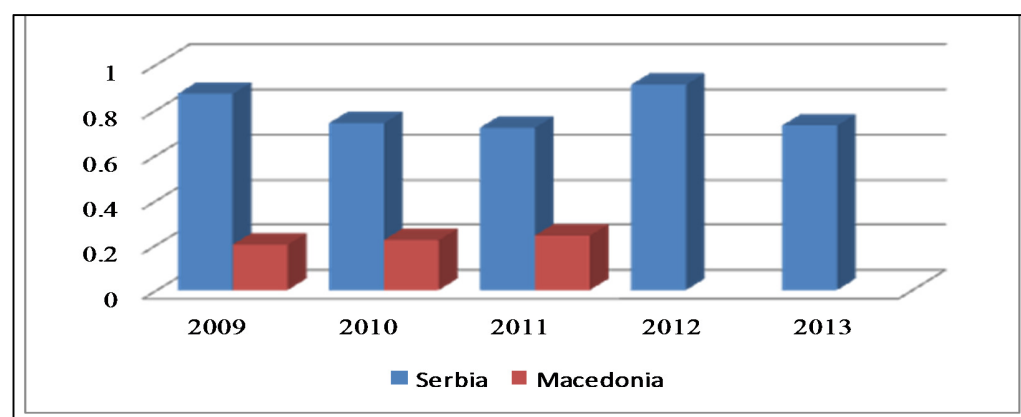
Figure 3. Investment, total, % of GDP



Source: Eurostat

Total R&D expenditure is an indicator used to measure innovation. It shows the extent of investment that is included in generating new knowledge. Countries have set their goals for this indicator. Target Total R&D expenditure % of GDP for the EU is 3%. Figure 4 presents this indicator for Serbia and Macedonia.

Figures 4. Total R&D expenditure % of GdP, 2009-2013



Source: Eurostat

Serbia and Macedonia spend much less on R&D funding than the EU countries and the values are below 1% GDP. Serbia invests 0.7% and Macedonia about 0.2% of their GDP in R&D. The private sector share of R&D in Serbia is about 25%, and in Macedonia 15.6%. In both countries the biggest share of R&D belongs to the public sector (ERAWATCH, 2013). In Serbia both private and public investment in R&D have remained on a very low level, the number of researchers is getting smaller and smaller and there seems to be no particular need to connect research to business and there is a lack of integration into global knowledge networks. However, there have been certain improvements in R&D and innovation, but challenges still remain that Serbia needs to meet in order to fully achieve the set objectives. Serbia needs to invest more into R&D, innovation and knowledge in order to bridge technological and economic gap that exists between Serbia and the EU.

According to the Report on the Progress in Realisation of Sustainable Development National Strategy for the period 2009-2017 (2009) Serbia achieved some positive results, but there are still many problems to solve. Serbia needs to reduce fiscal deficit by increasing austerity measures, enable growth based on a new development model and provide funds to finance it. Although financial resources were considered to be a dominant factor of growth, according to various analyses, human resources are considered to be the most competitive factor of development. A balance needs to be reached between current expenditure and production in order to decrease the growing number of obligations that are being created by contemporary generations, but the future generations will have to fulfil. As regards environmental issues, regulations were adopted and conformed to EU regulations. There is a need for building environmental infrastructure, modernising the system of economic instruments for rational use of natural resources, natural resources conservations and establishing the necessary institutions.

Serbia and Macedonia have achieved some progress, but they have to continue conducting reforms in order to achieve sustainable development and establish knowledge-based economy.

CONCLUSION

A sustainable development strategy is defined as a coordinated, participatory and iterative process of thoughts and actions to achieve economic, environmental and social objectives in a balanced and integrated manner, at the national and local levels. Serbia and Macedonia, as the EU candidate members are trying to adjust their strategies and policies to fit the EU regulations. Apart from conducting economic reforms, the two countries are in the process of sustainable development and establishing knowledge-based economy. The conducting of these two processes is slower than expected due to economic crisis, so the set goals have not been completely achieved yet. Monitoring of the processes of sustainable development and knowledge-based economy has been hindered due to the lack of indicators for these two countries. However, the best results have been achieved in socioeconomic domain, since the two countries primarily direct their economies towards achieving macroeconomic stability and gaining economic growth and development. The establishment of knowledge-based economy has been realised to a certain degree, but the reforms need to be continued.

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(NON-)PROGRESS IN INTEGRATIVE AND TRADE LIBERALIZATION PROCESSES UNDER CEFTA -2006

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ABSTRACT

The elimination of tariff and non-tariff barriers to trade within CEFTA-2006 had a positive impact on boosting up intra-regional trade exchange of goods. However, these positive trends were interrupted by the economic crisis in 2008. Since, the trade exchange of goods has recorded a continuous downturn. For example, the trade exchange of Macedonia with CEFTA-2006 trading partners reached its peak in 2008 when it created 28% of the total trade exchange of goods of the country. Preliminary data for 2014 show that the trade exchange of the Macedonian economy with the economies from the region went down to only 13%. The realized trade surplus of about 600 million dollars in 2008 went down to 400 million dollars in the period from 2010-2011 and continued to decrease in the years that followed. At the end of 2013 the surplus amounted only 80 million dollars, while at the end of 2014 Macedonia recorded for the first time a deficit of about 80 million dollars (www.ceftatradeportal.com).

The stagnation of the integrative process and trade liberalization within the region is evident in all CEFTA-2006 member-states. They all record better trade integration with EU trading partners with whom they exchange between 40% and 60% of their total trade exchange of goods. The two basic sources for the negative integrative tendencies within the free trade area are the economic weakness of all CEFTA-2006 economies reflected in the inconvenient structure of trading goods and the problem of the existence of non-trade barriers that especially affect the trade liberalization process within the region. This article will try to focus its analysis on the both sources of the negative integrative tendencies within the free trade area.

Keywords: CEFTA-2006; regional integration, trade exchange of goods, trade liberalization, nontrade barriers.

JEL classification codes: F15

INTRODUCTION

The CEFTA-week which is an event organized in late autumn each year since the creation of the free trade area, was held last November in Skopje, Republic of Macedonia. It is an event where all relevant parties (the CEFTA - Secretariat representatives, high level representatives from member-states, the business community, academia and relevant international organizations) analyze the effects of the effectuated trade liberalization and identify the most important future challenges. The last meeting in Skopje clearly pointed out that the trade liberalization within the region was at a stand-still point, that member-states were not prepared to take any serious measures or to articulate their top priorities for further trade liberalization and that the trade exchange of goods within CEFTA was further collapsing.

Negative trends from the point of view of total trade exchange of goods within CEFTA were recorded for the first time at the beginning of the economic crisis within the Eurozone six years ago. After a period of a slight recovery in 2010 and 2011, the negative trend intensified as the dead line of Croatia's accession within the European Union started to approach. Since 2012 the economy with

the greatest economic potential and the biggest trader within the free trade area diverted its interest from CEFTA trade liberalization issues and focused its energy on the final preparations for becoming a new EU-member state. This had a strong negative impact on the total trade exchange of goods within the region, but also on the trade liberalization dialog. However, the accession of Croatia within the EU in the middle of 2013 was not the end of the troubles of CEFTA-2006. The year of 2014 brought new hurdles that affected the second biggest trader within the region – Serbia, as well as Bosnia and Herzegovina. Last spring, due to the terrible floods, both of the countries faced new macroeconomic destabilization, further decrement of economic performance indicators, decrement of the total trade exchange within the region and total neglect of issues connected with further trade liberalization.

Macedonia is not an exception of the general negative picture within the free trade area. Data on the Macedonian trade exchange of goods with CEFTA-2006 trading partners clearly illustrate this negative downturn.

Table 1 Trade exchange of goods of the Republic of Macedonia within CEFTA-2006 for the period 2006-2014 (in million American dollars)

Year	Export	Import	Total trade exchange within CEFTA
2006	787.51	400.19	1,187.70
2007	991.72	613.70	1,605.42
2008	1,408.95	761.68	2,170.63
2009	1,000.42	600.36	1,600.78
2010	1,018.32	628.11	1,646.43
2011	1,299.31	799.29	2,098.60
2012	833.69	649.50	1,483.19
2013	804.26	719.00	1,523.26
2014**	512.23	570.32	1,082.55

Source: According to the Ministry of Economy of the Republic of Macedonia and the USAID (2008), *Report on Foreign Trade of Macedonia 2008*, Ministry of Economy of the Republic of Macedonia and the USAID, Skopje, 2008, p. 67 and www.mchamber.mk

**Note:* Data for 2006 are given for comparison purposes. The implementation of the Agreement between Macedonia, on the one hand, and Albania, Kosovo, Moldova and Monte Negro, on the other, began on the 26th of July 2007; with Croatia on the 22nd of August 2007; with Serbia on the 24th of September, 2007 and with Bosnia and Herzegovina on the 22nd November 2007. Data consider the whole year period of time (Statistical Office of the Republic of Macedonia, 2008).

***Note:* Preliminary data for 2014, calculated for the period from January to September 2014

Statistical evidence points out that the creation of CEFTA-2006 had a strong positive influence upon the total trade exchange of goods of Macedonia with trade partners from the free trade area in the first two years of its creation. From only 8% in 2006, the participation of CEFTA-2006 in the total Macedonian trade exchange of goods went up to 28% (Kikerkova, 2013:537). The economic crises in 2009 decreased the total volume of Macedonian trade exchange within the region to 20%, but in the following two years it went up to the level before the crises. However, the surplus that amounted about 600 million American dollars in 2008 went down to about 400 million American dollars in 2010, as well as in the following 2011 (Kikerkova, 2012:537). Since 2012 Macedonia recorded further decrement of the total trade exchange with CEFTA-2006 trading partners. In 2013 the total trade exchange of Macedonia with the free trade area went down to 14% and last year there

was a further decrement to 11.8% of the total trade exchange of goods of the country. Preliminary data for 2014 point out that even in absolute figures total trade exchange fell to a level lower than the one reached in 2006 when the free trade area had not been functional yet. Trade surplus completely melted down and last year it was converted into an estimated deficit of about 80 million American dollars (www.mchamber.mk). It is also important to note that this negative trend was not influenced by Croatia leaving the region. For Macedonia the two most important trading partners from the region were and still are Serbia and Kosovo. Those two countries comprise about 50-60% of the total Macedonian trade exchange of goods in CEFTA - 2006 (www.ceftatradeportal.com).

Looking at data published on the CEFTA trade-portal web page it is evident that all of the member-states have the same experience of substantial decrement of total trade exchange within the region and diversion of trade flows of goods towards the EU.

Table 2 Total trade exchange of goods with the EU and with CEFTA-2006 by CEFTA-2006 member-states in 2013

CEFTA member - state	Total EU trade exchange		Total CEFTA trade exchange	
	Exports	Imports	Exports	Imports
Albania	77%	64%	11%	7%
B&H	73%	68%	16%	11%
Kosovo	40%	44%	36%	28%
Macedonia	73%	63%	17%	10%
Moldavia	47%	45%	0%	0%
Montenegro	49%	47%	43%	37%
Serbia	61%	62%	21%	5%

Source: Calculated according www.ceftatradeportal.com

CEFTA member-states exchange about 70% of their total trade exchange of goods with non-CEFTA trading partners. Majority of the countries in the region have highly integrated trade flows with the EU, where most of them realize between 40 and 60% of their total trade exchange of goods.

Looking at the structure of the intra-regional trade of goods it is evident that over half of it consists of intermediate goods. In 2010 intermediate goods created 59% of the total exchange of manufactured goods within the region. However, the supply chain in the industry “Food, Beverages and Tobacco” alone created 43% (OECD, 2013:25).

Besides the industry “Food, Beverages and Tobacco”, CEFTA economies seem to be highly integrated also in “Textiles and Clothing”, but the integration within this supply covers only 5% of the intra-regional trade and is effectuated in final products, due to the specialization of the economies within the supply chain (OECD, 2013:6).

At intermediate stages of production CEFTA member-states are mostly integrated in the medium-low technology industries such as “Basic Metals” and “Fabricated Metal Products”. However, in value terms the medium-high technology industries “Chemistry” and “Electrical Machinery” happen to be dominant. They made important amount of the regional trade exchange of manufactured goods of Croatia before its accession to the EU and Serbia, and partly of Bosnia. It is important to point out that the intra-regional trade structure is dominated in value terms by goods from the medium-high technology industries, but in volume absolutely dominant are the goods from medium-low technology industries (OECD, 2013:7-8).

The two most integrated economies within the CEFTA-region from the view-point of intra-CEFTA supply chains are Macedonia and Bosnia and Herzegovina. In the Macedonian case this especially concerns the trade exchange of “Food, Beverages and Tobacco” supply chain of which 83% are realized within the region, followed by “Rubber and Plastic” with 62% and “Fabricated Metal Products” with 57% (OECD, 2013:19). For Macedonia the CEFTA region is to a certain extent also important for the trade exchange of drugs and cosmetics and construction materials (www.mchamber.mk).

The very traditional and technologically backward structure of the trade in goods is not typical only for the intra-regional trade of CEFTA-member states. About 70% of the intermediate products from the medium-low technology industries are still exported to trading partners out of CEFTA (OECD, 2013:25). The inconvenient structure of traded goods not only within the region, but also outside of it, confirms its weak economic potential and is the basic source of the low interest in all of the member-states for further serious steps in trade liberalization.

Non-trade Barriers as a Challenge of Further Integrative and Trade Liberalization Processes within CEFTA-2006

CEFTA member-states did not experience serious problems with the elimination of qualitative and quantitative barriers to trade. The real challenge was and still is elimination of a variety of non-trade barriers (NTBs)^{*74} mostly hidden and difficult to detect. At the start of the functioning of the free trade area companies did not even report or complain on their existence, as they were used to treat these obstacles as the usual way of doing business within the region. The first to draw the attention to these barriers were the economic chambers from the region. They asked for help in discovering and measuring the applied NTBs in order to enable negotiations on their elimination. Help was provided by the OECD with a creation of a monitoring tool for detection and measurement of existing NTBs. The monitoring tool defined three groups of NTBs: technical standards, sanitary and phytosanitary standards and administrative barriers to trade. The first measurement of the three identified NTBs was done in 2012, and the second one was realized last year. For each group of NTBs several indicators were defined that were to be measured and evaluated during the monitoring process, where the lowest mark in the evaluation process was 1, and the highest 5 (OECD&CEFTA, 2012:7). In the first monitoring round the identification and measurement of NTBs was done in 12 selected sectors such as: food products and beverages; fabricated metal products, except machinery and equipment; other non-metal mineral products; agriculture; pulp, paper and paper products; chemicals, chemical products and man-made fiber, electrical machinery and apparatus; rubber and plastic products; wood and products of wood and cork; machinery and equipment; coke, refined petroleum products and nuclear fuels. Most of the priority sectors pointed three most frequently traded products with CEFTA-trading partners. This means that the monitoring was effectuated upon 193 products in total (OECD&CEFTA, 2012:14). The second monitoring round however focused on the measurement of NTBs in only five priority sectors and selection of 9 priority final products in total. Narrowing of the monitoring focus was done in order to help efforts on elimination of NTBs in top priority sectors for the region from the point of view of the participation of each sector in the total volume of the intra-regional trade exchange of goods (OECD&CEFTA, 2014:6).

^{*74}Note: According to the international terminology all barriers to trade other than tariffs are nontariff barriers to trade. Since both qualitative and quantitative barriers to trade are successfully eliminated from the CEFTA region, the author's believe is that it is more appropriate to refer to the still existing barriers as non-trade barriers, as they primarily were installed to regulate other issues but trade. Nevertheless, they have a very strong negative impact upon trade.

The further analysis in this paper is going to deal with the main findings on the progress on elimination of each group of NTBs within the region.

Overcoming Technical Barriers to Trade within CEFTA-2006

The OECD report on elimination of NTBs in 2012 followed technical barriers to trade by classifying them in a slightly different manner in comparison to the report done last year. It pointed out that almost all CEFTA-2006 member-states strived to adopt European standards and technical regulations, as they were trying to achieve compliance with EU regulation in this area. However, all of them found themselves in a different stage of transposition of and compliance with established EU standards and regulation, which created additional barriers to trade within the region. Only few of the member-states had satisfactory physical capacity and competence for conformity assessment in all 12 priority sectors that were selected for the monitoring in 2012. Also, National Standards Bodies in CEFTA-countries showed insufficient capacity for active participation in the European standardization activities. All of the member-states did not possess systematic notification systems on new technical regulations, mandatory conformity standards and draft national standards (OECD&CEFTA, 2012:15-36).

Table 3 presents the classification of TBTs monitored within CEFTA parties in 2014. The monitoring this time was done in only six priority sectors with regard of the volume of traded goods, i.e. refrigerating/freezing furniture; windows; electric ovens other than microwaves; wooden furniture; metal furniture and seats. The first three products are subjects of the harmonized EU legislation, and the last three are not harmonized yet, though they are affected by various horizontal EU legislation. (OECD, 2014:15)

Table 3 Technical assessment framework

Transposition of EU legislation
Adoption of EU legislation (technical regulation and ENs) in identified priority sectors
Abolishment of conflicting national standards
Implementation of EU legislation
Implementation of EU legislation (technical regulation and ENs)
Conformity assessment bodies and capacity
Conformity assessment procedures
Participation in European standardization
National Standards Body
Principles of voluntary standardization
Legislation and standardization
Participation in EU standards related activities
Institutional framework for accreditation
National Accreditation Bodies
Law on accreditation
Membership in international/EU accreditation bodies
Information and notification mechanisms
Alignment of information and notification mechanisms with WTO TBT Agreement, Directive 98/34/EC and CEFTA provisions

Source: OECD (2014): *Preliminary Report on Elimination of Non-Tariff Barriers in Trade*, (Draft version), Paris, p. 14

The new report confirms almost everything which was stated in the OECD report done two years ago. It is confirmed once again that all CEFTA parties are active in the process of adopting the EU aquies, but as they have no common EU entry date, the pace of the adoption and transposition of EU legislation and standards varies from country to country. As the process is not synchronized this creates additional problems in regard with the existing TBTs. The countries made certain progress in this area, especially in regard with the process of accreditation and standardization. However, their performance is the lowest in regard with the implementation of EU legislation and participation of EU standardization. In order to enhance implementation of EU legislation CEFTA-member states are advised to make national plans and define priorities in consultation with their industries and agree industry strategies on exports of priority products within the free trade area. These would be also the groups of products where the transposition and implementation of EU legislation should be effectuated first. This is recommended to be the best way to eliminate conflicting national TBTs and rationalize the use of the insufficient capacity to participate in EU standardization activities. The report also confirms that since 2012 significant progress has been done through the Multilateral and Bilateral Agreement on European Cooperation for Accreditation in aligning the conformity assessment systems within CEFTA. However, evidence confirms the existence of conformity assessment bodies in all product areas in only few CEFTA member-states. It is also stated that the notification system on new technical regulations, mandatory conformity assessment procedures and draft national standards is not satisfactory, yet. The leading country in the field of harmonization of TBTs at present is Serbia, followed by Macedonia. Albania is slightly over the CEFTA average, while all of the other member-states are below it (OECD, 2014:14-37).

Dealing with Sanitary and Phytosanitary Measures (SPS)

The new OECD report on SPS measures and their impact upon the trade within CEFTA-2006 was effectuated by monitoring of three groups of products: beer made from malt, waters including mineral waters and sweet biscuits (OECD, 2014:14-39). These products were taken in consideration due to their high participation in the volume of the total trade exchange of goods within the region. The SPS assessment framework does not differ from the one created for the first monitoring cycle which was applied for 36 different products.

Table 4 SPS assessment framework

1. SPS institutional framework
SPS agencies
Risk management system
SPS strategy/action plan
Information management system
2. Co-operation among SPS agencies
• National inter-agencies cooperation
• Intra-CEFTA and external co-operation
• Adherence to international organization/conventions capacity for participation in related international meetings
3. Framework SPS legislation
• Adoption of framework and secondary legislation
• Alignment with WTO SPS Agreement and EU legislation
• Capacities for risk based control system
• Procedures for impact assessment
4. Transposition of European SPS measures

- Alignment with the EU acquires in priority sectors
- Capacities for transposition of legislation in priority sectors
- Traceability of export products
- Transparency in regulatory approach
- 5. Information and notification
 - Enquiry and notification points
 - Alignment of information and notification mechanisms with WTO SPS Agreement and Directive 98/34/EC

Source: OECD (2014): *Preliminary Report on Elimination of Non-Tariff Barriers in Trade*, (Draft version), Paris, p. 38

The analysis in the new OECD report confirms that the biggest progress in this area was done in regard with the criterion SPS legislation and SPS agencies cooperation. Nevertheless most of the problems stated two years before are still present. Despite the continuous progress in legislation harmonization, there is a lack of implementation of the legislation already in place. Another problem is the transposition of EU legislation relevant for this area in each member-state with a different pace (OECD, 2014:50-55).

Lack of staff, adequate equipment and financial constraints are evidenced in all CEFTA Parties and the situation has not improved since the monitoring effectuated in 2012. The SPS agencies especially suffer from a lack of risk analysis capacity meaning risk assessment, risk management and communication on risks. Instead of sharing important information on multilateral basis, member-states do exchange information on new legislation and measures on bilateral basis and at informal meetings. Only in Macedonia the legislation in this area was harmonized by the end of 2012. No other country in the region managed to implement the legislation on risk assessment and risk management (OECD, 2014:48-50).

Especially important is the non-existence of internationally accredited laboratories and lack of mutual recognition of national laboratories attests. Therefore, most of the member-states repeat the testing of the samples of imported products, which increases costs and prolongs the importing procedure. Furthermore CEFTA member-states do not distinguish between conformities in food safety versus quality of food. Hence elimination of quality issues from import/export control of food is strongly recommended. Even more important is that transposing the EU legislation in each member-state with a different pace creates additional problems as there are a lot of misunderstandings due to differences in understanding and commenting transposed laws, EU standards and practices. The OECD experts believe that these differences could be overcome by organizing workshops and staff trainings. It is also recommended to set priorities in each country according to its exporting potential and the traded volume of goods to define the most important legal acts that should be transposed first (OECD, 2014:52-54).

Except in Macedonia, at present there are not clear procedures on notification, as well as on implemented relevant laws in regard with the WTO, CEFTA-2006 and EC Directive 98/34. So, information points should be established as soon as possible and regular exchange of information on the applied and new SPS measures according to the international provisions and standards should be done on regular basis among all the member-states (OECD, 2014:56-62).

Administrative barriers to trade

Administrative barriers to trade basically concern the performance of the customs administration. Within the contemporary international trade, the efficiency of the customs administration is considered to be especially important for the swift, safe and cost efficient cross-border movement of

goods. The efficient performance of the customs administration can tremendously reduce export/import costs and thereby may influence the market competitiveness of products. The OECD monitoring tool defined nine indicators on administrative barriers within the assessment framework to be followed within CEFTA-2006 in 2012. The same framework was used in the last OECD report as well. The assessment effectuated in 2014 confirmed that all CEFTA parties did not manage to make a significant progress in elimination of administration barriers to trade, with exception of one parameter – involvement of the trade community. The customs procedures among member-states are still unsynchronized and they all face slow progress in implementation of international standards and customs good practices.

Table 5 Administrative assessment framework

Administrative barriers to trade	
1.	Establishment and functioning of a national customs website
2.	Establishment and functioning of enquiry points
3.	Involvement of the trade community
4.	Advance rulings
5.	Appeal procedures
6.	Fees and charges
7.	Formalities: documents and automation
8.	Customs procedures and processes
9.	Domestic and cross-border/international agency co-ordination and co-operation

Source: OECD (2014): *Preliminary Report on Elimination of Non-Tariff Barriers in Trade*, (Draft version), Paris, p. 63

The 2014 OECD report points out that there is no significant improvement in regard of the functioning of national web-sites, advanced rulings, appeal procedures and fees and charges. Although member-states try to follow up international standards and multilateral regulative framework, they fail to provide their full implementation, even when national legislation is in place.

Proper functioning of national web-sites is considered to be a crucial part of the trade facilitation process, as they are the most important source of pre-arrival trade related information. They should comprise all necessary information on relevant trade regulation issues, as well as on simplified customs procedures. They should also be easily accessible and information should be delivered in a transparent and non-discriminatory manner. All of CEFTA member-states have already national web-sites in place, but the amount and the contents on relevant information are not unified and they are not up-dated on regular bases. Both of the OECD reports stated that the quality and the scope of trade related information is highest in Macedonia and in Serbia, while only B&H issued a manual on border crossing procedures. The effectuated assessment on administrative barriers to trade once again pointed out that it is very important to enable relevant information on binding tariffs (BTI), binding origin (BOI), customs value calculation and preferential rules of origin of member-states. The lack of the necessary trade related information creates serious obstructions and draws back the trade facilitation process within the free trade area (OECD, 2014:97).

Another barrier where no progress is registered is the advanced rulings. Advanced rulings are obligation which derives from GATT and the WTO, as well as from the Revised Kyoto Convention. All the member-states brought their legislation in line with the EU relevant customs regulations. Nevertheless, this instrument is not sufficiently used, as in all the countries in the free trade area it is issued only at request of traders. Partly, the insufficient usage of the advanced rulings is a consequence of a lack of special profiles of customs officers within the national customs services, such as technical engineers, chemists, textile production specialists, etc. In order to stimulate issuing

of advanced rulings, the OECD monitoring-tool recommends regular trainings of customs officers on regional level (Kikerkova, 2014: 94 & OECD, 2014:74).

Appeal procedures are regulated with relevant provisions in all member-states and are published on customs web-sites. However, in some of the member-states there is no independent authority in charge of delivering second instance decisions in appellate procedures, although in all of the member-states legislation allows to appeal to an independent judicial authority. This is not in line with the provisions of the Revised Kyoto Convention and CEFTA member-states should pay due attention to this issue. Only in Macedonia examples of decisions delivered in appealing procedures are available on the customs web-site. The Macedonian good practice is recommended to be followed within the free trade area (Kikerkova, 2014: 94 & OECD, 2014:76).

The issue of fees and charges applied by member-states is considered to be in line with international standards and provisions in regard of the manner of their calculation, which is not on ad valorem basis and is limited to the approximate costs of services. However, no information on applicable fees and charges is available on regional level, and with exception of Macedonia, customs does not provide a comprehensive overview of types and amounts of all applicable fees and charges (OECD, 2014:78).

No progress is recorded also in regard of documentation formalities. CEFTA member-states have complicated documentation formalities due to the non-existence of electronic customs system, with exception of Macedonia, which makes electronic exchange of documents impossible within the region. Therefore, even if customs declarations' electronic lodging and processing is available in all member-states, submission of paper-form documentation is mandatory for customs clearance, which complicates and prolongs the customs procedures. Digital signatures and digital certificates, as well as electronic payment of customs duties and fees have still not been available within the free trade area. Both Montenegro and Serbia are over the average level in implementation of higher standards in this field. However, the single window is operational only in Macedonia. The OECD monitoring recommends conduction of joint projects on regional implementation of the single window concept and on electronic lodging and processing of customs declarations (Kikerkova, 2014: 95 & OECD, 2014:81).

Member-states are evaluated to have an especially weak performance when it comes to the issue of functioning of enquiry points. The enquiry points are not functioning on unified terms within the FTA and they basically cover customs legislation and procedures issues. Only in Macedonia there is a 24/7 hot line which covers other trade related issues, too. All member-states have not organized a one-stop shop for customs and agencies related in the clearance process, which prolongs customs procedures and increases costs. Main recommendation in this regard is to provide coordination of the enquiry points of member-states and to consider opening of CEFTA Trade Facilitation Portal (OECD, 2014:69).

Trade facilitation process with regard of administrative procedures is unimaginable without efficient risk management system. The customs risk management system is defined as a systematic application of management procedures and practices which provides the customs with necessary information to address movements or consignments that present a risk (Standard 6.3. of the Revised Kyoto Convention). The risk management within the customs is also important for the post clearance audit. CEFTA member-states are fully aware of the importance of risk management within the customs. However, they all face a lack of trained staff and expertise in this area. Therefore, the number of physical controls at the border is high above the international, as well as the EU standard. The member-states exchange information in order to help the process of risk management, though have not been able to create joint risk profiles, as well as sophisticated centralized risk management IT system, yet. They depend on international expertise on creating the risk profiles instead. The OECD monitoring – tool recommended developing of a Regional Training Strategy in order to provide uniform application of EU standards on risk management and post clearance audit (Kikerkova, 2014:95 & OECD, 2014:81).

The OECD monitoring-tool under customs procedures and processes analyzed the pre-arrival processing, developing separate release of goods and payment of customs duties, the difference in physical and documentary inspections of perishable and non-perishable goods within the clearance process, the extent of use of the status of authorized traders, regular trainings and web-publication of the average clearance time, as well as domestic and cross-border cooperation of the customs authorities. The findings of the monitoring confirmed the effort of all member-states in harmonizing their national legislation with EU standards and requirements. Despite all the efforts, some of the essential good practices within the region, such as: pre-arrival processing, the usage of simplified procedures and modernization of equipment and well trained personal in the customs laboratories, are still lacking. The problem with modernization of laboratories and equipping them with personal capable of expertise in different fields is considered to be a very serious one, as it is fundamental for proper collection of customs duties. The problem is difficult to overcome, as it is financially intensive. Therefore one of the recommendations states that maybe member-states should consider the possibility of specialization of certain national laboratories for certain types of goods and recognition of specialized laboratories on mutual basis. It is also recommended to establish special organizational units in charge of simplified procedures on licensing, control of shipments, risk profiling and conduction of post-clearance. There are also serious difficulties in implementing the concept of authorized economic operator (AEO), although in some of the member-states the legislation is already in place. In fact, only in Macedonia two companies, one domestic and one established with the help of foreign direct investment in one of the free economic and development zones completed the procedure and gained the status of AEO. The AEO concept could not be fully implemented without mutual recognition of the gained status at national level. Nevertheless, member-states have not expressed any initiative on starting negotiations and defining priorities in this regard (OECD, 2014:88).

The report paid due attention to domestic and cross-border agency cooperation and confirmed that working hours of border agencies within CEFTA-2006 have still not been synchronized. The parties have also not provided one-stop shop for physical and documentary controls, yet. The agencies are facing lack of technical and administrative capacities. From international perspective, national authorities did not achieve any agreement on joint customs controls or on strengthening the intensity of work of the CEFTA working group on risk management and providing joint risk profiling on regional level. Therefore, it is strongly recommended to make this top priority and to investigate the possibility of providing necessary information technology for ensuring interoperability and interconnectivity of the IT systems within the region (OECD, 2014:90-94).

CONCLUSION

The creation of CEFTA-2006 happens to be the most important project on reestablishing economic cooperation among the Western Balkan countries. At the beginning of its functioning, the free trade area revitalized the trade exchange of goods and provided implementation of international trade regulative and established standards under the trade liberalization rules. After eight years of functioning the free trade area faced many limitations and inefficiencies. Due to the very traditional and outdated economic structure of the member-states' economies, the free trade area is used mostly as a market for realization of agricultural products, in many cases unprocessed, certain kinds of processed food and beverages, and intermediate goods from the low and medium-high technology industries. To a certain extent only Croatia, before it became an EU member, and Serbia, were able to export machines and electrical equipment from high technology industries. Therefore, all of the member-states are integrated with 59% of their intra-regional trade in the intermediate production supply chain, of which 43% is due to the exchange within the food, beverages and tobacco supply

chain. This structure, however, does not vary very much from the one the member-states provide in the inter-regional trade, especially with EU trading partners, where about 70% of the total trading volume consists of intermediate goods. All of the member-states exchange approximately over 50% of their total trade exchange of goods with the EU. In the case of the countries with candidate status for EU membership this amount approaches almost 2/3 of their total trade exchange. This means that CEFTA economies are much more integrated with the EU, then among themselves, which is due to their heavy dependence on EU imports.

However, weak economic capacity is not the only reason for the limited usage of the trading potential of the CEFTA-region. Many existing, open and hidden non-trade barriers are also preventing free flow of goods among member states. The elimination of the traditional qualitative and quantitative barriers to trade made the problem of the existence of various NTBs quite obvious. As most of the active NTBs were difficult to identify and to measure, the CEFTA Secretariat asked for OECD expertise. The OECD provided an assessment framework that defined three groups of NTBs – technical barriers to trade (TBTs), sanitary and phytosanitary barriers to trade (SPS) and administrative barriers to trade. The assessment was first done in 2012 in 12 priority sectors in which 36 intermediate goods were investigated. In 2014 the second assessment was completed, but now in only 9 priority sectors and following up a much more limited scope of intermediate goods prioritized by the total volume of the realized trade exchange within the free trade area.

Nevertheless, the last assessment did not bring any substantially different conclusions from the first one, i.e. no significant improvements were done in regard of further trade liberalization and trade facilitation. In regard of TBTs and SPS in place, it was once more recommended to follow up international regulation and to implement international or EU standards as a method which would provide elimination of conflicting existing national standards. With regard of the administrative barriers within the region, the monitoring came to a conclusion that it was especially important to improve customs risk management on the borders and to enhance the implementation of simplified procedures among all member-states in order to avoid physical control of each shipment. It was also pointed out that member-states had to strengthen the technical and qualified staff capacity of national laboratories. If mutual recognition of laboratory investigations and national certificates is not possible, the expertise of internationally recognized laboratories should be demanded. Special attention should be paid to the full implementation of simplified customs procedures, decrement of the number of documents presented on the borders and implementation of paperless trade by full automation of procedures.

It seems, though, that NTBs are not the main cause for the sharp down-turn of trading flows and total volume of trade exchange of goods within CEFTA-2006. There are many factors that had a negative impact upon the trade flows within the region. One of them is certainly Croatia's accession into the EU, which deprived the region of the country with largest economic and trade potential. The weak economies of the member-states were challenged severely last year with the unexpected devastating floods. The damage was considerable for both Serbia and Bosnia and Herzegovina. Both of them faced serious fiscal, as well as balance of payment dis-balances. Serbia introduced a package of measures on saving, while Bosnia seems to be only a step away from a bankruptcy. Although not spoken aloud, it seems that all member-states suffer from some kind of a system failure, which creates additional instability and mistrusts among the trading partners. Traders involved in business transactions in Kosovo started to flee away from the country, as there was no way to obtain payments for the fulfilled business commitments. There are also negative economic tendencies in Albania, while both Kosovo and Macedonia are politically challenged. Considering the circumstances, it was not surprising to see representatives of CEFTA member-states obstinate from any kind of debate during the CEFTA-week held in Skopje in November 2014. On the contrary, their attitude clearly pointed out that member-states were not prepared to negotiate further trade liberalization.

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STRUCTURAL REFORMS POLICIES IN VULNERABLE ECONOMIES – THE CASE OF THE REPUBLIC OF MACEDONIA –

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ABSTRACT

Over the last few years structural reforms have often been mentioned in public context as a very sensitive topic. It is often that they refer to the changes in the way the governments work. Most economists believe that governments should help the markets operate efficiently, including the implementation of various agreements and addressing liquidity. However, structural reforms do not only refer to savings, but also to establishing macroeconomic balance, where the real sector should enable revenue growth and employment. According to the recommendations of the European Commission, the structural reforms should be used primarily for establishing institutional financial discipline and stability, which means reducing, or minimizing the fiscal deficit and reducing the level of public debt. The purpose of financial discipline and stability should be maintaining financial consolidation with deep reform and restructuring of public enterprises, consolidation of public finance, and steady growth based on export.

In this context "no" should be the answer to all government policies that include punishment measures intended for the private sector, especially in cases where such measures are to be implemented in underdeveloped economies or in economies facing macroeconomic imbalance. These vulnerable economies shall not be capable of withstanding policies that include increased penalties in cases when the liquidity is low. For these economies much more convenient policies shall be those of increased flexibility for the purpose of creating favorable business climate, and alleviated policies of stimulating nature. On the other hand, the solution should be sought also in the fight against corruption, transparency of the use of public funds, increasing the quality of public sector management, development of democracy etc.

Structural reforms in Macedonia have permanent tendencies of accomplishment. Although without any significant progress, yet there can still be said that a number of reforms have been made, but unfortunately, only in written. The reason for the slow progress of the consistent implementation of structural reforms is associated with the non-existence of a clear strategy and really developed policies which is something that signifies there is a real need to amend the operation and actions of the Government regarding its engagement primarily in managing public finance. Essentially, there has been some stagnation over the recent years in each domain of government policies especially in the implementation of development programs for sustainable economic growth and social stability. Namely, according to economic indicators, the overall public debt has been constantly increasing. Overloading the public sector in terms of employment and the lack of deep reforms and restructuring of public enterprises is also a negative indicator of economic growth and development. Export policies appear to be non-existing in the Government program, whereas for the purpose of achieving economic efficiency i.e. attracting foreign direct investments, there was a necessity that even “Far East had to be discovered” as well.

Keywords: structural reforms, vulnerable economies, Republic of Macedonia.

JEL classification codes: E61, H63.

INTRODUCTION - THEORETICAL FUNDAMENTS OF STRUCTURAL REFORMS

Over the last few years structural reforms have been more frequently mentioned both in public and in the public environment as well. The greater number of structural reforms appears to be a very sensitive issue. Most often, structural reforms are perceived as changes in the way certain Government operates. In essence, these changes tend towards creating preconditions for achieving economic growth. According to larger number of economists Governments are those that should help markets to work in a more efficient manner by implementing various agreements and managing liquidity. However, structural reforms do not only mean saving but also establishing macroeconomic balance that shall further enable the real sector to achieve rise in the level of income and the rate of employment.

If beginning with the fact that macroeconomics policies are implemented through measurements undertaken by the Government, then it becomes clear that the structural reforms are those that should first undergo the process of adopting legal acts, and then be subjected to the in-field realization of concrete measures and actions. Open economies have a tendency to cause changes in their functioning through structural reforms. These reforms in the long run should lead to improving public finance.

Successfully implemented structural reforms undoubtedly depend on a well prepared programme. Countries that are hit by huge economic challenges, especially those being in economic crises (i.e. vulnerable economies) are faced with a huge decrease in GDP, unemployment and budget deficits; these countries most often aim at getting out of such economic condition, but are forced to enter in the Bretton Woods' twins game and the game of the rest of the international financial institutions. Namely, international financial institutions such as International Monetary Fund, World Bank and the European Bank for Reconstruction and Development impose preconditions as goals that need to be achieved regarding the implementation of structural reforms. The preconditions are those referring to adapting the economy in the field of macroeconomic weaknesses and structural consolidations for the purpose of enabling sustainable economic growth, as well as achieving more efficient allocation of financial resources. The financing is usually being realized through credit arrangements between the debtor country and the International Monetary Fund. In order to achieve full implementation of structural reforms' policies, the credits are of short-term/long-term nature depending on the needs of the credit beneficiary. If credit arrangements are arranged in the field of issues regarding foreign payments and imbalance of the Balance of Payments, then they are of short-term nature. If it is a matter of arrangements that aim at realizing development goals, then the credits are of long-term nature. Generally, the purpose of such credits is to finance budget deficits and to enable incentive for economic growth and development. In this field, great efforts are made through deep reforms for fiscal discipline and consolidation of public finance to primarily enable financial stability of the banking sector and balance of the labour market as well.

When it comes to saving and public finance discipline, positive result can be achieved in the short to medium run. Obviously it appears to be significantly important considering the fact that saving is the basic precondition for economic development. Tendencies for having high rates of saving (given as percentage of GDP) with developed countries, such as the examples of USA, Japan and Germany, over the last 50 years have been at the level of above 20 percent. Such saving rates appeared to be a significant precondition for enhanced economic growth realized in a form of increased domestic production and rise in the level of the welfare.

The significance of the structural reforms' policies for the vulnerable economies

The State with its institutions plays the role of policy maker. Usually it is a matter of policy maker regarding fiscal policy, monetary policy, foreign trade policy, and income policy. It is lately that

as part of the aforementioned policies, more often in the field of economics appear to be popular the policies of macroeconomic balance in the field of employment, investments and the policies of public and overall debt i.e. the policies of deficits.

According to the recommendations of the European Commission it is expected that by making structural reforms there should be achieved institutional financial discipline and stability, which means that the fiscal deficit shall be decreased or minimized, as well as the level of public debt. The goal of financial discipline and stability should be maintaining financial consolidation by making deep reform and reconstructing public enterprises, consolidating public (state) finance by restricting budget spending and enabling stable growth based on export, which is a key indicator of having the public debt decreased and preventing it from further increase, i.e. decreasing the budget deficit and preventing it from further increase.

In this context “NO” should be the answer to all Government policies containing rigorous punishment measures /sanctions of the private sector, especially in occasions when such measures are to be implemented with undeveloped i.e. vulnerable economies i.e. with economies that are facing macroeconomic imbalance (especially regarding export, employment, public debt and investments). These vulnerable economies are not capable of enduring the policies of increased sanctions under conditions of low liquidity. Much more convenient for them shall be policies of increased flexibility for the purpose of creating stable and favourable business environment and alleviated policies of stimulating nature. On the other hand, the solution should not be sought only in macroeconomic policy, but also in actions such as fight against corruption, transparency of public finance spending, increase of the public sector governance quality and development of democracy as well.

Structural reforms mean making changes in the macroeconomic policies. It is a matter of fiscal and economic consolidation measures with the assistance of which not only the budget shall gain its balance but unemployment and the public debt shall be decreased, the domestic investments shall be boosted and the export shall be stimulated also.

Most of the structural reforms actually represent structural financial consolidations and adjustment of economy as a whole. Within the European Union, such reforms exist in the EU Member countries that are hit by severe financial and economic difficulties resulting from their continuous long-term being in the comfort zone, which led them to being on the verge of economic and financial collapse. It is through this approach to structural changes and changes in sector's operation that reformatory efforts are made, the first one being the persistence to cut out the macroeconomic risks, and then to set goals for economic recovery. The reformatory efforts are strong, primarily in the area of labour market reforms, made in parallel with the reforms of the legislation, the reforms and restructuring of the public enterprises and setting strict measures for financial discipline and consolidation of public finance and macroeconomic balance.

The countries with vulnerable economies in the European Union are characterized and overburdened with huge budget deficits and big foreign and public debt, as well as with negative growth rates. In order to fix these imbalances, these member- countries similar to the rest of the countries in the world which also face structural economic issues should enlarge their opportunities for foreign trade in manner that on one hand, they increase the export, and on the other hand they substitute the import with domestic production. (Canton at all, 2014, p.4-5).

The EU member countries such as Greece, Spain, Italy, Ireland and Croatia, which according to economic criteria, at the moment have vulnerable economies with negative rates of economic growth, high rates of unemployment and high budget deficit, desperately need structural reforms. In this context, Croatia can be given as a specific example (the newest EU member country), especially because of the fact that 12 quarters in a row it has increased recession (it faces a GDP fall) and has a rate of unemployment of around 18%. Although it is expected that all the member countries shall achieve growth in 2015, yet it is under question mark because the Eurozone is still facing a high rate of unemployment of 12% and a growth of poverty. Structural reforms with strong fiscal consolidation seem to be the only way to decrease unemployment and reduce poverty. Out of 157 recommendations

of the European Commission in 2014, the EU Member countries implemented only 12. The lagging behind and the irresponsibility in implementing the recommendations leads to insufficient coordination of budget and macroeconomic projections, with which the growth tendencies may deteriorate the bad economic condition of the Eurozone, which is already in a severe financial difficulties.

Table 1.- Measures of Crisis Management in EU Member Countries

Financial aid
Urgent interventions
Macroeconomic stabilization
European plan for economic recovery
Fiscal consolidation
Broad procedure for the deficit
Assistance to endangered countries
Programs for Greece and Ireland -EFSF (European Fund for Financial Stability) and EFSM (European Mechanism for Financial Stability).

Source: European Commission.

The way out of the crisis requires stable financial system (responsible monetary policy, regulated financial especially banking sector, regaining the trust in financial institutions and contemporary financial instruments) and responsible fiscal policy. At the same time, very important is the risk related to fiscal policy i.e. fiscal sustainability and sustainability of public debt (Kilibarda et al, p. 8).

According to the International Monetary Fund Report of March 2015, the recommendations for macroeconomic stability are also set for the countries of the so called Western Balkan (Republic of Macedonia, Albania, Serbia, Kosovo, Bosnia and Herzegovina, Montenegro), which are also facing difficulties regarding macroeconomic balance. The key recommendations are: budget spending discipline, decreasing the high budget deficits, decreasing the public debt and preventing the policies of bad credit arrangements. Also, it is suggested that the non-profitable public enterprises are privatized because they represent burden to the state budget and that reforms of the labour market start to be made. It is stressed out that Governments should undertake clear steps in order to eliminate legal, judiciary and tax barriers and to increase the role of both the private and the banking sector. "Without further reforms, the decrease in growth over the last years may become a norm that shall endanger the convergence of the living standard towards the economies in the European Union and shall negate the opportunities for employment in many countries in the region"(David Lipton, First Deputy Managing Director of IMF).

If the case with Greece is taken as an example, as a country being the biggest debtor in the Eurozone, it is clear that finding the real cure to exiting this hard economic and financial condition is more than a difficult task to do. The long-years trend of so called comfortable behavior of Greece with no true efforts for fiscal consolidation, with a rate of high pensions and salaries besides the huge employment in the public administration where unemployment is still perceived as a main challenge, the question is who shall finance the debt Greece has. In fact, 320 billion euros is the total debt of Greece that should be unavoidably covered. The escalation of the economic condition from corruption to irresponsibility leads to hegemony and loss of hope. It is certain that the lesson that should be learnt is the one talking that the case with Greece must not be analyzed as an exception, because "an unprecedented crisis justified an unprecedented fiscal response, but against a backdrop of fiscal profligacy, it also created unprecedented problems of debt sustainability" (Eichengreen, p. 199).

Structural reforms' policies in the Republic of Macedonia

It is undoubted that the Republic of Macedonia highly depends on the international global market. Over the last 20 years, the economy in the Republic of Macedonia is characterized by relative macroeconomic stability with low economic and investment activity, with high foreign trade deficit and continuously high rate of unemployment. Foreign trade in its largest part is oriented towards the EU Member countries, among which the largest trade partners are Germany and Greece. Meanwhile, it should be also taken into consideration the constant inability to balance the domestic demand with the domestic supply. From this perspective, it is in continuity that the Republic of Macedonia has been facing huge challenges when it comes to the foreign trade deficit. In fact, Republic of Macedonia as EFTA (European Free Trade Agreement) and CEFTA (Central European Free Trade Agreement) member has negative foreign trade balance. This deficit is permanent and with negative trend. However, only a small part of the causes for this condition lies in the fact that as a small country i.e. as a small economy, Republic of Macedonia as most of the Western Balkan countries faces a lack of natural energy resources/fuels such as oil, and especially the lack of natural gas, which is lately more and more often used as substitute of oil.

Negative macroeconomic reflections are identified in the field of investments. Macedonian economy has a chronic disease of insufficient scale of investments i.e. it lacks certain amount of investments such as foreign direct investments and private domestic investments as well. The most convenient incentive for the economy would be the "awoken" private domestic investments. However, foreign direct Greenfield and/or brownfield investments should not be at all neglected. At the same time, there should be certain precaution when allocating benefits for attracting investments, in order to enable the domestic and foreign investors to be in equal position. "Companies in the tradable sector of emerging countries produce and/or assemble intermediate goods for foreign multinationals. International outsourcing of production creates international trade and contributes to the growth of the tradable sector in less developed countries. Technological progress, trade globalization and outsourcing by multinationals interact and work in the same direction." (Fiorentini and Montani, p. 98.)

The analysis of the investment activity of a small open economy as the Macedonian one should be accompanied with an analysis of the import and the export, because this analysis can complete the image of the (un)succes in stimulating domestic investors i.e. attracting foreign ones. In this sense, it is important to emphasize that the total value of the export of goods from the Republic of Macedonia in the period from January to February 2015 amounts US\$ 674,552,000, whereas the import value totals US\$ 885,340,000. The overlapping of import and export is 76.2%. The trade deficit, for the same period amounts US\$210,788,000. In the current period, the largest part of the export of goods is directed towards the 28 EU member countries (78.8%) and the countries of the Western Balkan (9.8%), whereas the import largely comes also from the 28 EU member countries (64.0%). According to the State Statistical Office, regarding the foreign trade, Republic of Macedonia has the closest relations i.e. trades the most with Germany, Great Britain, Serbia, Greece and Bulgaria (53.0% of the total foreign trade is made with these five countries). The previous data is in itself explanatory when it comes to describing certain changes in the foreign trade cooperation. For example, in 2007, Republic of Macedonia besides trading with Germany, Serbia and Greece, mostly traded also with Russia and Italy, with which it made 50% of the total foreign trade of goods where as an exception it made a mild surplus.

According to the indicators of trade per products, the export was primarily consisting of exporting products such as products of iron and steel, ferronickel, tobacco and clothes products. On the side of the import, most present were the crude oil, electricity, motor vehicles, agricultural and food products.

Table 2 – Trade volume in the Republic of Macedonia with the countries abroad for the period January to February 2015

	US\$ 000			Indices			
	I 2015	II 2015	I-II 2015	II 2015/ ----- Ø 2014	II 2015 ----- I 2015	II 2015 ----- II 2014	I-II 2015 ----- I-II 2014
Trade volume	759 311	800 580	1 559 892	78.7	105.4	83.9	87.3
Further processing – volume	155 077	145 222	300 300	83.2	93.6	90.2	106.6
Export	336 177	338 375	674 552	82.3	100.7	88.2	95.8
Export - further processing	102 751	91 770	194 521	88.2	89.3	89.1	107.7
Import	423 134	462 206	885 340	76.2	109.2	81.0	81.7
Import - further processing	52 327	53 452	105 779	75.8	102.2	92.0	104.5
Import coverage by export	79.4	73.2	76.2	-	-	-	-

Source: State Statistical Office (<http://www.stat.gov.mk/>)

Table 3-Countries with the biggest trade volume with the Republic of Macedonia for the period January to February 2015

- daily exchange rate -

Country	Volume in US \$ 000	Structure	Export in US \$ 000	Structure	Import in US \$ 000	Structure	Import coverage by export
TOTAL	1 559 892	100.0	674 552	100.0	885 340	100.0	76.2
Germany	401 115	25.7	304 377	45.1	96 739	10.9	314.6
Great Britain	140 585	9.0	8 543	1.3	132 042	14.9	6.5
Serbia	99 175	6.4	26 001	3.9	73 174	8.3	35.5
Greece	93 258	6.0	25 668	3.8	67 590	7.6	38.0
Bulgaria	92 905	6.0	43 969	6.5	48 936	5.5	89.8
China	87 655	5.6	31 653	4.7	56 002	6.3	56.5
Italy	75 495	4.8	30 403	4.5	45 092	5.1	67.4
Turkey	50 278	3.2	10 352	1.5	39 926	4.5	25.9
Romania	38 486	2.5	11 285	1.7	27 201	3.1	41.5
Russia	34 764	2.2	5 726	0.8	29 039	3.3	19.7
Belgium	32 417	2.1	23 056	3.4	9 361	1.1	246.3
Spain	25 177	1.6	12 789	1.9	12 388	1.4	103.2
Austria	23 829	1.5	4 965	0.7	18 864	2.1	26.3
Slovenia	23 388	1.5	7 857	1.2	15 531	1.8	50.6
Croatia	22 604	1.4	10 407	1.5	12 197	1.4	85.3
Slovakia	22 031	1.4	10 204	1.5	11 827	1.3	86.3
Kosovo	21 924	1.4	19 365	2.9	2 559	0.3	756.7
Netherlands	21 899	1.4	8 341	1.2	13 558	1.5	61.5
USA	21 771	1.4	9 239	1.4	12 533	1.4	73.7
France	18 669	1.2	6 535	1.0	12 135	1.4	53.9

Source: State Statistical Office (<http://www.stat.gov.mk/>)

Undoubtedly, Republic of Macedonia needs a faster trend of increase in export as key aggregate of macroeconomic balance, which may possibly boost the production as well. In this context the major booster of production and economic activity should be the sector of small and medium enterprises (SME). By stimulating small and medium enterprises i.e. by stimulating the entrepreneurship some impulse for economic development of the country may appear. Therefore, under no conditions should stop the support given to small and medium businesses, and less strict should be the conditions for doing business i.e. these conditions should be alleviated, and the sanctions and the additional fiscal measures should be less rigorous. The number of 70 thousand active small enterprises is not to be underestimated at all, especially when having in mind the economic capacity in the Republic of Macedonia; however, the problem lies in their accelerating power. Namely, this obvious defect is a clear indicator of the (dis)interest of the Government to strengthen the support it gives to the small economy for the purpose of enabling its intensive development, especially in achieving results in the key segment, the one of employment and self-employment.

The lack of actual strategic approach in the fiscal sphere over the last several years contributed for having the budget fund being permanently emptied. The use of state resources and public incomes most of the time for construction projects did not appear to be of certain use for the rest of the economic sectors. Namely, these public investments oriented towards construction took account of the largest part of the capital investments financed by the modest amount of the state budget which over the last years has been renewed with short-term borrowings. This kind of borrowings appears to be useful for enlivening the economy in the short-run, but not in the long-run.

On the other hand, the robust public sector with tendencies to become overburdened aims at achieving unsustainable status-quo condition due to the visible distortion of the labour market. In this sense, under conditions of decreased transparency in public incomes spending, it is necessary to make reforms of the public sector in order to limit the additional employment of new staff. Although the Republic of Macedonia has a serious problem with the unemployment (by having a continuous rate of unemployment of 30%, from the beginning of the period of transition up until nowadays), it is a fact that it can be decreased only through providing support to the private sector which is perceived as engine for economic growth and development.

Nevertheless, in this context, there should not be forgotten all those positive events in the banking sector which became relatively stable primarily due to the good policies and regulations that regulated the banks' operation. The trend of decreasing the interest rates also contributed for having the offer of cheaper credits for the economy in the country.

Developing economies such as the Republic of Macedonia should obviously look for their chances for sustainable economic growth in the support of the domestic real sector. Economic efficiency can and should be expected from foreign direct investments as well, but it seems that in the example with the Republic of Macedonia there lacks a real strategy for foreign direct investments inflow that shall be in compliance with the function of the social preferences. Republic of Macedonia as small and vulnerable economy does not need reindustrialization nor subsidizing of state owned enterprises; it needs consistent macroeconomic policies with elements of support for the small and medium businesses. The key to success for having economic growth and development and promotion of the country as a suitable destination for investments and doing business could be looked for into the SME sector.

The period of transition in the Republic of Macedonia makes evidence of constant tendencies for making structural changes and reforms, unfortunately, with no significant progress. In fact, it can be said that large number of reforms were made, unfortunately only on paper. The reason for the slow progress and inappropriate implementation of the structural reforms is related to the non-existence of a clear strategy, lack of vision and lack of appropriate policies that shall treat the thing that is really to be treated as target i.e. the overall operation of the country in the field of public finance as a whole as well as the implementation of the rest of the macroeconomic policies. The fact is that over the last

years there is stagnation in each and every domain of Government policies, especially in the one regarding the implementation of development programmes for sustainable economic growth and social stability. Namely, according to economic indicators the total public debt shows a trend of increase (according to IMF data, from July 2014 the total public debt already reached a level of above 51% of GDP which is very close to the level targeted with the Copenhagen criteria).

Overburdening the public sector with employment of new staff (especially if made from political reasons), and the lack of serious deep reforms and restructuring of the public enterprises, also represents a negative contribution for the economic growth and development. The export policies appear to be inconsistent with the Government programme, whereas when it comes to economic efficiency i.e. attracting foreign direct investments there was a need to “discover even the Far East”. The Government as every other agent should be rational in the spending of its resources and it should insist on most adequately allocating them for the purpose of increasing the efficiency. Under conditions of global crisis this is not a simple thing to do, but “policy efforts should be directed at eliminating (or at least reducing) the underlying vulnerabilities, because the crisis cannot be triggered if there are no vulnerabilities.” (Chamon, Ghosh and Kim, p. 247). Namely, the negative tendencies of economic imbalance going hand in hand with the lack of strategy for sustainable economic growth and development are also accompanied with the lack of systematic prevention of corruption. Although at first glance it seems that it not a matter of a segment of structural policies and reforms, yet this issue has to be treated with special attention, in the short run advisably.

CONCLUSION

The global financial crisis that hit the whole world is still going on. No one can tell how long it shall last and what shall be the consequences of it (Kilibarda and all, p.66). Yet, structural reforms can result in macroeconomic stability and improvement of the economy. Those are painful steps that cannot be avoided. The usual assistance offered by the international financial institutions regarding structural reforms is conditioned with many rigorous preconditions. Besides the rest of this, the preconditions refer to the warranty that the borrowed financial means shall be spent in compliance with the overall financing goals.

Structural reforms are implemented through appropriate policies in conditions of market economy. The countries that do not manage to implement those policies are brought into a position of facing fiscal imbalances and need for increased discipline in the periods that are to follow. Those who criticize these policies state that the so called financial threats targeted for the countries with vulnerable economies appear to actually reach the level of blackmailing, which results in these countries not having another option except the one to meet those blackmailing requirements. However, it is clear that in this case there cannot be avoided the axiom about the inexistence of ‘free lunch’.

In the light of the negative actual trends of economic growth and development with many countries all over the globe, such as some of the EU member countries (Greece, Italy, Spain, Portugal, Ireland and Croatia), and the countries from the so called Western Balkan and South-East Europe, where Republic of Macedonia belongs, there can be emphasized two key forms of structural reforms’ policies for solving the problems of the above mentioned countries’ vulnerable economies: the first form is the one of increased saving on behalf of the state/the Government for the purpose of putting public finance under control, and the second one are the structural reforms for the purpose of stimulating GDP growth.

It is undisputable that the Republic of Macedonia needs continuous and evident increase of GDP per capita. Such a goal can be achieved only through creating conditions for increasing domestic and attracting foreign direct investments. The flat rate policies, on one hand, unfortunately combined with the huge public spending on the other (especially in the field of permanent employment in the

public sector i.e. in the public and state administration), caused negative indicators seen from economic perspective. Undoubtedly, the small Macedonian economy should reach high rates of economic growth and development by taking concrete steps for implementing the structural reforms that shall emphasize the support to small and medium enterprises, increase the export, increase the labour mobility and labour productivity, and decrease the spending in the public sector as well. Only in this manner Republic of Macedonia shall be capable of making step forward thus getting closer to European integrations under conditions when “the key challenge is to increase the level of integration within the regional and global markets” (EBRD, 2013).

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YOUTH UNEMPLOYMENT IN REPUBLIC OF MACEDONIA: A COMPARATIVE STUDY

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ABSTRACT

The labour market in the Republic of Macedonia is currently experiencing extremely low employment amongst young and currently struggling with persistently high unemployment rates estimated at 51.9% in 2013. The government of the Republic of Macedonia has been focusing on lowering the youth unemployment rate (15-24) through several measures, but these have either failed or yet to produce the desired results.

Using official data from the National Employment Agency, Labour Force Surveys executed by the State Statistical Office and Eurostat data, the main aim of this study is to examine the development of youth unemployment in the past decade (2004-2013) in the Republic of Macedonia from a multi-dimensional perspective. This while comparing national trends with the EU average and other European Countries in some contexts.

Findings show that youth unemployment rates in the country has been among the highest in Europe in the last decade with youth unemployment rates following a somewhat different pattern than those in comparison with other European countries. The study shows also that there is almost no gender difference in youth unemployment in the country, but that there are notable disparities when comparing unemployment among young people across regions in the Republic of Macedonia. It is clear that Governments measures have failed to produce the desired impact on youth unemployment and that future policies and other measures need to be more strategically focused and more inclusive.

Keywords: Youth unemployment, unemployment, employment, labour market.

JEL classification codes: J01; E24

INTRODUCTION

The Republic of Macedonia has, since its independence, made significant transformation and great progress in terms of economic reform, decentralization and social development. However, despite these advances the country still faces a number of persisting and emerging challenges. One of these major challenges is a weak labour market characterized by very high unemployment rate, low employment rate and low proportion of job creation.

High unemployment is however not a recent phenomenon in the country, nor is the country an exception in this regards. High unemployment rates (15-64 yrs.) are witnessed across the region as well as within the European Union, with countries such as Greece (at 27.7%) and Spain (26.2%) experiencing almost the same level of unemployment as in the R. Macedonia (29%) in 2013. In this context, of special concern is youth unemployment (15-24 years) which is remarkably and persistently high in the country despite sizeable gains in educational access and attainment in the Republic of Macedonia. The concern is not only related to the economic consequence of high youth unemployment for the country, rather it presents also a serious social concern; posing as such a serious social threat with eminent impact on amongst others emigration rates of amongst youth in the country (Janeska, 2013). Furthermore, according to Stambolieva (2008) high levels of youth unemployment and low youth employment rates jeopardizes the sustainability of social protection and the pension system in the country.

Young people are more vulnerable to economic downturns and the first to be cut from employment. They tend to be 'last in' and 'first out', in other words last to be hired, and the first to be dismissed, which together with the challenges they face in making the transition from education and training to the labour market makes them generally subject to higher rates of unemployment than older generations (United Nations, 2013).

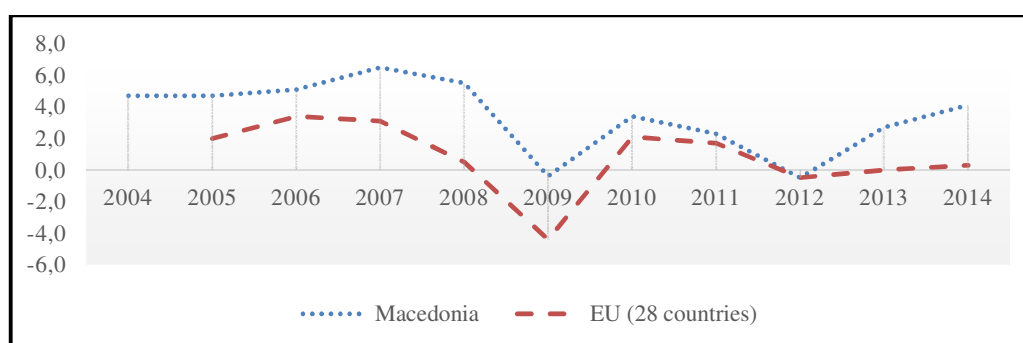
In line with above, the main aim of this study is to shed some light on the development of youth unemployment in the past decade (2004-2013) in the Republic of Macedonia from a multi-dimensional perspective. This while comparing national trends with the EU average. The main statistical data sources used for this study are official data from the national Employment Agency and the Labour Force Surveys executed by the State Statistical Office for the years 2004-2013; complemented with Eurostat data for comparisons with the EU average (EU-28).

Macroeconomic Developments

With the dissolution of Yugoslavia in 1991, the Republic of Macedonia became one of six new countries in the Balkans, and notably the poorest of them all; contributing no more than 5% to the total GDP of Yugoslavia with a GDP per capita at 2,180 US\$ in 1990 (Kostadinov, 2009).

Nearly 25 years after, and despite serious restructuring of both the political and economic systems, the country still remains among the poorest in the region with an estimated GDP per capita at 4,839 USD in 2013, with neighbouring countries Albania and Kosovo having lower GDP per capital levels in the same year as per Eurostat data. Looking at the growth rate trend over that last decade (figure 1), it is easy to conclude that the country has had a relatively robust growth rate over the last decade with an average growth rate of 3.5%; lying above the estimated average growth rate for the EU-28. The economic growth can be mainly attributed, as can also be understood from figures 2 & 3, to increased exports and foreign direct investments (FDI) inflows accompanied with increase in private consumption, remittances and credit expansion (Mojsoska-Blazevski, 2011). The Government of the R. Macedonia has in the past years actively been trying to attract Foreign Direct Investment and introduced several measures, including change of legislation and regulatory, but the inflow of FDI (Figure 3) in the last decade has been moderate despite efforts and data indicates high fluctuation in FDI inflows from year to year; emphasizing no stable FDI inflows. For a small and open country such as R. Macedonia, FDI play a crucial role in the country's growth and ability to create new jobs. According to US Department of State, Investment Climate Statement for Macedonia (2013), the R. Macedonia is despite its effort to adequate FDI failing in doing so for several reasons to include high levels of corruption, lack of transparency, lack of capacity and communication in and among ministries, and concerns about the rule of law and proper contract enforcement.

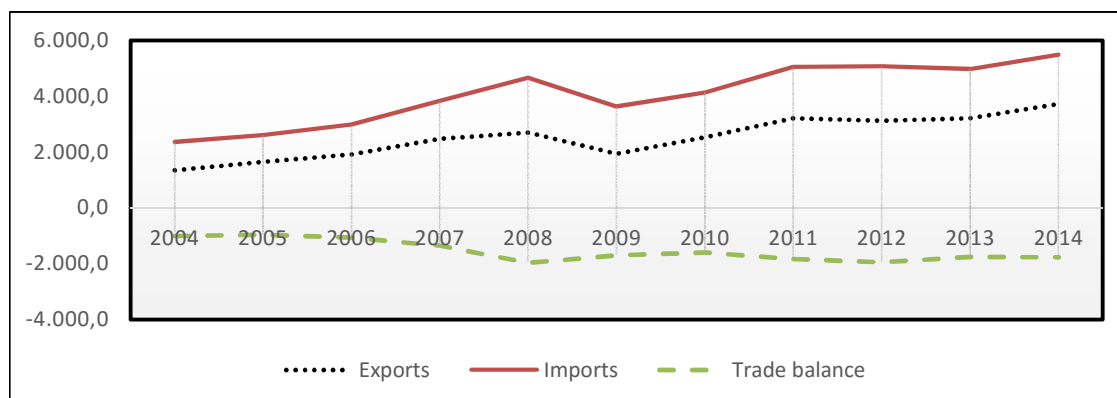
Figure 2: Real GDP Growth Rate 2005-2013 (Annual, %)*



*Preliminary data for 2013 and estimated data for 2014 (SSO)

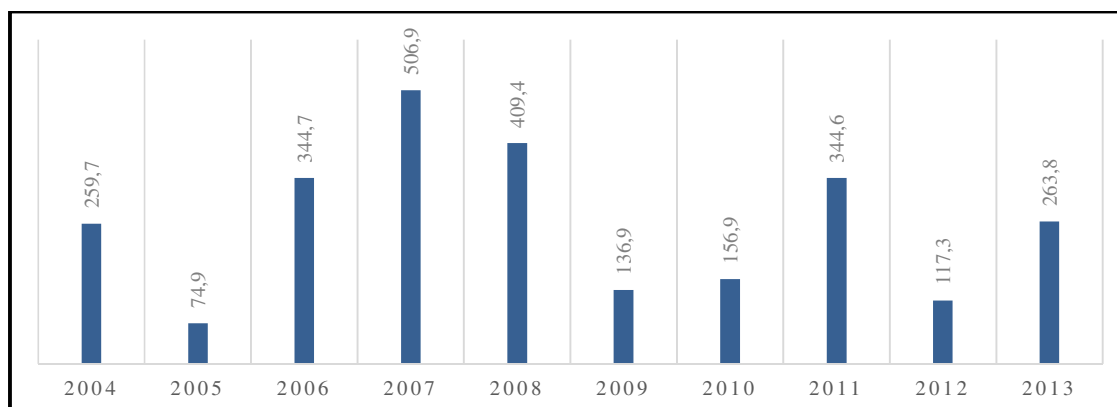
Source: Own compilation from National Bank of Macedonia and Eurostat

Figure 3: Annual Trade Balance in R. Macedonia 2004-2014 (millions, Euro)



Source: National Bank of Macedonia

Figure 4: Net Foreign Direct Investments 2004-2013 (million, Euro)



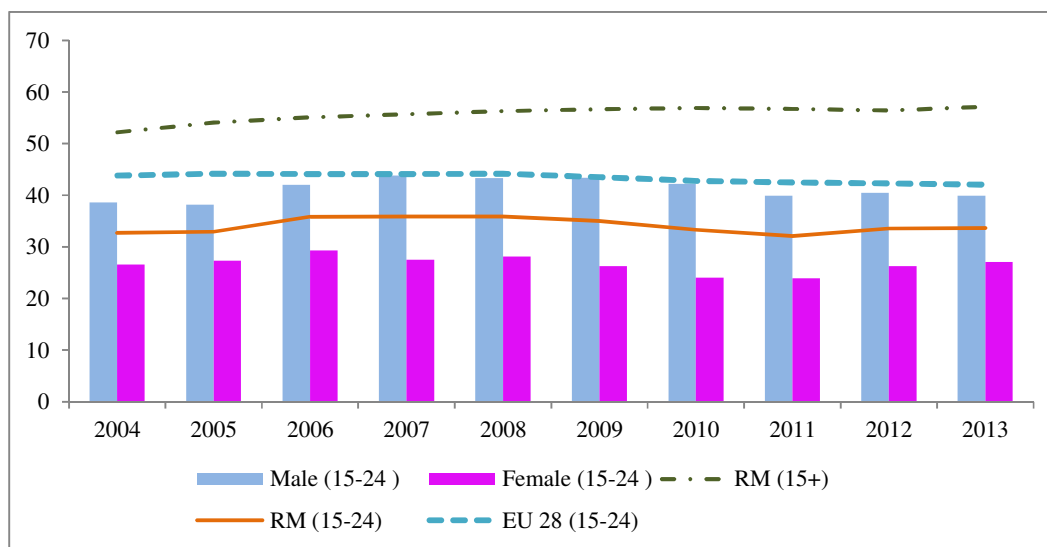
Source: National Bank of Macedonia

As can also be seen from trends in figure 1-3, the Macedonian economy has not remained immune to the spill-over effects of the economic crises. However, the negative effect has been considerably less than what has been experienced by most European countries. The main reason for this is the limited capital account openness (Ristevski, 2010). In the case of the Republic of Macedonia, the consequences of the economic turmoil mainly materialized through a notable fall in exports and Foreign Direct Investments (FDIs). The GDP growth was negative in 2009 (-0.4%), which is a drastic fall from 5% in 2008 and 6% in 2007. The growth rate has recovered since then with a 2.7% growth in 2013.

Youth Employment and Labour Market Participation

Looking at youth labour market participation (activity rates) and youth employment, data shows (figures 4 & 5) that despite a positive trend with increasing rates over the past decade, rates are still very low in both cases compared to the European Union (EU-28) in 2013, more specifically 17 p.p. lower in the case of youth employment and 8.5 p.p. lower in the context of labour market participation.

Figure 5: Youth Activity Rates by Gender (%)

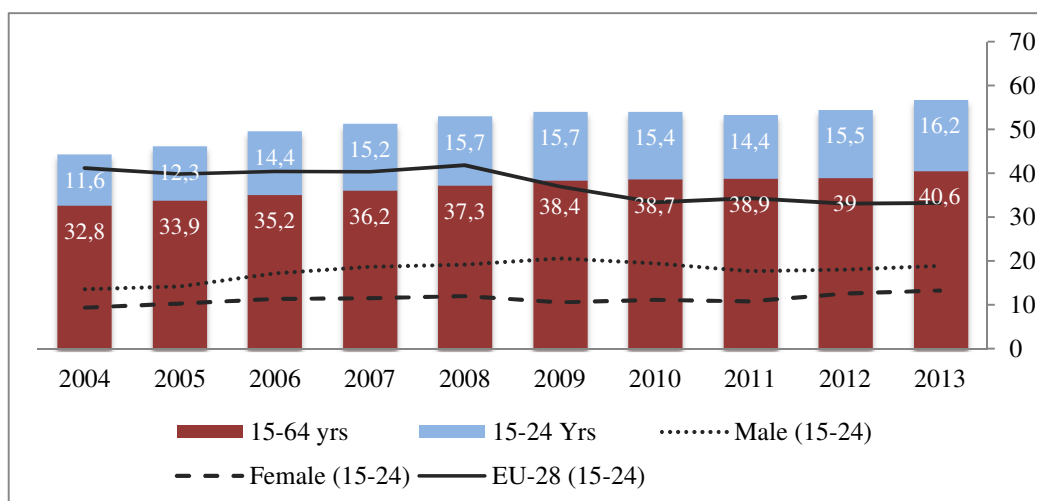


Source: Labour Force Survey, State Statistical Agency and Eurostat

The youth labour market participation increased from 32.7% in 2004 to 35.9% in 2007-08, but began to drop again reaching 33.6% in 2013. The fluctuation over the years in the overall youth labour participation rate is a response to similar fluctuations in the male youth activity rates for the same period, while female youth activity rates have remained relatively steady throughout the same period but at a very low level compared to male activity rates, more specifically 12.8 p.p. lower in 2013.

According to the World Bank (2008), lower female participation rates are mainly driven by very low levels of participation of young-rural-unskilled women. According to the same report, most women who are not in the labour force are either in school or undertaking household activities.

Figure 6: Youth Employment Rate by Gender (%)



Source: Labour Force Survey, State Statistical Office and Eurostat.

The trend in youth employment over the years show as somewhat different pattern than labour force participation rates, with female employment slowly but steadily increasing throughout the period reaching 13.3% in 2013 from a mere 9.4% in 2004, though with a small set back in 2010 where it fell temporarily to 10.6%. Male youth employment trends on the other hand show a somewhat different pattern. The male employment rate increased steadily in the first part of the period and culminated in 2009 at 20.6%, and dropped subsequently in 2010 and 2011 slightly to increase again in 2012 and 2013, reaching 18.9% at the end of the period.

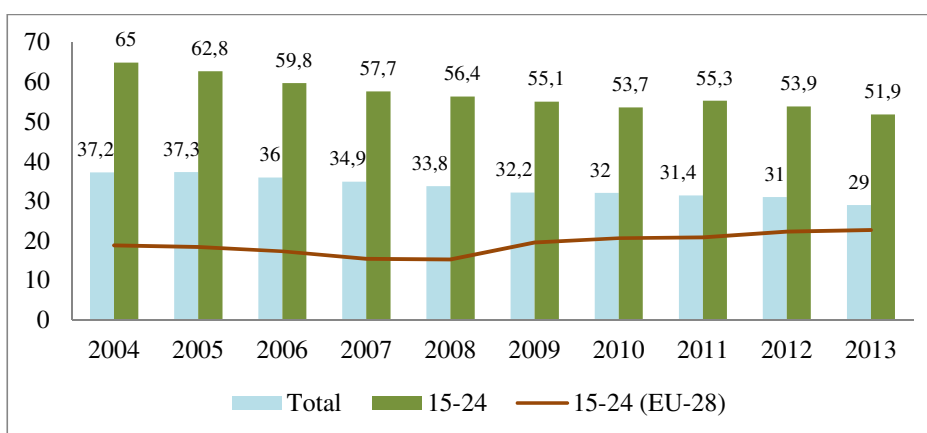
Youth Unemployment 2004-2013 in the R. Macedonia

The Republic of Macedonia is suffering from persistently high unemployment, which lies well above the EU average. The overall unemployment rate has over the past decade decreased by 8.2 p.p. but remains still at very high level (29% in 2013 according to the State Statistical Office, Labour Force Survey, 2013). Looking specifically at youth unemployment in the country (figure 6), the data display a much worse and alarming situation. This especially since young workers represent a group that can significantly contribute towards a more dynamic economic development of the country through their knowledge and creative abilities (Kjosev, 2007). As indicated by the data (figure 6), youth unemployment in Macedonia is extremely high; reaching a rate of 51.9% in 2013. It is app. 1.8 times higher than the national aggregate unemployment and 2.2 times higher than the average youth unemployment rate in Europe (EU-28) for the same year; surpassed only by Greece (57.9%) and Spain (54.6%) as per Eurostat data (Table 1). However, on the positive side, and looking at the development of youth unemployment over the past decade, the trend shows a decreasing pattern with an overall decrease of 13.1 p.p. over the past decade with a moderate decrease of 1.31 p.p. per annum. The decrease although positive, it is less encouraging when compared to the ratio between youth unemployment and aggregate unemployment, which are almost identical (1.75 in 2004 vs. 1.8 in 2013), and to the average economic growth rate of the country in the same period. The latter suggesting that the growth rate in the country to some extent has not been accompanied by new job creation and thus its impact on youth unemployment has been limited.

According to European Training Foundation (2013), the decline in youth unemployment is likely to be the result of increasing youth inactivity rates due to delayed entry to the labour market and continued education and training.

Noteworthy in this context is that the global economic crisis of 2008-09 does not appear to have hit this category at all given that the youth unemployment rate dropped by 4.7% from 2008 to 2010.

Figure 7: Youth Unemployment Rate, 2004 - 2013 (%)



Source: Labour Force Survey, State Statistical Office and Eurostat.

Table 1: Youth Unemployment Rates in Select European Countries 2004-2013 (%)

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Bulgaria	24.5	22.3	19.5	15.1	12.7	16.2	23.2	25.0	28.1	28.4
Czech Republic	19.9	19.2	17.5	10.7	9.9	16.6	18.3	18.1	19.5	19.0
Denmark	7.8	8.6	7.7	7.5	8.0	11.8	14.0	14.2	14.1	13.1
Germany	13.0	15.5	13.8	11.9	10.6	11.2	9.9	8.5	8.0	7.8
Ireland	8.3	8.6	8.6	9.1	13.3	24.0	27.6	29.1	30.4	26.8
Greece	26.1	25.8	25.0	22.7	21.9	25.7	33.0	44.7	55.3	58.3
Spain	22.5	19.6	17.9	18.1	24.5	37.7	41.5	46.2	52.9	55.5
Croatia	32.8	32.3	28.9	25.2	23.7	25.2	32.4	36.7	42.1	50.0
Italy	24.4	24.1	21.8	20.4	21.2	25.3	27.9	29.2	35.3	40.0
Austria	12.1	11.0	9.8	9.4	8.5	10.7	9.5	8.9	9.4	9.7
Portugal	14.1	16.2	16.5	16.7	16.7	20.3	22.8	30.3	37.9	38.1
Romania	22.3	20.2	21.4	20.1	18.6	20.8	22.1	23.9	22.6	23.7
Slovenia	14.0	15.9	13.9	10.1	10.4	13.6	14.7	15.7	20.6	21.6

Source: Labour Force Survey, Eurostat.

According to Micevska (2008) the very low employment rates and high unemployment rates in Macedonia can essentially be explained in the absence of significant labour supply constraints in the country and the limited labour demand, especially from the private sector. The private sector which is represented almost entirely by micro and small enterprises accounts for app. 80% of total employment in the country (ETF, 2013). These are often small family businesses and have as such low potential for generating business and employment growth due to the lack of both financial capital but also poor management experience (ETF, 2013).

The high unemployment rate amongst youth in the Republic of Macedonia can partly also be explained by the employment in the informal economy. The grey labour market is of considerable size and it is estimated that informal employment accounts for roughly 43% of youth employment (Table 2), while male and female youth employment in the grey market accounts for 59% and 41% respectively of total employment in the informal economy. The Government introduced in 2007 a flat tax system with proportional tax rates for personal (PIT) and corporate income (CIT) with the aim of shrinking the informal economy and making it easier for companies to register their employees. However with total employment rates decreasing (figure 5) in the period following the tax reform, its effect in this aspect is subject to discussion.

Table 2: Formal and Informal Youth Employment in R. Macedonia, 2013

Age Group	Formal employment			Informal employment		
	Total	Male	Female	Total	Male	Female
15-24 Year	27 172	16 601	10 571	20 755	12 244	8 511

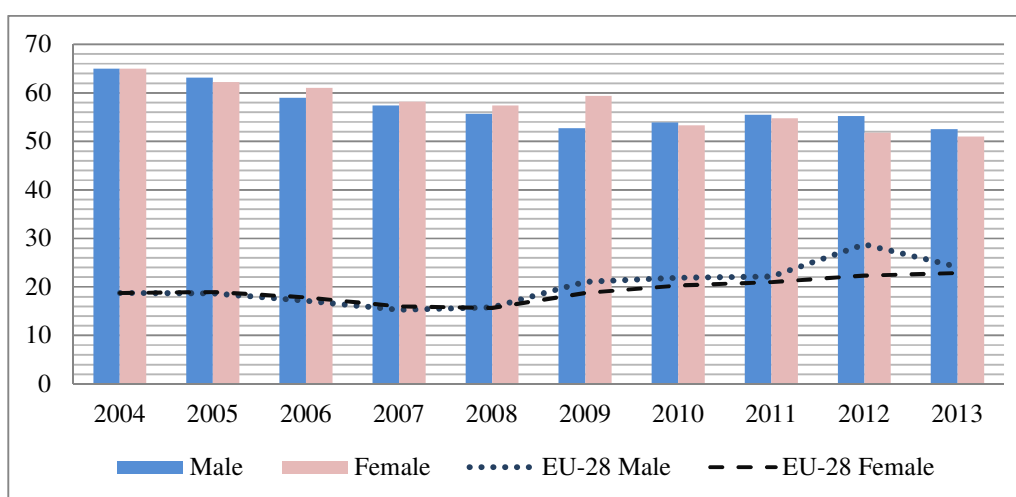
Source: Labour Force Survey, State Statistical Office

Another reason of the high level of unemployment in the country according to the World Bank (2008) can also be attributed to a large fraction of young men and women who are practically detached from the labour market but are considered to be unemployed. In this case referring to youth unemployed longer than 4 years and/or do not actively look for jobs.

Male vs. Female Youth Unemployment

From a gender perspective, it is noticeable that unemployment rates across gender groups are quite similar in the Republic of Macedonia as opposed to what may be witnessed in other European countries. Male and female youth unemployment rates have both dropped from 65% in 2004 to 52.5% and 51% respectively. While female youth unemployment rates have been decreasing steadily over the period, male youth unemployment rates have been more dynamic and have fluctuated over the course of the period increasing in the period 2010-2012 to as much as 55.5%. In 2013 the male youth unemployment rate began to drop again by 2.7 p.p. reaching 52.5% in 2013. Compared to the EU average (EU-28), registered data shows (figure 7) that both male and female youth unemployment rates in the Republic of Macedonia are slightly two time higher than the EU average rates for female and male youth unemployment. The figure also shows that both female and male youth unemployment in Europe have been severely touched by the global economic crisis indicated by growing rates in both cases in the years after the crisis.

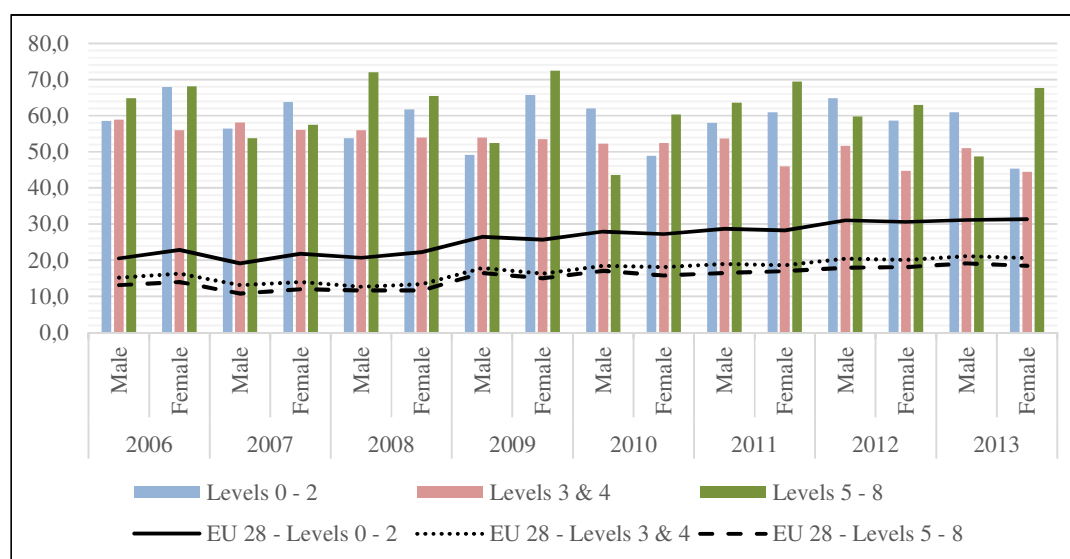
Figure 8: Youth Unemployment Rate by Gender, 2004-2013(%)



Source: Labour Force Survey, State Statistical Office and Eurostat.

Youth Unemployment by Educational Attainment

Looking at youth unemployment rates from an educational perspective (Figure 8), the data indicates that the highest incidences of unemployment are generally found among youth having completed tertiary education (levels 5-8), while those with lower educational level are less exposed to unemployment. A reversed picture vis-à-vis youth unemployment by educational attainment is on the other hand witnessed in the European Union (Figure 8). This phenomenon can be explained partly by the oversupply of educated youth (i.e. skills mismatch) and partly by wage reservation mechanisms. From a gender perspective, females who have completed tertiary education have the highest incidences of unemployment in the gender group with an unemployment rate at 67.7% in 2013 which is slightly less than in 2006 and 4.7 p.p. lower than the rate in 2009. Unemployment among youth males with tertiary education has on the other hand shown improvement over the years dropping from 64.8% in 2006 to 48.7% in 2013, making this category less vulnerable to unemployment compared to females and males with lower education levels. Compared to the EU, the unemployment rates by educational attainment show that national rates lie well above the EU averages which are on the rise basically since 2009 and onwards.

Figure 9: Youth Unemployment by Educational Attainment by Gender (%)


Source: Labour Force Survey, State Statistical Office and Eurostat.

Youth Unemployment by Duration

Youth unemployment in the Republic of Macedonia is characterized predominantly by long-term unemployment (unemployed more than 12 months), with young males more exposed than young females (Table 3). This to be the case for both the Republic of Macedonia and the EU-28. While the share of long-term unemployment as a percentage of total unemployment in the case of young women was remaining at the same level in 2013 as in 2006 at app. 73.5%, whilst fluctuating in between, long-term male unemployment as a percentage of total unemployment has slightly increase by 1.3 p.p. from 2006 to 2013, reaching 75.1% in 2013. In the EU context, figures show a steady increase in the share of both young males and females from 2009 and onwards reaching 37.2% for males in 2013 and 32.6% for females in the same year. The comparison with the EU-28 average shows also that long-term youth unemployment in the Republic of Macedonia is twice as high as the EU-28 average.

Table 3: Long-term Youth Unemployment (12 months or more) as Percentage of Aggregate Unemployment 2006-2013, (%)

	2006	2007	2008	2009	2010	2011	2012	2013
Total (RM)	73.7	70.8	72.1	66.9	70.2	60.2	70.2	74.6
Male (RM)	73.8	73.9	74.4	68.4	73.3	64.0	70.9	75.1
Female (RM)	73.7	66.1	68.4	64.3	64.2	53.8	69.3	73.6
Total (EU-28)	28.4	26.2	21.9	25.5	29.9	31.5	33.5	35.1
Male (EU-28)	29.3	27.8	23.6	27.0	32.6	33.6	35.8	37.2
Female (EU-28)	27.3	24.2	19.9	23.4	26.5	28.9	30.5	32.6

Source: Labour Force Survey, Eurostat.

Regional Trends in Youth Unemployment in R. Macedonia

Available data (Table 4 & 5) indicates that there are large disparities in labour market outcomes across regions in the Republic of Macedonia both when looking at aggregate unemployment and youth unemployment. Higher incidents of aggregate unemployment is witnessed in the North-eastern (44.9%), South-western (36.7%) and in the Polog region (33.6%) which all had a higher unemployment rate in 2013 in comparison with the national unemployment rate (29%).

The East region and the Southeast region have the lowest unemployment rates with 19.5% and 18.8% respectively, though with an increasing trend in comparison to previous years where the unemployment rate has been as low as 9.3% in 2011 in the South-east region. Except for the latter two regions, Polog and the Southwest region, all other regions have in the period 2009-2013 experienced improvements in aggregate unemployment with the Polog region experiencing the highest increase in unemployment rates over the period (6.3 p.p. from 2009 to 2013). The low unemployment rates in the above mentioned regions is attributed to the fact that these regions have a large agricultural sector (World Bank, 2008). The disparity of unemployment across regions is obvious as is the fact that regions with relatively high unemployment rates are regions with traditionally high unemployment rates (Northeast region) comparative to other regions, and the same applicable for regions with relatively low unemployment rates (Southeast region).

Table 4: Aggregate Unemployment in R. Macedonia by Region, 2009-2013, (%)

Region	Unemployment rate				
	2009	2010	2011	2012	2013
Republic of Macedonia	32.2	32	31.4	31	29
Vardar Region	39.7	37	36.4	35.9	29.8
East Region	17	16.4	16.4	18.5	19.5
Southwest Region	32.7	34.3	42.8	42.3	36.7
Southeast Region	14.4	11.5	9.3	13.8	18.8
Pelagonia Region	33.2	33.6	31.4	25.3	22.2
Polog Region	27.3	30.8	31.8	34.2	33.6
Northeast Region	64.8	62.8	59.6	52.8	44.9
Skopje Region	33.5	33	30.7	31.3	29.3

Source: Labour Force Survey, State Statistical Office

In the context of Youth unemployment in various regions in the Republic of Macedonia data shows (Table 5) disparity across regions in the number of registered unemployed youth with the Employment Agency. The trend in registered unemployed youth with the National Employment Agency is downwards with numbers decreasing by 18.5% in the Eastern region to as high as 52% in Skopje from for the period 2009 to 2012. Looking at the drops in registered unemployed youth from 2012 to 2013 even higher percentages are evident; from 28.7% in the Eastern region to 66.9% in the Skopje region. The latter can be explained by the fact that the National Employment Agency has changed the way upon which they register unemployed in 2013, following the adoption of the change of the Law on Employment and Unemployment Insurance, which meant that in 2013 unemployed were separated and registered in one of two categories: *active unemployed persons* and *other unemployed persons* (Mitev, 2013). The first category are unemployed looking actively for employment and obligated to register with the Employment Agency every month, while the second category is "passive" unemployed obligated to register with the Employment Agency on every six

month. Figures presented by the National Employment Agency for the year 2013 (Table 5) are thus only registered active unemployed persons (youth). Based on the figures from the National Employment Agency, Skopje region has the lowest number of unemployed youth (1623) in 2013 followed by the North-eastern region (1667). While the Eastern region and the South western region top the table with 3416 and 2853, respectively, registered active unemployed youth.

Table 5: Registered Youth Unemployed with the National Employment Agency by region 2009-2013

Region	2009	2010	2011	2012	2013
Eastern	5875	5528	4967	4790	3416
North-eastern	5559	4780	4304	3343	1667
Pelagonia	6189	5824	5141	4525	2103
Polog	7246	6929	6170	4710	2381
Skopje	10264	8571	7384	4917	1626
South-western	10289	9531	8346	7110	2853
Vardar	4503	3960	3581	3056	1387

Source: Own calculations based on National Employment Agency in the Republic of Macedonia

Causes of Youth Unemployment in Macedonia

Youth unemployment is vastly studied and discussed in literature, and does as such not present a new or unexplored area, and high unemployment levels is rarely attributed to a single factor. In the case of Macedonia, the high level of youth unemployment can be attributed to a series of factors, this in addition to the large informal economy, of which only a few will be highlighted. Firstly, youth unemployment in Macedonia is frictional in the sense that young people have difficulty in making the transition from school to the labour market and generally moving from one job to another, if dismissed from job. This difficulty among youth is common worldwide, and according to the UN (2013), it can be explained amongst others by the lack of proper career orientation and job search education, their age thus lack of experience or substantial experience, due to the lack of profound networks which can provide them information on and access to job opportunities. The poor quality of service provision by the National employment agency and their inability to serve as a bridge between unemployment and employment is also an important element of this. According to Mitev (2013) the National Employment Agency is more promoting itself as a job market institution instead of Agency for support of unemployed. Hence, young people in Macedonia are quite disadvantaged in finding employment or new employment.

Secondly, youth unemployment in the country is also structural. With increasing enrolments in higher education, limited economic growth and low job creation, a substantial mismatch is evident in the Macedonian society between labour supply and labour demand. This including a skills mismatch evidently in the labour market with the higher education producing skilled labour, not only at rates that cannot be absorbed by the industry, but rather irrespectively of industry needs. Furthermore, due to the absence of quality vocational education and training, young people have it difficult to learn new skills applicable to the industry. Another element is related to the geographic immobility (internal migration). Young in Macedonia have it difficult to move to other regions within the country or simply from rural to urban environments to get a job. As research is needed to understand this phenomenon in more detail in the Republic of Macedonia, this difficulty may be closely related to their age, family ties, or simply because they look towards international immigration

as a more sustainable solution. While this may be related mostly to male youth, for females social or family conventions on the female role in the household may also apply in addition.

The high level of unemployment in the country may also be explained by the high degree of voluntary unemployment amongst youth. Many young people remain unemployed or withhold themselves for looking for employment in the private sector in the hope of landing a job in the public administration which they believe is more long-term sustainable despite prospects of lower salaries, while other choose to stay unemployed because there are looking towards migration and job opportunities outside the country. While a third group simply remain unemployed due to inflows of sizeable remittances from parent(s) or other relatives (Mojsoska-Blazevski, 2011).

Finally, the high youth unemployment in the country can also be explained by the poor economic performance of the country and the inability of the government to create jobs in general, especially to account for new entrants to the labour market. The volume of Foreign Direct Investments have been relatively low and have not stimulated job creation to the extent hoped.

Government Policies and Measures

Political attention to towards youth unemployment has in the past decade been growing in the country and Government measures to fight this phenomenon have not been missing. The Government of the Republic of Macedonia recognizes the eminent danger of consistently high youth unemployment rates and the complexity involved in lowering unemployment rates, in particular amongst the younger generations, and has as such since 2006, undertaken several labour market reforms and introduced measures specifically aiming to fight unemployment amongst youth. However, the composition and effect of these measures is highly debated and questioned in both literature and public settings; alluding that government measures undertaken to date are generally weak and non-inclusive; lacking both coordination, concerted action, and not reaching the most vulnerable youth in the country (Janeska (2013); ETF (2013); Kjosev (2010); Risteski (2010); Progress (2012)).

According to Janeska (2013), while referring to below measure, the results of so far implemented strategies, action plans, programs, measures and activities were modest and did not contribute for significant improvement of the unfavourable situation on the labour market in the Republic of Macedonia.

Measures introduced since 2006 by Government to fight unemployment in the country:

- National action plan for employment in the Republic of Macedonia 2006-2008
- National employment strategy 2010
- National action plan for employment in the Republic of Macedonia 2009-2010
- National employment strategy 2015
- National action plan for employment in the Republic of Macedonia 2011-2013
- Operational plans for active employment policies and measures (annually since 2007)
- Action plan for youth employment 2015
- Strategy and action plan for volunteering promotion and development 2010-2015
- Action plan for informal economy decrease for 2013 etc.

Based on the recognition that the country is facing both quantitative and qualitative challenges in youth unemployment, the Government introduced a few years back the “Action plan for youth employment 2015”, targeting 28% of the total youth population aged 15 to 29 years old (app. 135,000 young men and women) with its intervention measures (Government of RM, 2012). This will be devoting approximately €28.2 million for this purpose (Government of RM, 2012). According to the Action Plan, the Government outlines four strategic objectives and a number of key outcomes:

1. **Strengthen the (youth) labour market governance system by** improving the competence of labour market institutions at all levels to coordinate and monitor the achievement of employment and youth employment objectives;
2. **Enhance youth employability through** reform of the education and training system and raise the quality of career counselling and guidance;
3. **Foster youth employment through private sector development by setting up a** system of incentives to promote youth employment and human capital development. To include also the establishment of dedicated youth entrepreneurship services;
4. **Ensure the labour market inclusion of disadvantaged youth by amongst others** improving the targeting and financing of active labour market programmes.

In 2007, a “modern” system of Active Labour Market Measures (ALMMs) and services was introduced by government within the National Employment Agency with the aim to provide quality employment services such as counselling and guidance, individual employment planning, labour market training covering both on-the-job and off-the-job training, and employment subsidies and self-employment programmes. However according to the European Training Foundation (2013) and Janeska (2013), ALMMs have proven to be weak, limited and non-inclusive; while suffering not only from budgetary constraint but also poor coordination and general lack of proper qualification among National Employment Agency staff to implement these. In example, Janeska (2013) emphasises the Conditional Cash Transfer Facility programme, which aims to provide employment support for young unemployed persons (up to 29 years of age) from households that are social assistance beneficiaries through the provision of financial compensation for unemployed youth in amount of 14.000 MKD (227 Euro monthly) and 3000 MKD (50 Euro per month to the employer (as compensation for training and administrative costs). This for a period of six months, but with obligation on the employer’s side to keep them on job additional six months. Janeska (2013) stresses that although this may prove as significant motivation for the young unemployed people, the program is limited scope and can be negatively interpreted since only 125 young unemployed and because many unemployed youth will not be eligible for this due to the fact that they need to be registered as actively looking for job. Furthermore, no guarantees exist in continuance of employment after end of program, so participants may end up becoming unemployed again after the program, as the case with the internship programme (European Training Foundation, 2013).

CONCLUSION AND RECOMMENDATIONS

Although key labour market indicators have shown some improvement in the period 2004-2013, the country is still facing critical problems youth unemployment, with long-term unemployment among youth being especially worrisome. The youth unemployment rate has dropped by 13.1 p.p. in the study period, but the ratio of youth unemployment to aggregate unemployment remains more or less still the same. It can thus easily be concluded that the Government efforts and measures in the last decade has failed or yet to yield substantial results in lowering youth unemployment rates. With a youth unemployment rate at 51.9% in 2013, the Republic of Macedonia ranks amongst the highest in Europe with a 2.2 times higher youth unemployment rate compared to EU-28. Furthermore, considering current macroeconomic and political trends, little hope exist in the achievement of a substantial decrease in youth unemployment rates in the near future.

While recognizing the complexity and multidimensional aspects involved in combatting youth unemployment, and both the quantitative and qualitative challenges in this aspect, the institutional framework governing the youth labour market, should address and formulate policies and measures in the future in a way that they effectively and inclusively address youth employment through intervention in key areas impacting youth unemployment such as macroeconomic development impacting job creation, development of education and training policies with specific relevance to

labour market needs, and development of labour market policies that can gaps in labour demand and supply. This whilst carefully studying and understanding the nature of youth unemployment in the Country. In other words, Government needs to look deeper into the causes of youth unemployment, this not only in the deficiencies related to the education system (i.e. skills mismatch) but also of the labour market. Increasing ALMP budgets, coverage and efficiency, and promoting and stimulating youth entrepreneurship are essential in this aspect, as well is the inclusion of the private sector in developing and implementing measures and policies combatting youth unemployment in various aspects. This across all regions and especially amongst more vulnerable groups in the country such as rural females, ethnic minorities, etc.

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THE GLOBAL CRISIS –A STATE RAISING MANY SERIOUS ISSUES

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ABSTRACT

The global crisis from the first decade of the 21st century raises many serious issues about: the crisis in the economic theory, the appropriateness of the practice, the accuracy of Marx's prediction, the fate and sustainability of capitalism ...

Hence the inspiration to write this paper, but not with the intention to completely answer the raised questions, but rather to kindle the interest, within scientific or professional circles, about further efforts in this subject with a view of crystalizing the standpoints and opinions about designing a society with a humane face and profile, as the right of every individual regardless their spatial and temporal location.

Therefore we structured this paper as a short overview of our standpoints regarding each of the raised issues, and we drew appropriate conclusions wherever rational and argumentable. Let the participants in this conference judge how right we were.

Keywords: global crisis, questions, answers, solution.

JEL classification codes: P00, P1, P5, F3, F60, F65

*“Everything the communists told us about communism was a complete lie, but everything the communists told us about capitalism was actually true”
(Russian joke from the 90s)*

INTRODUCTION

The global crisis, whose seeds were planted as far back as 2001, showed its biggest symptoms by 2007, i.e. first the inability to repay mortgage loans, which then snowballed to unprecedented proportions which characterized this crisis as a financial, economic, debt, structural and systemic at the same time. People still cannot discern the end of this crisis, reflected by reduced production, high unemployment, budget, fiscal and foreign trade deficits, as well as the stagnating commercial activities, accompanied by poverty and misery.

Bearing the “made in USA” attribute, the crisis “virus” infected, through the globalization tunnels, more or less all countries in the world and mostly the Eurozone⁷⁵, not sparing even the

⁷⁵ Due to the traditionally close ties to the U.S.

former socialist economies which, after the transition, became parts of the monolithic capitalist system.

To make the irony even bigger, the ruling liberal doctrine could not offer a package of measures to repair/eliminate it, and the solutions for the crisis were sought among the nefarious governmental interventions incompatible with the principles of the “*lessez laize*” concept.

Clearly, this time it was not about the well-known revival and booming cycles, immanent to capitalism, but rather the unraveling crisis reached deeper, and touched the very contours of the capitalist system, i.e. the theory on which it was based, as well as the practice through which it pulsed.

In this context, the current crisis, comparable to the one from 1929-1933 (the reasons that created it and the treatment “therapy” applied) raised many serious issues like: the viability of the current macroeconomic theory, the effectiveness of the practical developments, the reaffirmation of Marx’s predictions, the infallibility of capitalism as “the end of history”, i.e. its sustainability within the new circumstances.

The Theory’s Fault

Axiomatically, economic theory always correlates to economic practice. If the actual shifts are dissonant with an accepted theoretic paradigm, then the transformation of the theoretic concepts becomes an imperative in order to adapt them to the current circumstances of reality. This is exactly what happened in the environment of the current crisis – the dominant macroeconomic theory could not explain the actual economic oscillations, i.e. it could not offer solutions on how to amortize them. Therefore this latest crisis also entailed a crisis of the theoretic postulates⁷⁶, and retrospectively raised the issue of changing them in favor of new ones. The evolution in the development of capitalist society corroborates this conclusion.

Until the occurrence of the great economic crisis (1929 – 1933), the classic economic theory dominated the capitalist scene, based on Smith’s “invisible hand of the market” idea as the single and automatic regulator of economic flows, capable of achieving balance automatically⁷⁷ without any external interventions⁷⁸.

The 1929 – 1933 crisis shook the foundations of liberalism which, faced with the crisis oscillations, could not offer adequate responses to them. Then Keynesianism made a big entrance, suggesting that the market cannot balance itself and state intervention becomes a condition sine qua non in regulating the economy. The period of managing the economy in the spirit of Keynes’ ideas or the so called “state capitalism”, as a theoretic concept, dressed in new garb, connected to the practice, i.e. to the actual developments. The state successfully coped, by applying the new economic policy (Roosevelt’s New Deal) with the signals emitted by the practice. This gave birth to the “mixed economies”, as a kind of combination between the market and interventions⁷⁹, and the crises got a new face, i.e. they occurred in the form of mild and resolvable recessions⁸⁰.

However, the orthodox liberal school, led by Hayek did not rest during this period. Its proactivity was especially emphasized with a view of stressing the capitalist market advantages vs the Soviet socialist model, especially during the block conflict, also known as the “cold war”.

⁷⁶ The economic crises also initiate crises in the macroeconomic theories, noted J. Robinson.

⁷⁷ The Say’s Law of Market.

⁷⁸ However two fields were under the control of the government: banking and foreign trade.

⁷⁹ The Samuelson will state “our economy is a mixed economy” and President Nixon will say “we’re all Keynesians”.

⁸⁰ Hicks will also contribute to Keynesianism with his model of the relationship between the real and the monetary sector (IS-LM), i.e. the Philips curve reflecting the inverse relationship between the inflation and unemployment.

When, during the middle of 1970s, the stagflation phenomenon occurred (stagnation and inflation at the same time), provoked by the growth of oil prices⁸¹, the “weapon” against Keynesianism was found. “State capitalism” lost the battle to the argument that the new negative tendencies lie in the wrong moves of the state, i.e. the “errors and the deficiencies” of the Keynesian doctrine. Thus, the “liberal winds”⁸² blew once again over the capitalist lands, and the broad wave of total privatization, maximal liberalization and full deregulation incorporated in the so called “Reaganomics” (USA) and the so called “Thatcherism” (G. Britain)⁸³ started in practice. All of this meant the return of the liberal principles in all pores of capitalist society, i.e. majorization of the role and the significance of the market to the level of a market chaos. Precisely this chaos of the American mortgage markets caused the financial crisis (2007) which subsequently “mutated” into all possible types of crises which the “visible hand” of the state now tries to sort out.

We think that the reincarnation of the orthodox liberalism in the new and changed constellation of the market, as well as of capitalism as a system, dispersed the crisis ingredients from the U.S. to all possible global destinations. It would have been rather better to work on the convergence (and not the confrontation) between the systems (capitalist and socialist), which actually happened in practice and which Tinbergen, inspired by the real manifestations, generalized in a theory.

In genere and the macroeconomic theory bears the fault for the current crisis because the science track (turned towards the rational allocation of the limited resources to optimal satisfaction of the societal needs) conveniently shifted into the ideology track (turned towards satisfying the profit interests of the minority, to the detriment of the interests of the majority).

The Fault Of The Practice

The practice, on the other hand, registered suspicious, speculative developments subordinated to his “highness” –profits. The chronology of events between 2001 and 2007 corroborates this conclusion.

The epicenter of the emerging crisis relates to the U.S.⁸⁴ mortgage market, going back to 2001 when the higher profit rates led to massive shifts of the capital (domestic⁸⁵ and foreign⁸⁶) in it. The mortgage loans “boom” on this market was provoked by the low interest rates, i.e. the excess availability of funds which the American banks had to disburse in order to increase profits. The easy access to these loans increased the demand which, in an environment of subdued demand, resulted in a permanent growth of real estate prices⁸⁷. Primarily, the loans targeted the people who consumed more which, in turn, stimulated the growth of production⁸⁸. At the same time all kinds of speculative games were at play. The banks approved high risk, toxic loans, also known as subprime loans since the banks approved them indiscriminately, based on devalued criteria and without solid corroborative documentation. Then they converted the loans into bonds, securities and a plethora of their financial derivatives, which they easily transferred on the U.S. and other financial markets. Thus the banks acquired the cash assets they needed to increase their lending operations (anticipated bank

⁸¹ This “crisis” cannot even begin to compare with the previous one.

⁸² Laffer’s supply-side economics, Friedman’s monetarism and Lucas’ rational expectations theory.

⁸³ That was a time when the public sector was intensively privatized, the liberalization reached its maximum level and regulation was at a minimum, the taxes of the rich reduced vs reduced tax breaks for the poor, with free international flow of capital (foreign direct investments). The consequences included huge budget deficits, redistribution of the income and polarization of the population.

⁸⁴ This market was considered one of the most development and most secure markets that guaranteed high gains for little risks.

⁸⁵ The American capital moved out of the country, i.e. in countries with low labor costs.

⁸⁶ The investors include European countries, China, India, oil exporting countries and Asian countries with foreign exchange surplus.

⁸⁷ The two biggest mortgage banks Fannie Mae and Freddie Mac had an unprecedented expansion, primarily for the citizens of the US which Krugman calls “government sponsored borrowers”.

⁸⁸ The lending to the industrial sector experiences notable decline.

revenues). On the other hand the, the banks also speculated by establishing/financing the so called “hedge investment funds” which also operated speculatively like the banks⁸⁹. The models of this “casino economy” also included the so called “securitization” (the issuance of financial derivatives even before the approval of the lending). Furthermore, the FED (central bank)⁹⁰ safeguarded this wide variety of schemes by socializing any potential losses from these activities using the taxpayers’ assets, de facto, encouraging the financial machinations regardless of where they originated.

The process went downhill in 2006 when the saturated demand and the increased supply led to the decline of the real estate prices followed by the fleeing of capital, i.e. the investors. The crisis peaked when the mortgages reached unrealistically low values, when the borrowers could not repay what they borrowed (because the interest rates grew) and the banks could not recover their assets by invoking the mortgages (due to the real estate price decline), i.e. when the initial state of continuous growth of real estate prices (which enabled the mortgage value to exceed the loan amounts in relatively short periods of time) completely reversed – when the mortgages devalued, loans could not be refinances, the mortgage segment of the market crashed. This reduced the liquidity of the U.S. banking system, the interest rates increased, lending declined, bank activities ground to a halt, as well as the activities in the country. Consequently, the financial crisis easily spilled over into the real sector, attacking the households⁹¹ and the companies⁹², pushing into a recession (subdued economic activity) the entire U.S. economy in an environment of high budget⁹³ and trade ⁹⁴ deficits (debt problems). Everyone knows very well the epilogue of these processes – the global crisis which, with varying “virulence” levels and different “incubation” periods affected all countries of the world,⁹⁵ especially European countries⁹⁶ and did not circumvent the former socialist economies⁹⁷.

Hence, the practice resulting from the poor operationalization of the theory⁹⁸, objectively maybe even more than the theory itself, is among the culprits for the crisis. This happened because of the fact that, instead of real products it allowed virtual products to circulate the market. While the former originate from the production segment (neglected at this time) and serve to satisfy the societal needs, the latter originate in the financial sphere (speculative at this time) and do not satisfy the societal needs.

Marx’s Crises Predictions

Throughout the development of economic thought, numerous economists⁹⁹ busily worked on the matter of crises or economic/business cycles. One of them was Karl Marx whose analysis of capitalist society is among the best and most consistent and hence his scientific views of the capitalist crises in general, as well as the outcomes of each crisis truly deserve to be respected.

If we paraphrase Marx’s teachings about crises then they become continuous, periodic disruptions that shake the capitalist system due to the presence of goods that cannot be actualized on

⁸⁹ American funds without any public oversight.

⁹⁰ The FED actually did not have control over many institutions that conducted typical banking businesses, and Krugman considered them “non-banking banks” or a “parallel banking system”, i.e. “shadow banks”.

⁹¹ High unemployment, due to the production reduction, i.e. the enormous decline of the living standard (food and energy price increases and wage stagnation).

⁹² Bankruptcy of small and medium enterprises.

⁹³ The U.S. traditionally resolves its budget deficit by opening new military conflicts (war investments) i.e. by “guns and boots”.

⁹⁴ Investments outside of the U.S. borders (China, India, Brazil etc.) and the neglect of the U.S. real sector resulted with higher imports and lower exports of goods.

⁹⁵ Mainly due to the mutually initiated investments, the dispersed capital and the decline of U.S. imports.

⁹⁶ European banks were actively involved in the U.S. mortgage market.

⁹⁷ There the crisis affected primarily the real sector, due to the traditional and controlled banking sector.

⁹⁸ The operationalization was the “Achilles heel” of the liberal theory and therefore per definitionem it was followed by no or poor economic policies.

⁹⁹ Sismondi, Malthus, Jevons, Rocher, Tugan – Baranovsky, Moor, Schumpeter, Mises, Hayek, Minsky, D’Arshi, Romer, Bernanke, Stiglitz, Krugman etc. Kondratiev’s long wave theory in the context of crises has also been reactivated lately.

the market. Such hyper-production crises provoke discontinuity in the reproduction process, i.e. in the normal flows of the goods market. In fact, this leads to piling up of goods on the market which, due to the low purchasing power, cannot be sold which leads to reduced production, reduced employments, lower rents, business stagnation, followed by a gradual recovery until the next crisis. Hence he deduced the cyclic nature, rather than a uniform development of capitalism, i.e. about the economic crises as a functional principle of capitalism. At the same time Marx did not forget to note that the formal capitalist crises potential correlates to money as means for payment, i.e. to loans.

The crises in Marx's teachings do not arise from random circumstances, but rather as a regular occurrence provoked by the fundamental contradiction between the social nature of production on one hand and private appropriation on the other. The social nature of capitalist production is determined by the market interconnectivity between all producers, their focus on producing for society, as well as the fact that the production of one person goes through the hands of many others¹⁰⁰. The confrontation lies in the notion that the results of this joint (social) effort are appropriated by one class of people – the capitalists, because they own the means of production¹⁰¹. This conflict is manifested in two ways: first, through the detailed organization of production in each company (micro plan) and a total anarchy of the total production (macro plan) and secondly, through the unlimited tendency of every capitalist to produce more and the limited purchasing power of the working population.

In addition, Marx underlines that the capitalist economy is not constantly in a crisis. Crises breakout periodically in certain time intervals due to the effect of contradicting factors that act constantly and simultaneously – one set of factors impacting the expansion of the reproduction/realization and others that impact the narrowing of reproduction/realization.

“Crises are only temporary, violent solutions to existing contradictions, violent explosions which, after some time, establish the disrupted equilibrium” – states Marx decisively. In the same context, he continues onto saying that the capitalist production develops cyclically, defining the cycle as the period from one crisis to the next, i.e. as the period comprising the phases of crisis, depression, revival, booming, and crisis.

Apropos the consequences of a crisis Marx agrees that crises do not spare any segment of the economy, i.e. that they only reflect the fact that “the capitalist production relations become an inhibitor of the development of capitalist production forces”.

Looking through the prism of the current crisis, the following Marx's thought became prophetic: “Owners of capital will stimulate the working class to buy more and more of expensive goods, houses and technology, pushing them to take more and more expensive credits, until their debt becomes unbearable. The unpaid debt will lead to bankruptcy of banks, which will have to be nationalized, and the State will have to take the road which will eventually lead to communism”.

Marx's anticipations also trigger respect with regard to globalization, monopoly, the imagined needs, the Big economic crisis, the profit rate declining tendencies ... On the other hand, Marx's legacy was besmirched by the failure of communism which was not his primary preoccupation. Finally, Marx never intended to go into an exhaustive analysis of the socialist/communist society or how it would function. In fact, he expresses only a vision of it on very few pages. From this standpoint the Russian revolution, which occurred prematurely dealt the biggest blow to socialism. If we follow Marx's reasoning, socialism had much better prospects in the developed capitalist countries, i.e. countries where capitalism gave all it had and created the material basis for socialist existence, rather than in the undeveloped and poor Russia in 1917. Therefore, the problem was created by the “Marxists” who understood Marx's ideas, albeit scarce, as the absolute truth and, at any cost and even violently, attempted to incorporate them in an unprepared, unsuitable economic environment.

¹⁰⁰ The process of concentration/centralization of production and capital emphasizes even more the social nature of capitalist production.

¹⁰¹ Appropriation or the distribution of the results of the production process has always been the greatest ailment of capitalist societies, a question people always avoided “like the plague”.

One of the greatest opponents of Marx's communist/socialist notions was Lenin, but we will mention him here in a different context. Namely the practice continuously presents the characteristics of his imperialism, as the last stage of capitalism, starting from the high level of concentration/centralization of the capital/production, through the financial capital and the financial oligarchy, to the export of capital, the economic and territorial subdivision of the world. These five milestones of one of the stages in the development of capitalism, have not only been confirmed by the practice, but have also increased in size.

Undoubtedly the latest, current crisis, as never before, reanimated and recycled Marx's doctrine, which is truly exposed as a detailed "scanning" of the social and economic anatomy of capitalism. Marx's "Das Kapital", today is read and reread, experiences a true "rebirth" in the efforts to find a way out of the labyrinths of the global crisis.

The Crisis and the Fate of Capitalism

The outbreak of the crisis again actualized the issue of the existence of "mixed economies". It proved that today's economies must be exposed as "mixed economics", i.e. as a symbiosis between the market and interventions. First, because of the limited range of the market (innate and acquired deficiencies) and secondly due to the changed characteristics of the capitalist system through its evolution. The 18th century market differs quite a lot from the market in the 19th century, and the 19th century market cannot compare to that of the 20th century. Furthermore, the functional market characteristics of the different phases of the 20th century differ quite a lot as well. In general, market transformations inevitably seek to regulate the spontaneous effects of the market with deliberate state actions aimed at stimulating the positive market effects and eliminating the negative effects of the market on the economic flows. A completely free market today is just as dangerous as the fully regulated market once was or, said differently, the absence of a market is harmful, but the presence of market fundamentalism is even more harmful.

From a historic distance socialism is the past, but so is the classic capitalism as well. The traditional features of the manufacturing capitalism have irreversibly changed beyond recognition, starting from the relationship between capitalists and hired labor, through the essence of private ownership, the function of individual markets, the nature of competition, all the way to the freedom of choice. Hence, liberal capitalism as a present day *modus faciendi* represents an unacceptable dogma with irrational, suboptimal and adverse repercussions, especially in the long run and on the micro level. Looking at it from this angle, modern economy can no longer function without state assistance. This does not "erode" the idea of the free market, rather the laws/institutions, planning¹⁰² and economic policy measures help create the necessary macroeconomic environment wherein it will function without adverse consequences. With this understanding, state intervention becomes a permanent market complement¹⁰³, which will purposely, *ex ante* channel, regulate, and even control the *ex post* reactions of the market. Consequently the motto "market or intervention" becomes "both market and intervention" or market, if possible and intervention if necessary.

This idea represents the fundus of "mixed economies" that correspond to the present day level of development of the economy. They are possible and desirable. They are possible because every country is more or less experienced in their application, and they are desirable because they will offset the negative effects of the market, and iron-out the negative effects of state interventions¹⁰⁴. The actualization of such combined market economies requires a revision of the previous theoretic concepts, but also their adequate operationalization through efficient economic policies, based not

¹⁰² Planning is not a socialist "patent" rather its "birthplace" is capitalist.

¹⁰³ But not its substitute.

¹⁰⁴ "Mixed economies" in this context offer the best results. The examples of Sweden (integration of socialistic elements in a capitalist environment) and China (integration of capitalist elements in a socialist environment) sufficiently corroborate this.

only on economic, but also sociologic and environmental reforms that will ensure the sustainability of the transformed capitalist system.

From this standpoint, there is an even bigger disagreement between the two dominant capitalist schools: the neoclassical on one hand and the Keynesian on the other. The economic representatives of these schools still have a long way to go to achieve the necessary consensus. In the meantime, all options and sub-options circulate, starting from ordoliberalism (liberalism with regulatory frameworks), through the Keynesian – institutional synthesis, all the way to the new neoclassical paradigm.

In any case, it is certain that we are at the onset of a new capitalist structure, i.e. moving away from its current form towards a new reconstructed one. We wish for the development of a “capitalist – socialist” or a “socialist – capitalist” system of the French, German, Scandinavian or a Chinese type¹⁰⁵. However, let time show!

CONCLUSION

Summa summarum, the global crisis, born in the USA rose to epidemiologic proportions infecting all parts of the globe because of their mutual global networking.

The responsibility for the crisis can be located in both the economic theory, as well as the economic practice. The former because it made a fetish of the free, unregulated market, and the latter because it “switched the theses” and neglected the production of real goods in favor of the “production” of worthless papers, abstract virtual goods that could not satisfy the needs of the population, i.e. neither money nor products.

The crisis shook the myths about the “ideality” of capitalism, animated Marx’s predictions, brought back the “mixed economies” from the scrapheap of history. It proved that the modern economy requires both a market and interventions – an amalgam of their regulatory mechanisms¹⁰⁶, in order to function smoothly, because capitalism is no longer what it used to be and socialism is done, i.e. because neither the market is infallible nor interventions are contaminated.

Clearly we stride towards a new, reconstructed, transformed shape of today’s monolithic capitalist structure, i.e. towards a new type of social and economic functioning. What we call it is less important, it is more important that it overcomes the crisis sinusoids.

The authors of this paper, in this context referred to “mixed economies”, i.e. those that Samuelson metaphorically calls “warm heart and cool head economies”. They are both possible and desirable.

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¹⁰⁵ France never gave up on its planning, Germany gave its capitalism a “social appearance” building a “social – market economy”, Sweden refuted the traditional dogma that the state is an obstacle to competition, and China gradually introduces market element using the prefix “socialist”. Each one is an example of an excellent system convergence, unattainable many years ago.

¹⁰⁶ The market had always been handicapped when it comes to the future and also fails to address to the issues of regional, social, moral and humane inequalities.

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HOW DOES DECENTRALIZATION AFFECT FISCAL PERFORMANCE OF GENERAL GOVERNMENT?

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ABSTRACT

This paper analyzes the effects of expenditure and revenue decentralization on fiscal performance of general government in Central and Southeastern European countries. Over the last two decades, most European countries have been assigning government expenditures and revenues from central to local levels of government. As a result, about 4.3% of government expenditures and revenues were shifted from central to local governments, over the period 1995-2013. Using panel data, this paper investigates whether the extensive decentralization reform in CESEE countries, had improved or worsened the general government fiscal balance. The sample consists of 11 CESEE countries (Bulgaria, Croatia, Czech Republic, Hungary, Estonia, Latvia, Lithuania, Poland, Romania, Slovakia and Slovenia). Two different measures of fiscal decentralization are employed: expenditure decentralization (share of local expenditures in general government expenditures) and revenue decentralization (share of local revenues in general government revenues). The results from the panel regression model indicate that expenditure decentralization, significantly improves the fiscal discipline of the central and local governments. In fact, the more decentralized countries have smaller fiscal deficits and public debts. Additionally, this paper investigates the effect of the unemployment, monetization and population dependency rate on fiscal balance of general government.

Keywords: fiscal decentralization, fiscal balance, government debt, SEE countries

JEL classification codes: E62, H62, H71, H72

INTRODUCTION

Many European countries have undertaken fiscal decentralization reforms in recent decades, assigning more expenditure functions and revenue sources to lower levels of government. The decentralized provision of goods and services is generally intended to take into account different local preferences and improve the accountability of local governments (Oates, 1972). According to the classical theory of federalism, decentralization can increase the overall efficiency of public provision of goods and services, mainly because local governments are “closer” to the citizens and therefore can better match public provision with local preferences for public goods and services. Also, transferring the responsibilities for public spending and revenue collection from central to local government levels can increase the central and local government accountability. Following these arguments, fiscal decentralization is expected to improve the fiscal performance of general governments, i.e. to provide higher efficiency of government spending and lower fiscal deficits and debts.

This paper investigates whether fiscal decentralization was related to better fiscal performance of general governments in Central and Southeastern European countries, over the last two decades. The paper is organized as follows: the first section addresses the economic debate on decentralization and fiscal performance issues; the second section represents a brief review of previous empirical studies; the third section represents some stylized facts on decentralization and fiscal performance in CESEE countries over the last two decades; and the fourth section is an econometric analysis of the effects of fiscal decentralization on the fiscal performance in CESEE countries.

Economic Debate on Fiscal Decentralization and Fiscal Performance of General Government

Previous theoretical and empirical studies offer different assessments on whether fiscal decentralization is a factor that improves fiscal performance of local and central governments or not. According to Prud'homme (1995), decentralization is associated with a deterioration of fiscal performance of the general government, for two reasons. First, a decentralized fiscal framework implies the existence of multiple taxation levels in the country, and second, the greater the autonomy local governments have the more complicated fiscal policy coordination between different levels of government is.

Local governments may act in accordance with their own policy goals rather than with the general macroeconomic goals set by the national government. This problem becomes especially evident when local governments are prone to excessive spending under soft budget constraints, shifting the fiscal burden from local residents to all national taxpayers outside their local jurisdiction. In such conditions, coordination of national fiscal and monetary policy at the national level and maintaining macroeconomic stability of the country, represent a real challenge (Prud'homme 1995). On the other hand, decentralization may also have a positive impact on fiscal performance of the governments. If local governments undertake effective taxation and spending policy, and operate more accountable and transparent compared to the central governments, then the effects of fiscal decentralization on the general government performance will be positive. Some empirical studies show that the more decentralized countries have smaller budget deficits and public debts (Pereira, 2000; Ebel and Yilmaz, 2002). One of the reasons for that are probably the strict legal regulations on local borrowing that exist in almost all countries, while the restriction on central government borrowing is not a common practice.

Further, decentralization can have different effects on fiscal performance, depending on the revenue sources of local governments. For example, according to the theory of "fiscal illusion", when local governments are financed more by fiscal transfers from the central government, they will probably tend to maximize the local expenditures (Oates, 1993). Fiscal transfers, on the other hand, make the relationship between costs and benefits of public goods unclear: local taxpayers demand a greater amount of public goods and services, and local governments are motivated to increase the public supply, because the costs are transferred outside of their jurisdiction (theory of tax export). Econometric evidences that fiscal imbalance leads to increased fiscal deficits and macroeconomic instability in the countries are found in the following empirical studies: Rodden and Wibbels, (2002); Ebel and Yilmaz, (2002); Eyraud and Lusinyan, (2013), and others.

According to some authors, fiscal decentralization, which implies a higher level of tax autonomy of local governments, can also exacerbate the fiscal performance of the government and can lead to macroeconomic instability of the country (Thornton, 2007). The local governments usually conduct fiscal policies with more pronounced pro-cyclical character which can undermine the macroeconomic stabilization policy goals of the central government (Tanzi, 2000). On the other hand, if the local governments are mostly financed by fiscal transfers and shared taxes from the central government, fiscal competition for resources between different levels of government will be lower and it will be easier for the central government to engage in macroeconomic stabilization policy (Thornton, 2007).

Another channel through which decentralization can affect the fiscal performance of the governments is associated with the political decision-making process and the relationship between politicians and socially influential groups. Namely, some authors have argued that decentralization can make politicians "weaker" and more exposed to lobbying by powerful interest groups (Velasco, 2000). In every society there are several influential groups that benefit from certain types of public expenditure programmes and try to pursue their own interests through the government policies.

Hence, a higher level of government decentralization will promote larger public expenditures, higher fiscal deficits and public debts and an overall macroeconomic destabilization (Velasco, 2000).

Although, fiscal decentralization can impact fiscal performances of the government through different channels and in different ways, it is generally accepted that a poorly designed system of fiscal decentralization, in which local governments operate under soft budget constraints, where central government guarantee the local debt, decentralization will probably lead to increased fiscal deficits, increased public debt and general macroeconomic instability (Martinez - Vasquez and McNab, 2003).

EMPIRICAL LITERATURE REVIEW

The empirical literature is inconclusive as to the impact of decentralization on fiscal performance. Thus, according to some authors, decentralization has a negative impact on fiscal performance (De Mello, 2000), while according to others, decentralization leads to smaller fiscal deficits and debts (Ebel and Yilmaz, 2002; Rodden and Wibbels, 2002; Neyapti, 2010). Despite this inconclusiveness, most empirical studies have found evidence for negative correlation between the level of expenditure decentralization and the size of fiscal deficits and debts of the local and central governments, although the effect on overall fiscal performance of government will probably depend on the influence of some other factors, such as: monetary policy and the demographic structure of the country (Ebel and Yilmaz, 2002), political arrangements (Rodden and Wibbels, 2002) and quality of institutions (Neyapti, 2010), etc. Further, most authors agree that local government financing has strong influence on the fiscal performance of general government. If local governments are financed in a greater extent by fiscal transfers from the central government, rather than from their own revenue sources, it is more likely that decentralization will contribute to greater fiscal deficits and debts (Ebel and Yilmaz, 2002; Eyraud and Lusinyan, 2013).

De Mello (2000) explores the impact of decentralization on the fiscal performance in a case study of 30 countries: 17 developed OECD countries and 13 developing countries, over the period 1970 - 1995. According to him, the increased level of tax autonomy of local governments exacerbates their fiscal position. In developing countries, where local governments in greater extent depend on fiscal transfers from the central government, there are larger deficits at central government level. In OECD countries, the increasing share of fiscal transfers in local revenues, improves local government fiscal performance, but only until local expenditure share in total government expenditures reaches a certain level. Above that certain level, the further increase of fiscal transfers in local revenues, starts to deteriorate local government performance. According to De Mello (2000), the fiscal position of local and central governments are influenced also by other factors, such as: monetary creation, terms of trade, rising pension costs as a result of the process of population aging, etc.

Ebel and Yilmaz (2002) replicate the study of De Mello (2000) on the impact of decentralization on the budget deficits, but instead of the GFS data for fiscal decentralization, they use the OECD local tax autonomy database. They conclude that when fiscal decentralization is measured by the share of local tax revenues over which local governments have discretion in determining the tax rate and tax base in general government revenues, decentralization statistically significantly contributes to reducing local government deficits. Additionally, Ebel and Yilmaz (2002) conclude that fiscal transfers from central government have a statistically significant negative impact of fiscal discipline of local governments and leads to higher local deficits and debts.

Rodden and Wibbels (2002) explore the impact of decentralization on macroeconomic stability, in a case study of 15 federal countries, over the period 1978 - 1996. They concluded that a higher level of expenditure decentralization in federal countries, leads to a reduction of fiscal deficits and inflation. Furthermore, Rodden and Wibbels (2002) note that political factors have a significant impact on the examined variables, i.e. the budget deficits and inflation rate are lower in the federal

countries where political parties at the national government level, also have a large influence at the state and local government level.

Neyapti (2010) examines the relationship between fiscal decentralization and the budget deficit in the case of 16 developed and developing countries, over the period 1980 - 1998. He concludes that a higher level of expenditure decentralization leads to a reduction of the general government deficits, but also suggests that political, institutional and other factors have strong influence on the effectiveness of decentralization in reducing government deficits. Therefore, according to Neyapti (2010), the researchers should be particularly careful in making general recommendations on decentralization, that are not adapted to the specific conditions in the certain country.

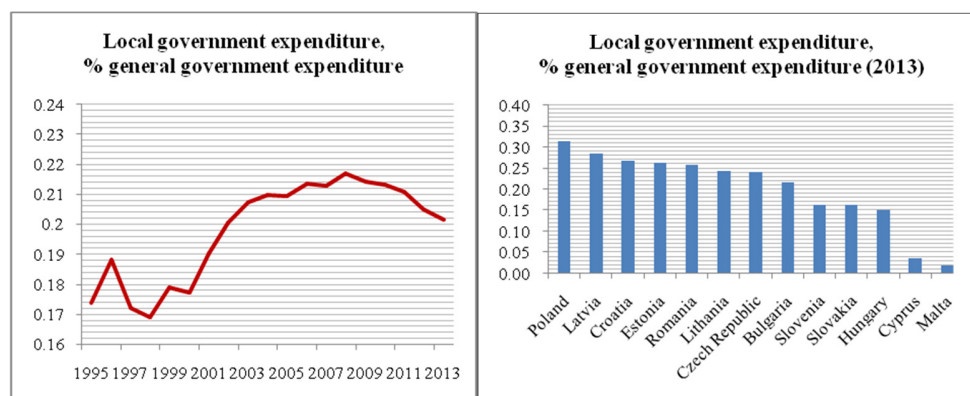
According to Eyraud and Lusinyan (2013), the fiscal discipline of the local governments is stronger when they finance the expenditures more with their own local revenues and less with fiscal transfers from the central government and local borrowing. Eyraud and Lusinyan (2013) conducted their research on a sample of developed OECD countries, over the period 1995 - 2007, and concluded that the reduction of vertical fiscal imbalance by 10 percentage points, other things being equal, will improve the overall fiscal balance of general government (local and central government) by 1 percent of GDP.

Stylized Facts on Fiscal Decentralization and Fiscal Performance in CESEE Countries

This section presents some stylized facts on fiscal decentralization in CESEE countries and its relation to government deficits and debts, over the last two decades. The data are taken from EUROSTAT and cover the period 1995 – 2013.

Fact 1. Over the last two decades, the CESEE countries have undertaken slow but continuous process of fiscal decentralization. As a result, during the period 1995-2013, about 4% of general government expenditures were shifted from central to local level of government.

Figure 1: Expenditure decentralization, CESEE countries

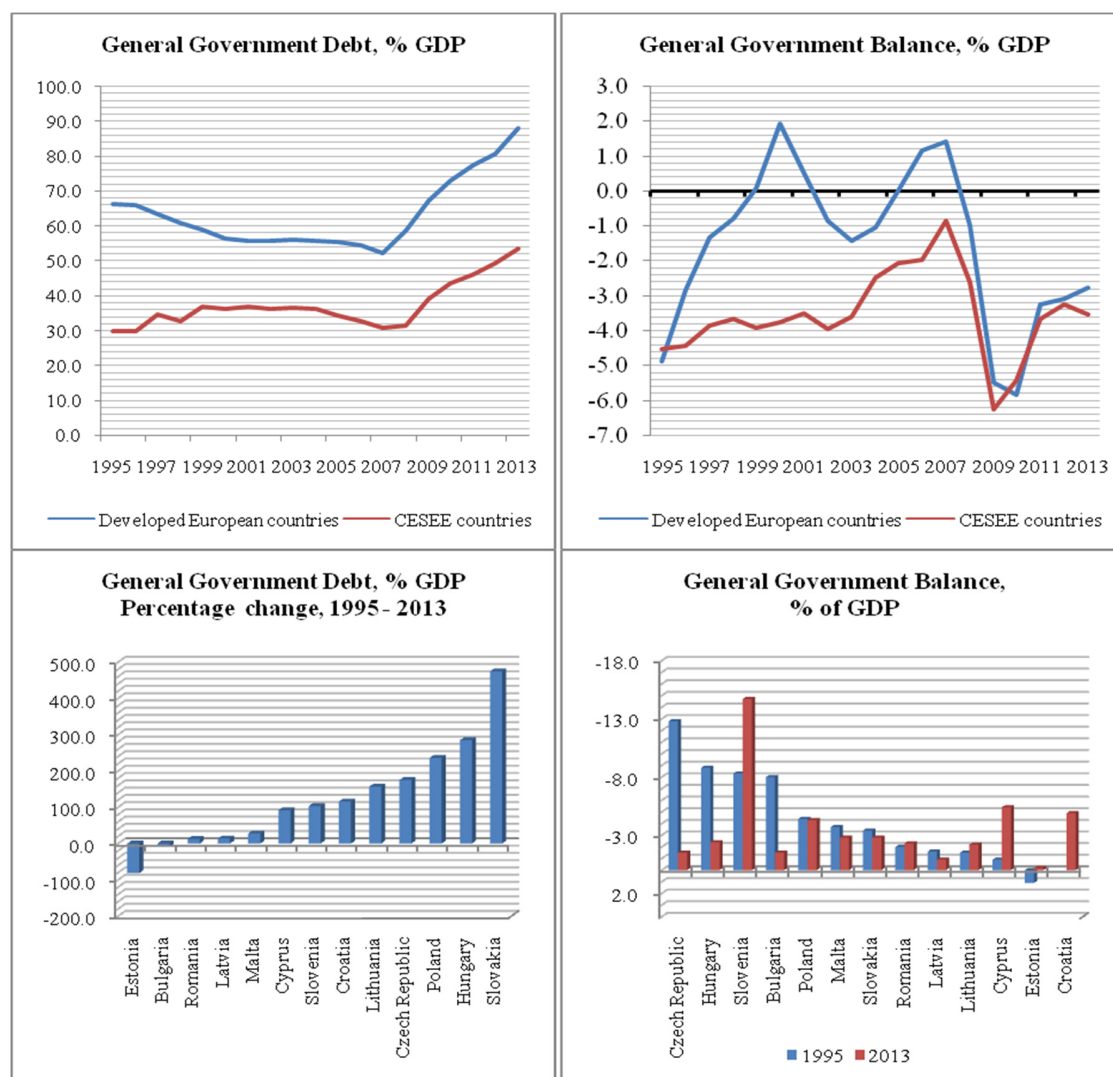


Source: Author's own calculation based on EUROSTAT data.

In CESEE countries, in 2013, the share of local government expenditure was about 20.1% of general government expenditure and 8.9% of GDP. Among CESEE countries, the most decentralized are: Poland (31.27% share of local expenditure in general government expenditure), Latvia (28.45%), Croatia (26.75%) and Estonia (26.20%). In fact, eight of the thirteen analyzed CESEE countries have an expenditure decentralization rate above 20%. Apart from these, the least decentralized countries are: Malta (1.89%) and Cyprus (3.68%).

Fact 2. After the latest financial crisis in 2008, general government debt in CESEE countries significantly increased from 31% of GDP in 2008 to 53% in 2013. Additionally, over the last two decades, the CESEE countries continuously had larger fiscal deficits compared to the developed European countries¹⁰⁷.

Figure 2: Fiscal performance of general government, CESEE and developed European countries



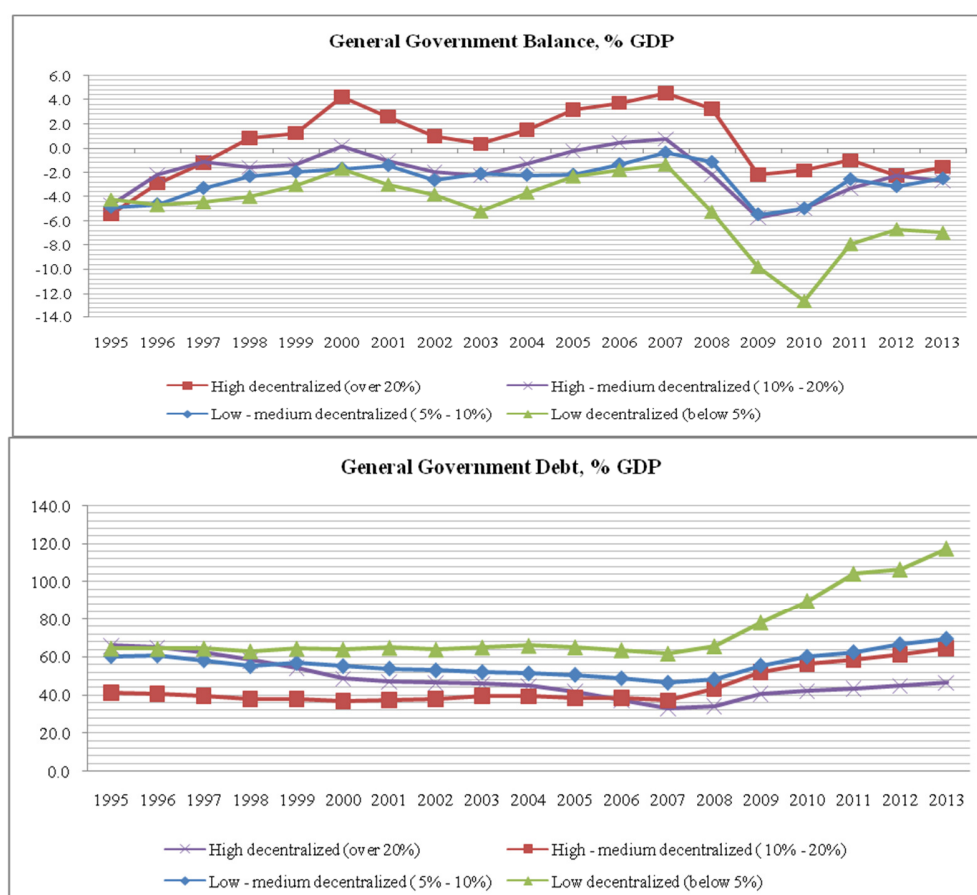
Source: Author's own calculation based on EUROSTAT data.

In 2013, among the analyzed CESEE countries, Cyprus had the highest level of public debt of 102 % of GDP, as a result of the constant increase of budget deficit from 0.9% in 1995 to 6.4 in 2012. Bulgaria, Croatia, Hungary and Slovenia are also facing significantly high level of public debts (above 70% of GDP in 2013).

¹⁰⁷ Belgium, Denmark, Germany, Ireland, Greece, Spain, France, Italy, Luxembourg, Netherlands, Austria, Portugal, Finland, Sweden, United Kingdom, Iceland, Norway, and Switzerland.

Fact 3. The more decentralized government, the better the fiscal performance: smaller fiscal deficits and public debt¹⁰⁸.

Figure 3: Fiscal decentralization and fiscal performance of general government, CESEE and developed European countries



Source: Author's own calculation based on EUROSTAT data.

The figures above show that more decentralized countries have lower budget deficits and public debts compared to other countries. Over the period from 1995 to 2013, on average only the most decentralized countries had positive general government balances of 0.4% of GDP. On the other

¹⁰⁸The European countries are categorized by the level of fiscal decentralization into four categories: (i) high - decentralized countries – over 20% share of local government expenditure in general government expenditure (Denmark, Finland and Sweden); (ii) medium high - decentralized countries, 10% – 20% share of local government expenditure in general government expenditure (United Kingdom, Estonia, Iceland, Italy, Latvia, Norway, Poland, Romania, Slovenia, France, Netherlands, Croatia and Czech Republic); medium low - decentralized countries, 5% - 10% share of local government expenditure in general government expenditure (Austria, Belgium, Bulgaria, Germany, Lithuania, Luxembourg, Portugal, Slovakia, Hungary, Switzerland and Spain) and low - decentralized countries – less than 5% share of local government expenditure in general government expenditure (Greece, Ireland, Cyprus and Malta).

side, the high – and low - medium decentralized countries, over the same period, had budget deficit of 2% to 2.7% of GDP respectively, while the least decentralized countries, had the highest average deficit of 4.9% of GDP. The least decentralized countries also had the greatest deterioration in general government balance during the financial crisis in 2008, when budget deficits increased to 9.8% of GDP in 2009 and 12.6% of GDP in 2010. At the same time, the least decentralized European countries had the highest boost of public debt from 64.5% in 1995 to 117.6% in 2013. On the other side, the most decentralized countries reduced their public debt from 66.1% of GDP in 1995 to 46.5% of GDP in 2013.

DATA AND METHODOLOGY

To assess the impact of decentralization on fiscal performance, a panel regression model as estimated, relating the general government balance to fiscal decentralization, government debt, unemployment, elderly above 65, health expenditures and monetization rate. The data covers up to 16 years of observation, ranging from 1996 to 2012, for 11 countries of Central and South Eastern Europe: Bulgaria, Estonia, Latvia, Lithuania, Poland, Romania, Slovakia, Slovenia, Hungary, Croatia and the Czech Republic. The panel is unbalanced and the number of observations is 145 and 146 for the estimations of expenditure and revenue decentralization.

The following model was estimated:

$$GGBalance_{it} = \alpha_0 + \alpha_1 Decentralization_{it} + \alpha_2 Debt_{it} + \alpha_3 Unemployment_{it} + \alpha_4 Elderly\ 65_{it} + \alpha_5 HealthCare_{it} + \alpha_6 Monetization_{it} + \varepsilon_{it}$$

Where, subscript (it) stands for country (i) at time (t), α denotes the regression coefficients that are estimated and ε is an error term in the model.

The dependent variable in the model is general government balance, measured as percentage of GDP. This paper analysis the general government balance rather than central and local government balance, because the general government balance is considered as more relevant for assessment of the overall fiscal policy and macroeconomic stability in the country (see also IMF, 2011). The data are obtained from the World Economic Outlook Database.

Two different measures of fiscal decentralization are employed: (i) expenditure decentralization, measured as the share of local government spending in general government spending; (ii) revenue decentralization, measured as the share of local government revenues in general government revenues. The data for decentralization are obtained from the Fiscal Decentralization Indicators Database. Herewith, I like to point out that the revenue decentralization measure refers to all revenues that are assigned to local governments (local taxes, non-tax local revenues, shared taxes, fiscal transfers from the central government, etc.) and not only the “own” local revenues, over which local governments have a certain discretion in determining the tax rate or the tax base. Hence, although the revenue decentralization does not reflect in the best way the actual assignment of fiscal resources and the fiscal autonomy of the local governments, I use this measure for decentralization, due to the lack of more appropriate data on “own” local government revenues for most of the CESEE countries.

Besides the fiscal decentralization, the model has also tested the significance of a large set of control variables including: the level of indebtedness (share of general government debt in GDP); social security and health care expenditures (rate of unemployment and share of health care expenditures in total government expenditures); the demographic structure of the population (proportion of elderly above 65 years in total population) and monetary factors (monetization, measured as the percentage share of M1 and M2 in GDP). The growing public debt requires larger interest payments, i.e. increases the debt service burden, especially if the principal is to be refinanced

at higher interest rates. A rising public debt also increases the risk premium on government securities, which was evident in the recent crisis, causing higher interest rates on the debt. Therefore, it is expected that a rising public debt worsens the government budget balance. The unemployment rate is considered an important determinant since it affects the budget balance twofold: first, due to higher social security costs (unemployment benefits) and second, due to the loss of tax receipts (Masson, 1995). The social programs and demographic trends lead to large social transfers and health care expenditures (Elmendorf and Mankiw, 1998), which present a large portion of the budget expenditures of CESEE countries compared to other developing countries. The ageing population reduces the ratio of social contribution payers to beneficiaries, imposing difficulties for the financing of these systems and their sustainability. These variables are expected to be negatively correlated to the budget balance. All the data are obtained from the World Development Indicators Database.

Based on the results of the Hausman test, the regression coefficients were estimated using the method of fixed effects, as more appropriate than the method of random effects. Additionally, the model was also estimated using the first difference method. To correct for the serial correlation and heteroskedasticity in the model, AR (1) error term and White cross - section weights are employed.

Estimation Results

The following table summarizes the estimation results of the model. The columns (1) and (2) present the estimated coefficients of the model using the fixed effects method, while the columns (3) and (4) present the estimated coefficients using the first difference method.

Dependant variable: General Government Balance, % GDP				
Independent variables	CESEE Countries			
	Fixed effect method		First difference method	
	(1)	(2)	(3)	(4)
Expenditure decentralization	0.235 *** 0.045		0.178 *** 0.034	
Revenue decentralization		-0.005 0.083		-0.009 0.094
Government debt	-0.067 ** 0.029	-0.086 *** 0.031	-0.160 *** 0.061	-0.162 ** 0.068
Unemployment	-0.201 *** 0.070	-0.193 *** 0.071	-0.129 * 0.075	-0.138 * 0.084
Elderly 65+	0.339 0.477	0.648 0.490	0.468 1.256	0.876 1.222
Health expenditures	-1.936 *** 0.500	-1.814 *** 0.470	-1.933 *** 0.394	-1.843 *** 0.376
Monetization	-0.075 * 0.039	-0.076 * 0.041	-0.034 0.032	-0.037 0.031
Constant	5.064 5.019	4.897 ** 4.946	0.019 0.334	0.011 0.339
AR(1)	0.417 *** 0.080	0.465 *** 0.074	-0.174 * 0.094	-0.166 ** 0.074
R-squared	0.730	0.723	0.432	0.408
R-squared adjusted	0.693	0.686	0.348	0.322
F-statistic	20.153 ***	19.641 ***	5.181 ***	4.736 ***
Durbin-Watson statistic	1.785	1.793	2.033	2.022
Inverted AR Roots	0.42	0.47	-0.17	-0.17
Cross - section	11	11	11	11
Sample	1996-2012	1996-2012	1997-2012	1997-2012
Observations	145	146	134	135

Note: The White heteroskedasticity consistent standard errors are given below coefficients.
* 10% level significance, ** 5% level significance, *** 1% level significance.

The estimated results of the model indicate that the general government fiscal discipline in Central and Southeastern European countries improves when government expenditure is being transferred from central level to local levels of government, probably because of the higher efficiency of local government spending related to the central government spending.

According to the estimation results, expenditure decentralization has a positive and statistically significant effect on general government balance. Namely, the increase of local government expenditure in general government expenditure by one percentage point, other things being equal, improves the general government balance by 0.235 percentage points (equation 1), or 0.178 percentage points (equation 3). These findings are consistent with the previous empirical studies that have shown that expenditure decentralization contributes to better fiscal performance of general government (Ebel and Yilmaz, 2002; Rodden and Wibbels, 2002; Neyapti, 2010, etc.)

Unlike expenditure decentralization, the revenue decentralization has a negative and statistically insignificant effect on the general government balance. So, according to the results of the model, transferring the expenditures from central to local level of government improves general government balance, but assigning revenue sources to local governments doesn't have the same positive effect. Based on the findings of some of the previous empirical studies, it can be assumed that the inconsistency in expenditure and revenue decentralization effect on fiscal performance is probably due to the limitation of the used revenue decentralization measure (Ebel and Yilmaz, 2002). Stegarescu (2004) also argues that the share of local government revenues in general government revenues is possibly a problematic measure of fiscal decentralization since it doesn't necessarily reflect the actual assignment of fiscal resources to the local governments. Furthermore, according to him, fiscal transfers can serve as mechanism for the central government to put control over the local decisions and hence they can undermine the positive effect of decentralization on fiscal performance of governments.

The debt coefficient is negative and statistically significant as , suggesting that government balance doesn't incorporate debt sustainability constraints. The unemployment rate also has a negative and statistically significant effect on general government balance, suggesting that fiscal policy in CESEE countries has countercyclical character and that the impact of automatic stabilizers is built - in the general government balance. Expenditures for health insurance have a negative and statistically significant effect, suggesting that fiscal policy in these countries has a pronounced social character. Finally, monetization also has the expected negative sign, indicating that loose monetary policy contributes to lower discipline by the fiscal authorities.

CONCLUSION

This paper assesses whether fiscal decentralization improves fiscal performance of general governments in Central and Southeastern European countries. The econometric results indicate that expenditure decentralization actually improves the general government balance in CESEE countries. The fiscal discipline of the government improves when government expenditures are shifted from central to local levels of government, probably due to the greater efficiency of local government spending. Unlike expenditure decentralization, the revenue decentralization didn't show statistically significant influence on general government balance, probably because the share of local revenues in general government revenues is not the best indicator of the actual degree of decentralization and local autonomy in the countries. Namely, the local revenues consist of "own" local government revenues and fiscal transfers from the central government, over which local governments have no control or power for decision making. Therefore, further research of fiscal decentralization based on "own" local government revenues data, instead of "total" local revenues, will probably overcome this inconsistency in results.

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CONFERENCE TOPIC

II.

**FINANCE
IN THE POST-CRISIS PERIOD**

GEOGRAPHICAL DYNAMICS OF VENTURE CAPITAL INVESTMENTS: A DISCRETE SPATIAL ANALYSIS

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ABSTRACT

The geographical concentration of venture capital investments is an important concern for researchers and policy makers alike. The European Commission and the Organization for Economic Co-operation and Development (OECD) disagree about the geographical distribution of venture capital. This paper analyzes geographical concentrations at the city level from 1970 to 2013 in the major developing economies. Results display four evolution paths representing four groups of countries. The quantity of investments and the level of technology in a nation increases concentration while financial crises and the size of public equity size decreases concentration.

Keywords: geographical concentration, venture capital, regional equity gap, investment

JEL classification codes: G2, O1, O2, O5, R1, R3, N9

INTRODUCTION

The European Commission and the Organization for Economic Co-operation and Development (OECD) disagree whether it is desirable to concentrate the activities of ventures.¹⁰⁹ While the European Commission is in favor of more regional clusters, the OECD advocates development of a more even geographical distribution. Regional equity gaps exist but no consensus has yet emerged about their efficiency. Silicon Valley and Route 128 in the United States of America (USA) are examples of geographic regions with very high levels of venture capital concentration.

This paper analyzes geographical concentration of institutional venture capital investments in major developing economies for the period 1970 until 2013.¹¹⁰ The paper raises the following

¹⁰⁹Martin, Sunley, and Turner (2002).

¹¹⁰ The countries belong to the OECD organization and the Brazil Russia India China South Africa group (BRICS). These countries are: Australia, Austria, Belgium, Brazil, Canada, Switzerland, Chile, China, Czech Republic, Germany, Denmark, Estonia, Spain, Finland, France, the United Kingdom, Greece, Hungary, Ireland, Israel, India, Iceland, Italy, Japan, South Korea, Luxembourg, Mexico, Netherlands, Norway, New Zealand, Poland, Portugal, Russia, Sweden, Slovenia, Slovakia, Turkey, the United States and South Africa.

questions: how has geographical concentration of venture capital investments evolved from 1970 until 2013? What are the determinants of this evolution?

The paper fills several gaps in previous works. First, a study of concentration between 1970 and 2013 highlights the evolution of concentration over a long period which includes several crises. Avdeitchikova (2012) and Lingelbach (2012) point out that in many countries, there is a trend towards geographical concentration, generating regional equity gaps. Nevertheless, no research studies the long temporal evolution of this concentration. Second, only Florida and Smith (1993) and Zook (2002) empirically study the reasons for geographical concentration in venture capital. Thus, an international comparison among the OECD and BRICS countries is fruitful in order to ascertain the main determinants of geographical concentration in venture capital investments.

The data on venture capital investment activity are from the database Securities Data Company (SDC) application VentureXpert. Additionally, the World Bank website provides information about economy and geography for each country.

The results of this paper show four patterns of temporal evolution. One group of countries, including the USA, increased monotonically throughout the period. Three other groups increased in concentration from 1970 to 2000 and decreased in concentration between 2000 and 2002, followed by either (1) a stabilization in Canada, UK, France, Austria and Netherlands, or (2) a decrease in Australia, Sweden, Finland, Norway, New Zealand, South Korea, Belgium and Italy, or (3) an increase in concentration for Spain, Germany, China, India, Russia and Japan. As for the determinants of investments in venture capital, the results indicate that a high quantity of investments and level of technology in a country favor concentration. Financial crises and the size of public equity decrease concentration.

The remainder of the paper is organized as follows. Section II reviews the literature. Section III develops the hypotheses. Section IV presents the data. Section V details the methodology and section VI reports the results. Section VII concludes.

LITERATURE REVIEW

This section organizes the previous research in two parts. The first presents research about trend in the geography of venture capital investments for the main developing economies. The second exposes the theoretical models which explain the trend.

Trends in the geography of venture capital

The USA was the first country where researchers investigated the geographical concentration of venture capital (Leinbach and Amrhein, 1987). The states which solicit and receive the most outside investment are California, Massachusetts and Texas. At the regional level, the California-Southwest and Gulf Coast regions receive abnormally high levels of venture capital investment. In the year 1981, the two regions reinvested the main part of their own funds in their own region, 72% and 60% respectively. Many other develop the same kind of research that Leinbach and Amrhein for different time periods in the USA.¹¹¹ The results are similar. There is a geographical concentration of supply and demand during different periods depending on the geographical unit, state, Metropolitan Statistical Area (MSA) or region.

¹¹¹See Florida and Kenney (1988), Green and McNaughton (1989), Florida and Smith (1990), Florida, Smith, and Sechoka (1991), Bygrave and Timmons (1992), Florida and Smith (1993), Zook (2000), Zook (2002), Green (2004) and Shachmurove (2006).

McNaughton (1991a) shows an evolution towards equilibrium between the provinces and territories of Canada in terms of investments during the period 1979 - 1986. A study conducted later revealed that investment into Ontario and Quebec grew much faster than in other parts of the country between 1995 and 2005 (Subhash, 2007).

In Europe, the same patterns are recognizable among different countries.¹¹² For instance, Germany has a more homogeneous repartition of investments thanks to the dispersion of its supply (Martin et al., 2005). Concentration depends on the financing stages. Mason and Harrison (2002) show a difference between the “merchant venture capital” and the “classic venture capital.”¹¹³ The second is more concentrated.

Geographical concentration of venture capital investment has been observed for some BRICS countries similar to the OECD countries. For example, in Brazil, capital is concentrated in few places within narrow areas. In 2003, three regions, Sao Paulo, Minas Gerais and Rio de Janeiro received, respectively, 39 %, 18 % and 15 % of investments (De Carvalho and al., 2012, De Lima Ribeiro and Gledson de Carvalho, 2008). A similar situation exists in China and in India.¹¹⁴ Unfortunately, there is not enough information available for Russia and South Africa.

Explanation of geographical concentration

The previous research propose four models to explain the geographical development of venture capital in a country (Green, 2004). The first is the neoclassical view of the venture capital market as developed by McNaughton (1991b). It predicts geographic dispersion as long as funds are available. The second integrates the markets’ imperfections which preclude the capital to move freely. Its name is the geographic model (Thompson, 1989). The third takes into account the city’s effect with specializations (Green, 1991) and shows a process with pioneer cities which encourage smaller cities to receive activities in venture capital. The fourth considers a dynamic model incorporating the move of financial institutions branches within high technologic centers and then the appearance of local venture capitalists (Florida and Smith, 1993).

HYPOTHESIS DEVELOPMENT

The literature review shows a weakness in previous research, given that to the best of our knowledge, only Florida and Smith (1993) and Zook (2002) try to explain the determinants of concentration with quantitative tools. To complete this first approach, this section contains four hypotheses about the effects of the quantity of investments, financial crises, technology and public equity activities.

The Quantity of Investments

Previous research underlines an increase of investments until 2000 across the world. Consider the fact that a bounded physical space cannot receive an unlimited number of objects. Human activities are generally space-intensive. These principles explain the growing dynamics of cities which often extend their geographical boundaries. As the quantity of investments in a country increases, intuition suggests that they will disperse like gas in an empty room. This view is in line

¹¹²See Mason and Harrison (1991), Mason and Harrison (2002), Martin, Sunley, and Turner (2002) and Martin et al. (2005).

¹¹³Merchant venture capital is the Management Buy Out operation while managers or employees buy company with debt. Classic venture capital corresponds to the venture capitalists who invest in young technological companies.

¹¹⁴See Bruton and Ahlstrom (2003), Lu and Tan (2012), Dossani and Kenney (2001) and Subhash (1999).

with the conventional model in which the capital moves freely in a perfect market without geographic constraints (McNaughton, 1991b). If there is a constant growth in venture capital activities, then venture capital needs more land. These observations lead to the following hypothesis:

Hypothesis 1: the geographical concentration of venture capitalists' investments is inversely related to the quantity of investments in a country.

Financial Crises

If there is a trend in the concentration of venture capitalists' investments, it depends on market conditions. Market conditions have changed, particularly with the dot-com bubble and the financial crises in 2008. Before the internet crisis of 2001, the expanding market of internet companies induced higher needs for financing and increased geographical dispersion of investments (Green, 2004). Venture capitalists were ready to go to invest. The explosion of the bubble led to both concentration of activities and a multiplication of bankruptcies. The period following the bubble involved a change in market conditions, allowing for a higher concentration in investments. Financial crises could reduce the geographical concentration in venture capital investments. Thus, the second hypothesis is:

Hypothesis 2: the geographical concentration of investment by venture capitalists is inversely related to a financial crisis.

Technology

To maximize the effects of technology on economic performance, geographical proximity is necessary. Path dependence and increasing returns demonstrate this principle (Krugman, 1991a, Krugman, 1991b). Technology is a result of human processes, which involve ideas, conflicts, tests and time. Based on the second conditions, many researchers explain agglomerations and the existence of spillovers.¹¹⁵ Hence the following hypothesis:

Hypothesis 3: the concentration of venture capitalists' investments increases with the intensity of technological development in a country.

Public Equity Dynamic

The usual and expected exit for a venture capitalist is through an Initial Public Offering. Thus, there is a link involving a delayed impact of venture capital dynamic on public equity activities.

Some research has shown that being closer is more efficient to achieve economic performance (Henderson, Shalizi, and Venables, 2001, Krugman, 1991a). Consequently, the venture capital sector performs better if geographical concentration is higher. This argument supports the hypothesis of a positive dynamic between the size of the public equity sector and the geographical concentration of investments in venture capital.

Hypothesis 4: the concentration of venture capitalists' investments increases with the size of the public equity sector in a country.

¹¹⁵ See for examples, Rosenthal and Strange (2003), Ellison and Glaeser (1999) and Ellison, Glaeser, and Kerr (2010).

DATA

Two datasets are used in this study. The first contains the details about the yearly investments in venture capital for the period 1970 until 2013. The second offers information about the economy and geography of each country.

Venture Capital Data

The data for venture capital investment activity are from the database Securities Data Company (SDC) application VentureXpert. For each funded company, one time or more across the period, data provide postal address and information about the investments that include amounts and financing stages.¹¹⁶ The data have 100,066 companies funded across 39 countries.¹¹⁷ The database contains information from MoneyTree and all the venture capital associations across the world.¹¹⁸ It covers all financing stages.

Economic and Geographic Data

The data for economic and geographic characteristics for each country are extracted from the World Bank website. The five variables used are:

- UrbanpopPC: urban population (percentage of total population);
- Territory: total nation area km²;
- Poptotal: number of citizens;
- ExportTICPC: exportations of advanced technological goods (percentage of total manufactured goods);
- MarketcapiGDPPC: sum of all the firm's capitalization (percentage GDP).

METHODOLOGY

The methodology section has two parts. The first presents the geographical concentration tools with a Discrete Spatial Analysis. The second shows the methods to detect similarities between the countries and to test the determinants of geographical concentration.

Calculations of Concentration Indices

Discrete Spatial Analysis considers sub-spaces in a global space. Each sub-space has a part of the variable of interest. Then, shares of the sub-spaces allow to compute indices i.e., the Herfindahl-Hirschman index (Hirschman, 1964), the Gini index (Gini, 1912), and the Theilindex (Theil, 1967).

¹¹⁶These stages are: Leverage Buy Out (LBO), Seed, Early Stage, Expansion, Other, Secondary Buyout, Later Stage, Acquisition, Acquisition for Expansion, Bridge Loan, Open Market Purchase, Management Buy Out (MBO), Private Investments in Public Equities (PIPE), Recapitalization or Turnaround, Venture Capital Partnership, Secondary Purchase, Pending Acquisition, Mezzanine and Management Buy In (MBI).

¹¹⁷These countries are: Australia, Austria, Belgium, Brazil, Canada, Switzerland, Chile, China, Czech Republic, Germany, Denmark, Estonia, Spain, Finland, France, the United Kingdom, Greece, Hungary, Ireland, Israel, India, Iceland, Italy, Japan, South Korea, Luxembourg, Mexico, Netherlands, Norway, New Zealand, Poland, Portugal, Russia, Sweden, Slovenia, Slovakia, Turkey, the United States and South Africa.

¹¹⁸MoneyTree is a quarterly study of venture capital investment activity in the United States controlled by PricewaterhouseCoopers, the National Venture Capital Association and Thomson Reuters.

All the indices require to select a geographical unit such as a city, region or state. This paper uses city which is the smallest level available in the data.

The first index is the **Herfindahl–Hirschman index (HHI)**. The HHI sums the squared shares of each city Sk_{cy}^2 for country c at year y . N_{cy} is equal to the number of cities.

$$HHI_{cy} = \sum_{k=1}^{N_{cy}} Sk_{cy}^2 \quad (1)$$

$$\text{where } Sk_{cy} = N_{kcy} / N_{cy} \quad (2)$$

By the following transformation, the range is between 0 meaning dispersion and 1 describing concentration:

$$\text{Normalized HHI}_{cy} = \frac{HHI_{cy} - \frac{1}{N_{cy}}}{1 - (\frac{1}{N_{cy}})} \quad (3)$$

The second index is the **GINI index** which uses the area between the Lorenz curve $f(x)$ and the 45 degree line. The range is between 0 indicating dispersion and 1 showing concentration.

$$GINI_{cy} = (2 * (0,5 - b)) \quad (4)$$

$$\text{where } b = \int_0^1 f(x) dx \quad (5)$$

$f(x)$ is the function that represents the cumulative share of investments as a function of the cumulative number of cities for country c in year y .

The third index is the **THEIL index**. It compares the number of investments in a city by a theoretical value, which represents an equal repartition of investments by city, μ_{cy} . The range is between 0 i.e., dispersion and $\ln(N_{cy})$ indicates concentration.

$$THEIL_{cy} = \frac{1}{N_{cy}} \sum_{k=1}^{N_{cy}} \frac{x_{kcy}}{\mu_{cy}} * \ln \frac{x_{kcy}}{\mu_{cy}} \quad (6)$$

$$\text{where } \mu_{cy} = \frac{1}{N_{cy}} \sum_{k=1}^{N_{cy}} Sk_{cy} \quad (7)$$

The term x_{kcy} is the number of investments in city k of country c in year y . μ_{ck} is the theoretical average of the number of investments by city in country c at year y corresponding to an equal repartition.

ANALYSES

Firstly, graphical analyses show the trends depending on each country. Secondly, regressions on unbalanced panel data test the assumptions about venture capital activity, financial crises, technology and public equity activities. These regressions include some variables of control to consider the geography of each country.

For each index the equation (8) regress the number of investment deals and investment' values.

$$\begin{aligned} Index_{cy} = & \alpha + \beta_1 UrbanpopPC_{cy} + \beta_2 Territoryln_{cy} + \beta_3 Poptotalln_{cy} \\ & + \beta_4 Nbinvestmentsln_{cy} + \beta_5 Crisis_{cy} + \beta_6 ExportTICPC_{cy} \\ & + \beta_7 MarketcapiGDPPC_{cy} + \varepsilon_{cy} \end{aligned} \quad (8)$$

Where c denotes country c and y year. All variables are yearly. UrbanpopPC is urban concentration. Territoryln is the logarithm of the size of the country in km^2 . Poptotalln is the logarithm of the total population. Nbinvestmentsln is the logarithm of the number of investment deals. This last variable changes by the variable value investmentsln which is the logarithm of the value of investment deals for the regressions in terms of value of investments. Crisis is a dummy variable which takes the value one for the years 2000, 2001, 2007 and 2008. ExportTICPC is the share of high technological goods in total exported manufactured goods. MarketcapiGDPPC is the market capitalization of firms as a percentage of Gross Domestic Product.

The data are unbalanced panel. For such data, several tests from Hsiao (2003) and Hurlin (2009) enable the selection of the best model. They consider the panel structure with homogeneity tests by using three Fisher tests (Hurlin, 2009) and, then choosing between a fixed and a random effect with using the Hausman test (Hausman, 1978).

RESULTS

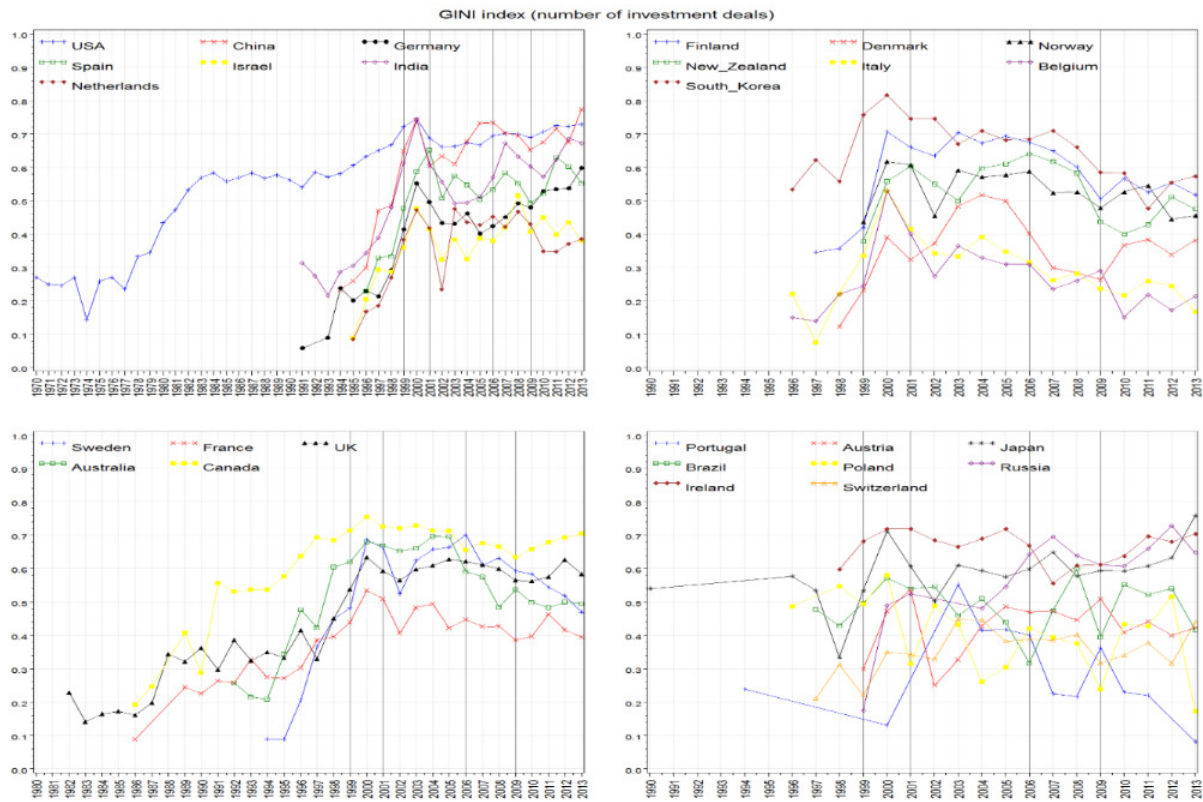
This section organizes results in two parts. The first analyzes how the geographical concentration evolves within and between each country for the period 1970-2013. The second investigates the determinants of the geographical concentration. In this section, the words “in terms of number of investments” mean that the indices compute each investment with the same weight equal to 1. The words “in terms of value of investments” indicate that the indices consider each investment with its value as a weight. This difference highlights two types of concentration.

Groups of Countries and Trend

The Graphical analysis with Figure 1 point out four groups of countries in concentration in terms of number of investments. All countries experience an increase until the year 2000, followed by a drop that lasted until 2002. However, the first is then characterized by a stable evolution in Canada, UK, France, Austria, Ireland and Netherlands, the second by a decrease in Belgium, Switzerland, Norway, Sweden, Australia, Finland, South Korea and Italy and the third by a stagnation and then a raise from 2008 until 2013 for Spain, Germany, China, India, Russia and Japan. For the concentration in terms of value of investments, there is an increasing trend for almost all countries with a significant volatilities.

Concerning hypothesis 1 with regards to the negative relationship between the evolution of number of investments and geographical concentration across time, the results reject this claim it. The increase of investments around 2000 does not reduce the concentration. The converse situation appears. The next section allows to confirm this first observation and to check the other hypotheses.

Figure 1 GINI index in terms of number of investment deals



Source: Securities Data Company (SDC) platinum 2.1 (module VentureXpert) and authors' calculations. All financing stages.

Determinants

This section provides results for the sources of geographical concentration. Tables 1 contains regressions results for the three indices HHI, GINI and THEIL in terms of number of investments.

Estimated coefficients are from Ordinary Least Squares regressions. All the variables are yearly. UrbanpopPC is the share of urban population as a percentage of the total population. Territoryln is the logarithm of the national area in km². Poptotalln is the logarithm of the number of citizens. NBinvestmentsln is the logarithm of the number of investments. Crisis is a dummy variable which takes the value one for the years 2000, 2001, 2007 and 2008. ExportTICPC is the share of high technological goods in total exported manufactured goods. MarketcapGDPPC is the market capitalization of quoted firms as a percentage of Gross Domestic Product. Heteroscedasticity-robust standard errors are reported in parentheses. ***, **, and * denote significance at the 1%, 5%, and 10% level, respectively. The countries are Austria, Australia, Belgium, Brazil, Canada, Switzerland, China, Germany, Denmark, Spain, Finland, France, the UK, Ireland, Israel, India, Italy, Japan, South Korea, Netherlands, Norway, Sweden and the USA. The model is:

$$(1) \text{ Index} = \alpha + \beta_1 \text{UrbanpopPC} + \beta_2 \text{Territoryln} + \beta_3 \text{Poptotalln} + \beta_4 \text{NBinvestmentsln} + \beta_5 \text{Crisis} + \beta_6 \text{ExportTICPC} + \beta_7 \text{MarketcapGDPPC} + \varepsilon$$

Table 1 Regressions in terms of number of investment deals

	OLS – Pooled model		
	HHI(1)	GINI(1)	THEIL(1)
UrbanpopPC	-0.045 (0.045)	-0.219*** (0.050)	-0.016 (0.142)
Territoryln	0.011*** (0.003)	0.031*** (0.003)	0.041*** (0.011)
Poptotalln	-0.007 (0.006)	-0.034*** (0.006)	-0.016 (0.018)
NBinvestmentsln	-0.029*** (0.005)	0.055*** (0.006)	0.158*** (0.016)
Crisis	-0.013*** (0.003)	-0.014*** (0.004)	-0.046*** (0.014)
ExportTICPC	0.679*** (0.070)	0.438*** (0.075)	1.421*** (0.254)
MarketcapGDPPC	-0.057*** (0.009)	-0.029*** (0.011)	-0.111*** (0.037)
Intercept	0.215** (0.109)	0.541*** (0.111)	-0.335 (0.343)
R ² adjusted	0.330	0.485	0.422
F test	27.754***	52.336***	40.678***
Observations	382	382	382
Countries	23	23	23

Table 1 shows that the number of investments has a positive impact in concentration. Even if the quantity of investments increases, the geographical dispersion of investments does not increase. The variable crisis highlights a negative relationship between geographical concentration and the periods before financial crises. In other words, financial crises reduce geographical concentration. Technology has a positive impact on concentration given the sign of the coefficient for the variable ExportTICPC. The variable marketcapGDPPC shows that the size of public equity has a negative impact on the concentration of investments. The same results appear for the regressions in terms of value of investments for all the variables.

Consequently, the results reject the hypothesis 1 with regards to the quantity of investments. Indeed, the increase in the quantity of investments leads to increase in geographical concentration. The results confirm hypothesis 2, financial crises do contribute to a decrease in concentration. The results validate hypothesis 3, technology increases geographical concentration. Finally, the results reject hypothesis 4, public equity size has a negative impact in geographical concentration.

CONCLUSION

Geographical concentration of venture capital investments is an important subject in order to ascertain the entrepreneurial development of a country. Up to now, many researchers have investigated the agglomeration in venture capital to understand how and why investments concentrate in close areas. However, to the best of our knowledge, no paper studies this topic by using the same tools for a long term period across many countries.

This paper fills this gap by investigating geographical concentration of venture capital investments at the city level from 1970 until 2013 in major developing economies. It evaluates the concentration with a Discrete Spatial Analysis using the HHI, GINI and THEIL indices.

The results for the trend analysis show that one group has a monotonic increase in concentration, for example in the USA. Three other groups have an increase in concentration from 1970 to 2000 and a decrease in concentration between 2000 and 2002, followed by either (1) a stagnation in Canada, UK, France, Austria and Netherlands, or (2) a decrease in Australia, Sweden, Finland, Norway, New Zealand, South Korea, Belgium and Italy, or (3) an increase in concentration for Spain, Germany, China, India, Russia and Japan.

The results for the determinants of the concentration of investments indicate that the quantity of investments and technology favor concentration. Financial crises and the size of public equity decrease concentration.

The results of the paper provide direct quantitative figures with regards to how and why geographical concentration evolved from 1970 until 2013 in the major developing economies. The findings, by quantifying and explaining geographical concentration, are relevant for policy makers who considering optimal location patterns.

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THE BANKING INDUSTRY: MONETARY POLICY TOOLS OR FIRMS IN A PROGRESSIVE GLOBAL FINANCIAL CHAOS

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ABSTRACT

Since the '70s of the last century, through a world interdependent growing single financial market, the banking systems have found themselves in a progressive turbulence. According to Roy Harrods' tough position against fixed exchange rates, we entered the second post gold standard epoch on 15 August 1971, triggering an oil standard, a monetary huge hyperinflation, up to Paul Volker strict policies in the '80's. In a huge liquidity trap, started by Greenspan in 1987, up to Bernanke who on 16 March 2008, with full QE according to the Federal Reserve Act Sec.13-3, as outlined in Robert Mundell Reconsideration of the twentieth Century's speech in the 1999 Nobel Prize winner address, shows that most of the monetary chaos has been always stemming from the tripping monetary authorities themselves.

After the 1979 world disorder, all the monetary instruments have led to a banking industry deregulations. First, the repudiation of the Glass Steagall Act with the Modernization Act, a tight control, after the 2008 derivative last bubble burst, up to the present contradictory monetary remedies: Dodd-Frank Act.

The long history of uncertainty from Edegworth mathematical physics, Wolfowitz econometric models, down to some sophisticated econometric models at the IMF and at the Fed, none could succeed in foreseeing any last decade event. Shortfalls in the mathematical approach to finance, too many vested interest operating, the irrational exuberance, have prevailed, the too big to fail approach, as portrayed by Andrew Ross Sorkin, columnist of the N.Y. Times in the year 2010, has started the road to a short of planned uncertain economy.

The Japanese syndrome as describe by Robert KOO in his 2009 Lessons from Japan Great Recession, has shown the inefficiency of any Keynesian remedy, not yet digested by all the vested interest. The secular depression and the Western economic crisis, as accepted by most of the financial literature and media, has actually been contradicted by the inmost spectacular economic growth in the East, where China has surpassed the USA GDP and the World GDP grew from 28 US\$ trillions at the beginning of the new millennium to the present 90 US\$ trillions.

The present sad return to a diffuse outline of inequalities and social economic injustice, the French perspective of (Piketty, 2014), Thomas Piketty, calls a return to the public market manipulations, which unfortunately, can bring only to the evident political race to the power of modern vested interests as depicted by Keynes in the year 1936.

Keywords: banking, monetary policy, present crisis, recovery, interdependence

JEL classification codes: G21

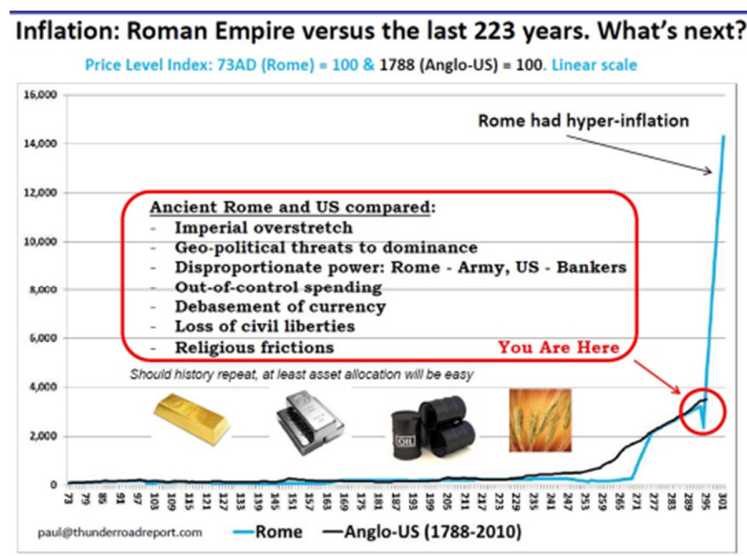
INTRODUCTION

The dollar debasement, was finalized on the 15th of August 1971, in Camp David, where President Nixon assembled his key economic advisers in a panicked weekend retreat. Surrounded by economic advisers as Arthur Laefer tells (Arthur B. Laffer, 2011, 4), Nixon declared "I have

directed Secretary Connally to suspend temporarily the convertibility of the American dollar *except in amounts and conditions determined to be in the interest of monetary stability and in the best interests of the United States*". So the dollar was pulled off the gold standard, changing definitely the role money played, until that moment since the Bretton Wood 1, where the Dexter White plan took effect, three weeks after the landing of the allied troops in Normandy. Definitively a worldwide system of fiat money, destroying the fixed exchange rates since then in force, took off to new horizons.

That decision, taken in a state of panic, set up a far-reaching deleterious series of consequences that would last for years to come, up to the present turmoil suggesting a Bretton Woods 2 solution to the present world monetary deep crisis and turmoil. In summary, Nixon imposed a 10% tax import surcharge, promoted a Job Development Credit in form of a tax credit on American Made investment products and a wage and prices control resembling the Diocletian Edict on Maximum prices dated A.D. 301

Figure 1 Roman denarius debasement.



The following President Gerald Ford, in the middle of the '70s started the WIN program, *whip inflation now*, when, as a logical consequence, prices really started to reflect the monetary expansion, once out of the gold discipline. The left WIN buttons still reflect that period.

During the following decades, up to this year, we have had some phases linked one another and expressing the evolution of the consequences enacted on that day in the year 1971:

- the inflationary seventies;
- the Paul Volker recovery efforts during the eighties, up to the NASDAQ sudden fall on the On Black Monday, 19.10.1987; the S&P 500© Index lost 20.5%, the Dow Jones Industrial Average (DJIA)© lost 22.6% and the NASDAQ Composite lost "only" 11.3%. However, this severe one-day US stock market crash also affected other international stock markets. At that time Alan Greenspan has been already for two months running the FED;
- the twenty years of Alan Greenspan leading the FED introducing the new era of recurring quantitative easing or the like, pulling liquidity as a remedy to any financial turmoil;
- the Chinese industrial revolution, after the Mao Tse-tung demise of the cultural revolution and the mutual Chinese and US recognition in Washington January 1979;

- the Nasdaq dot.com bubble, the 9/11 attack to the twin towers, the subprime and the final derivative bubble bursting in an unpredictable way, with an unusual contradictory resilient consumer price index stability and in a financial markets general ever growing figures.

All these events are strictly connected and are consequence of some panic decisions that in a retrospective profile look like a prevailing contradicting economic path, from the New Frontier to the supply side economics, to the monetary policies allowed by the free fiat money illusion, especially affecting financial markets manipulated values. *"In this and previous chapters we have seen that unstable money robs sometimes one class and sometimes another; that it upsets all sorts of calculations and economic relationships and adjustments; that it causes harmful fluctuations in trade and employment, and produces discontent, labor troubles, class hatred and violence; and that in the end it represents general economic loss. These evils of unstable money may be reduced to three: social injustice, social discontent and social inefficiency"* (IRVING, FISHER 1928, 105).

Let us remember the Jimmy Carter National Energy Plan, the excess-profit tax and the fighting queues at the gas stations, the gas price ceiling controls, the mandate temperature controls in government buildings and the air recycling order for airlines to save on fuel costs.

THE EVOLUTION

Along the implementation of the single euro currency, at the end of the inflationary '70s and after the Paul Volker restricting measures of the early 80s', three major stock market bubbles burst in the international financial arena. The first, the dot.com bubble in the year 2000, after the market closed at 10.395 on 27 September 1999, on October 2002 it was at 7.286. The related and consequent subprime rate bubble in the year 2007, few months after the Standard & Poor regained its 2000 value and, thirdly, the derivative bubble in the year 2008, as a likely final consequence of the monetary policies adopted by the FED in those twenty Alan Greenspan's years, still unsolved.

All these unpredicted events, out of any econometric prevision or control both at the FED and at the IMF, led to the present confuse unlimited recession, which, much more than a cycle shows an exit from the Columbian epoch and a definitive re-surfacing of Asia.

Meanwhile, the sovereign massive debt reached unbearable levels in many Southern Countries, challenging all the convergence criteria and reaching the annual GDP level in several countries:

- price stability, inflation should not to be over 1.5% of the average percentage points of the three best-performing Member States;
- the annual government deficit: it should not have exceeded 3% of national GDP;
- Government should have never exceeded the limit of 60% of national GDP.

Since the Keynesian revolution, the economic theories and economic policies, prevailing during these years were:

- a general opinion that the 20th century Great Depression should have been managed with monetary, rather than fiscal policies, (MUNDELL, 1999);
- hence any fiscal policy, according to Milton Friedman and the Chicago School, were commonly perceived as doomed to failure;
- thirdly, the trade-off between inflation and unemployment was accepted as an unavoidable final effect of an essential monetary expansion, lately defined quantitative easing, without too much concern for the purchasing power of money;
- the missing recovery and take off, after any kind of monetary expansion may be connected to the leading to a liquidity trap in a no inflation environment (J. R. RHODES, 2008).

"We used to think," James Callaghan, told the Labour party conference in 1976, "you could spend your way out of a recession and increase employment by cutting taxes and boosting spending. I tell you in all candour that this option no longer exists..."¹¹⁹

This attitude has lately been commented by several Nobel prize winners, among them (ROBERT LUKAS, 1995).

THE MONEY FUNCTIONS

As generally supporting policy framework and residual sources, after the dollar debasement consequences, the left theoretical structures used by most policy makers, during the three last decades in the 20th century, modern macroeconomic models were under scrutiny already at the end of the Century. (ROBERT LUKAS, 1996, 262). He was writing

"But who can say how the macroeconomic theory of the future will develop, any more than anyone in 1960 could have foreseen the developments I have described in this lecture? All one can be sure of is that progress will result from the continued effort to formulate explicit theories that fit the facts, and that the best and most practical macroeconomics will make use of developments in basic economic theory."

Furthermore,

"It is no wonder that the integration of money into a neoclassical framework has been so difficult to achieve: neoclassical economics is fundamentally incompatible with the most important functions of money, which - as a medium of exchange - is to free people from the need to know the V, price of n-1 goods at all the times. Money exists because the real world is fundamentally non-neoclassical. Money and Walras do not mix." (RICHARD KOO, 2009, 308)

And,

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Minsky's model of the credit system, which he called the "financial instability hypothesis" (FIH) (Minsky, Hyman P. 1992) incorporated many ideas already circulated by John Stuart Mill, Alfred Marshall, Knut, Wicksell and Irving Fisher.

"A fundamental characteristic of our economy," Minsky wrote in 1974, "is that the financial system swings between robustness and fragility and these swings are an integral part of the process that generates business cycles."

Disagreeing with many mainstream economists of the day, he argued that these swings, and the booms and busts that can accompany them, are inevitable in a so-called free market economy-unless government steps in to control them, through regulation, central bank action and other tools. Such mechanisms did in fact come into existence in response to crises such as the Panic of 1907 and the Great Depression. Minsky opposed the deregulation that characterized the 1980s.

¹¹⁹<http://www.newstatesman.com/search/google/Callaghan%20%20and%20candour?query=Callaghan%20%20and%20candour&cx=014587529549946006773%3Aq0ke2unon2y&cof=FORID%3A11&site=search=>>

THE CRISIS

With the US\$ debasement, the benefits of comparative advantage were then lost without a sound medium of exchange, to store value and to work out the investments efficiency returns. Recrimination over unilateral trade policies made it more difficult to agree on other measures and to stop the large potential monetary base supply bubbles (BARRY EICHENGREEN, JEFFREY SACHS, 1986, 67-71).

The multilateral clearing mechanism, as developed between the two World Wars resulted inefficient and not able to restore the previous Hume model of comparative advantage by means of a self-regulating prices' system, as used to be the gold standard self-adjusting rule; the international trade did not take off and an epoch of autarchy was the result.

The shah of Iran Reza Pahlavi, after 37 years of ruling, left Teheran on 16 January 1979 for never return because of millions of protesters everywhere in the Iranian cities, forming one of the biggest humankind crowd. Never appeared before such a revolution, in a State, usually addressed as a miracle of modernization and economic reforms, controlling one of the biggest army as well as an effective secret police. The crowd was ready to die for a scholar living in exile in Paris, Ruhollah Mustafa Khomeini an elder Shiite scholar, a revolution leader who was not aiming to a secular modernization. His only desire was an Islamic revolution, which actually succeeded in disrupting the Communist rule in Central Europe and spread to the rest of the Arab world, a holy war called jihad, displacing most of the socialist principles.

On 3 May 1979, the Conservative Party, led by Margaret Thatcher ousted the incumbent labor government of James Callaghan with a parliamentary majority of 44 seats. The election was the first of four consecutive election victories for the Conservative Party, and Thatcher became the United Kingdom's - and Europe's - first female, the iron lady head of a government.

John Paul II, born Karol Josef Wojtyła, also known as Saint John Paul the Great, became pope of the Catholic Church on the 16th October 1978 and, a few months later, in June 1979, it is to his Poland that he makes his first of so many trips during his pontificate. A huge crowd came to listen to him in Warsaw's Freedom square and it is precisely at that moment that the Polish people realized how considerable his power was. Worker's strikes multiplied, leading to a destabilization of the Polish communist regime. At the end of 1981, when the government, running out of arguments, adopted the martial law, Solidarnost had 10 million members and was carried on by a deep social wave. For the first time since 1968 in Czechoslovakia, a communist regime was seriously shaken.

Christmas 1979 was the Russian first day of invasion of Afghanistan, the first Nation to recognize the October revolution in 1917. The Soviet war in Afghanistan lasted nine years, since December 1979 to February 1989. As a part of Cold War, it was powerfully fought between Soviet led Afghan forces against multi-national insurgent groups called the Mujahedin, mainly composed of two alliances: the Peshawar Seven and the Tehran Eight. The Peshawar Seven insurgents received military training in neighboring Pakistan and China, as well as weapons and billions of dollars from the United States, United Kingdom, Saudi Arabia, and other countries. The Shia groups of the Tehran fight alliance received support from the Islamic Republic of Iran. Early in the rule of the PDPA government, the Maoist Afghanistan Liberation Organization also played a significant role in opposition, but its major force was defeated by late 1979, prior to the Soviet intervention. The decade-long war resulted in millions of Afghans fleeing their country, mostly to Pakistan and Iran. Hundreds of thousands of Afghan civilians were killed in addition to the rebels in the war.

The initial Soviet deployment of the 40th Army in Afghanistan began on December 24, 1979, under Soviet leader Leonid Brezhnev. The final troop withdrawal started on May 15, 1988, and ended on February 15, 1989, under the last Soviet leader, Mikhail Gorbachev. Due to the interminable nature of the war, the conflict in Afghanistan has sometimes been referred to as the "Soviet Union's Vietnam War" or the "Bear Trap".

At the end of 1978, the septuagenarian Chinese, Communist Party leader Deng Xiaoping, after stabilizing the relations with the US, "*The United States of America and the People's Republic of China have agreed to recognize each other and establish diplomatic relations as from January 1, 1979.*" (EZRA F. VOGLEI, 2011, 333) heaved himself to the top job introducing a series of economic reforms that ultimately changed the country beyond all recognition. Emulating closer reforms, he applied the successful free or special zones regimes of Singapore, Hong Kong, Taiwan and similar Special Economic Zones, to mainland and continental China. Adopting the Wealth of Nations' principles, he opened the Country, out of the extirpated Cultural Revolution and the little red book doctrine of Lin Biao, in a borderless free capitalistic enterprise regime. He finally attracted most of the industrial activities and capitals out of the expensive ruled welfare Western democracies, starting a new economic era for the Far East region and it is escalating financial centers.

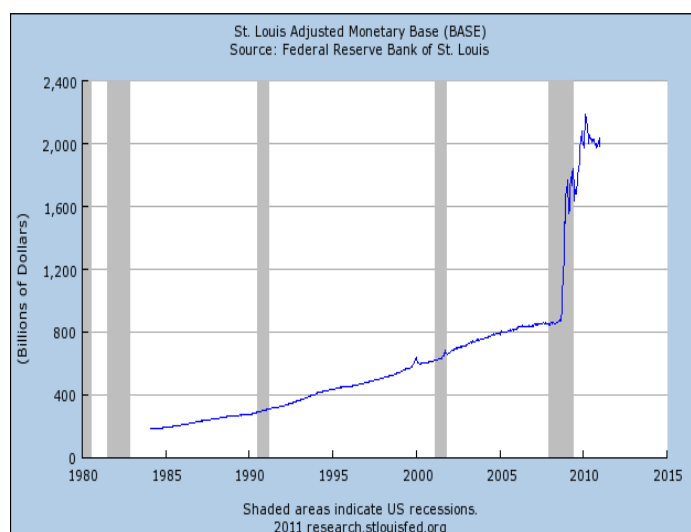
At same time, he and his colleagues planned the dissolution of the collective farms set up by Mao Zedong and permitted the peasantry to return to their old system of private family farming. These five figures, not correlated but performing their task in different areas in an already global economy, were the artificers in that year 1979 of an epochal social remodeling, marking the end of the great socialist utopia that had dominated so much of the twentieth century.

The huge literature about the demise of socialism, include even liberals bound to the prevailing welfare State theory reinforced after the American '60s movements started in Berkley, at Joan Baez notes. " ...economics inevitably takes place in a political context, and one cannot understand the world as it appeared a few years ago without considering the fundamental political fact of the 1990s: the collapse of socialism, not merely as a ruling ideology, but as an idea with the power to move men's minds." (PAUL KRUGMAN, 2009, 10).

In this way, at the end of the seventh decade of the twentieth century, the twin forces, markets and religion, discounted for so long after the enlightenment, came back vigorously on the world stage.

The three large free waves of monetary basis after the 1971 August debasement: the NASDAQ, 10 October 1987 slump, the 11/9 2001 Alan Greenspan's FOMC, led towards the subprime collapse in 2007. Successive quantitative easing huge funds, were assigned to Henry J. Paulson.

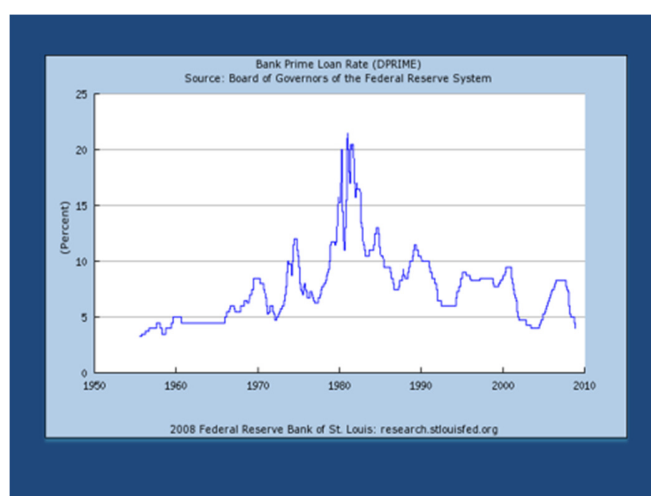
Figure 2 The monetary base increase



To save the Freddy Mac, the Fanny Mae and the Bear Stearns acquisition by JPMorgan, Paulson obtained, in the year 2008, 750 US \$ billions. Such Congress fiat money provisions had, as fallout, the triggering of a great market bubbles leading the D.J. index towards 16.000, the great financial inflation ever in a world dominated by the great China resurfacing and recovering at in comparable low prices, dismantling the Western structure of cost and prices in the industrial technology. The crisis actually started in the seventies and spread from the peripheral areas toward the center of the Western States, starting from the (S&L) saving and Loan Industry down to:

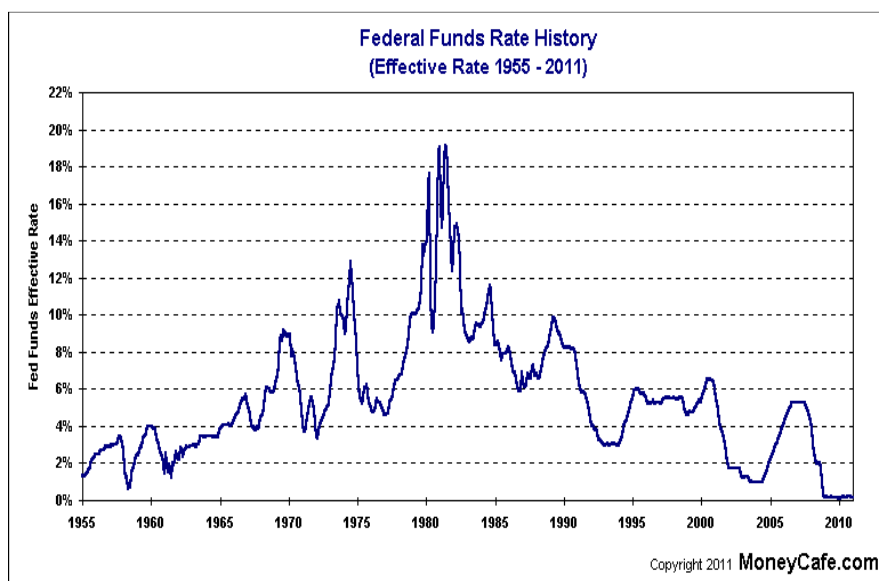
- S&L crisis 1980
- Japanese banking crisis 1990
- Drexel and Burnham
- December 1994 and early 1995 Mexico - Tequila Crisis
- Argentina
- Brazil
- The Philippines
- Poland
- 1997 Thailand
- Indonesia
- Malaysia
- October 1997, Korea
- August 1998, Russia declared a debt moratorium
- January 1999, Brazil exchange rate crisis
- Enron
- Worldcom
- Baring Bank
- Lehman Brothers
- Freddy Mac
- Fanny Mae
- Bank of America
- Wachovia
- Bear Stearns
- Merrill Lynch
- Morgan Stanley
- BNP Paribas
- Goldman Sachs.

Figure 3 Prime rates during the '70s and the '80s



..., in a sequence of insolvency, State acquisitions, public recapitalization, unbalanced accounting structures, in a frenzy re-regulation of the financial industry through closer and stricter Basel criteria. The final conclusion, puts a doubt on the banking industry, are banks pursuing profit and therefore enterprises or, centers of social accountability under the protection of a political lender of last resort, in order to close financials out of any risk of bankruptcy being *too big to fail* in an informal planned economy.

Figure 4 Federal funds rates



THE RESTRUCTURING PRESENT DILEMMA

Most of *clear and present dangers* come out of the relationship between deep deregulation during the eighties and strict macroeconomic restructuring financial guidelines requirements, like the Volker rule or the gold rule. These were enforced by the lending Authorities, mostly the IMF, the WB, and EBC as (SAP) Structural Adjustments Plans, and prefigure the political cost of both reshaping the public administration and reforming the welfare state as grown through the cold war years and later.

A free market economy, under consumers' preferences and choices, is not able to allocate savings and investments according to political guidelines and it seems very difficult to obtain wide unconditional consensus, as long as the State is a factor of increasing public demand from a private consumption angle.

As a readjustment from a public swollen consensus demand, pursuing politically prearranged goals, to a concurrent contraposition between a civil society attitude and a contribution on a single member partnership statute, to a passive bargaining political consensus, based on individualistic vested interests, the gap seems now to be insuperable and not likely absorbed by available instruments.

Figure 5 Public debt increase

Here are the actual figures of what the total debt was when each president left office and the percentage increase:			
Ford,		\$ 0.65 trillion	00,0%
Carter,		\$ 0.93 trillion	42,0%
Reagan,		\$ 2.68 trillion	189,0%
Bush,		\$ 4.18 trillion	55,6%
Clinton,		\$ 5.7 trillion	36,0%
Bush,		\$ 10.7 trillion	75,0%
Obama		\$ 17,2 trillion	67,0%

"The financial crisis that began in the summer of 2007 should therefore be understood as an accelerator of an already well-established trend of relative Western decline" (NIALL FERGUSON, 2011).

The consequence is a declining low profile welfare society, facing a new wave of capitalistic instruments, operating from the global new growing competition out of the classic everlasting economic goals, based on value, synthetic expression adding quality and price in a single competitive environment. The total growth of exports from Asia and the slow progressive substitution of western productions, were leading to an economic supremacy which ended in a surpassing Chinese GDP over the leading USA, undiscussed lead after the second world war and up to the unsuccessful planned economy experiment in the Eastern hemisphere.

The survival kit left by the financial institutions would have been able to satisfy a strenuous defense of the dying welfare State privilege, which would have endured as long as the Eastern financial centers would have supported it.

Now we must face the overcome of Chinese GDP, larger than the USA one and the misleading welfare policy financed only by deficit spending supporters as well by China. Asia has regained the previous economic level it used to have at the beginning of the new world discoveries, which kind of structural reforms are we now supposed to endure in order to keep our present income untouched, this is the final undisputable problem.

The structural adjustments are really a long and fatiguing experience since it is difficult to develop a sustainable industrial and services presence in the global economy if not developing a previous existing one.

CONCLUSIONS

Post-Keynesian scholar¹²⁰Paul Krugman, in recent academic work, has collaborated with Gauti Eggertsson on a New Keynesian model of debt-overhang and debt-driven slumps, inspired by the writings of Irving Fisher, Hyman Minsky, and Richard Koo. Their work argues that during a debt-

¹²⁰<http://en.wikipedia.org/wiki/Paul_Krugman#cite_note-158>

driven slump, the "paradox of toil" (Gauti Eggertsson, 2010) together with the paradox of flexibility, can exacerbate a liquidity trap, reducing demand and employment. The paradox of flexibility is that a debt deflation shock can create a situation where increased price and wage flexibility result in decreased total demand. This term was introduced by Paul Krugman and Gauti Eggertsson in the paper *Debt, Deleveraging, and the Liquidity Trap: A Fisher-Minsky-Koo Approach* (Arthur B- Laffer, 2011). The term was intended to complement the "paradox of thrift", a concept resurrected by John Maynard Keynes and Eggertsson's earlier work on the "paradox of toil".¹²¹ Krugman and Eggertsson proposed that the paradox of toil and the paradox of flexibility mean that wage and price flexibility do not facilitate recovery from recessions during a liquidity trap, but actually exacerbate them.

The crucial point lies in the Keynesian lack of marginal capital efficiency, in a definitely new environment coming out of the dollar bi-debasements, one after the first World War, the second after the 1971 August panicking Camp David session, with identical consequences, roaring monetary inflated years, bubble burst and depressions, 1915-1935 and 1971-2015.

In the year 1929, the recession turned in a depression and only the war impulse started a new expansion area. In the new cold war scenery, after the second debasement and related liquidity traps, in absence of adequate risk offsetting profits, the new Eastern Tigers attitude, in an open World economy, out of any welfare state boundaries, led to a definitive Western stagnation. The decisive forces are now the floating exchange rates, the absence of adequate capital efficiency and the low wage and labor costs of the new industrial Asian States.

The strict interdependence, learned through the disappointing autarchic policies and nationalistic ideals in force the two World Wars, have led to the acceptance of a new reality where competition, cooperation and economic integration represent the translation of the first economist message.

The Wealth of Nations, by Adam Smith, written in the year of the independence declaration 1776 has now become a best seller in all the Chinese bookshops.

The problem, at this very point of our history is the necessity of a new Bretton Woods 2, to face the tough slumps occurring all over the world and inappropriately named crisis. In reality, the problem arises with the debasement of the dollar and the related convertibility are:

- the flexible exchange rate, linked to the external imbalances and therefore the weakening of the single currencies function as meter of value;
- the development of the huge structuring of derivatives to face foreign exchange risks;
- the promotion and sale of an amount of such financial products out of control and out of official evidence.

Furthermore, besides the close fallout over trading, imbalances and interest rate, as instrument of monetary policy, the market has developed further interest rates derivatives instrument which:

- have engulfed public administration, financial management procedures;
- generated huge losses in unpredictable events like tactical monetary policies swift changes like in the case of easy monetary policies and anti-inflationary measures.

Third, the tremendous expansion of progressively high quality and low price Asian industrial productions have left Western banks full of liquidity, with interest rates close to zero in not negative, and lack of opportunities in the real economy:

- the intervention of the FED, the Treasury and the TARP funds have managed to keep running the banking, insurance and automotive industries in a frozen uncritical market.

¹²¹http://en.wikipedia.org/wiki/Paradox_of_flexibility_-_cite_note-eggertsson2010a-2

During the years 2007 -2008, Henry Paulson, lived besides Timothy Geithner and Ben Bernanke until the 2009 Obama entrance at the White House, on the 20 January, the management of three TARP funds of 700 billion each, enlarging the already booming monetary base and assuming the largest ever internal deficit ever seen(Alan Greenspan, 2014, 103).

The almost socialization of the US largest industrial sectors have progressively reduced the role of North America in the world economic arena, and China has reached the largest World's GDP during this current year. Actually, the World is not in a phase of recession or depression, the West economies are suffering trade imbalances and high unemployment rates, but the World, over all, has enlarged its GDP three times since the first bubble burst at the beginning of the 21st first Century. A revision of the monetary global interchange rates, the acceptance of some concurrence in the interdependent global market, the modernizing of the World political framework in a new dimension, reducing the gap between the technical technological and communication progress and the political frameworks is the major point. These infrastructures nowadays are mostly based on and old-fashioned communication styles, based on representative local relationships, with a limited perception of the present dangers, strictly related to the global activities of the financial institutions and the mobility of manufacturing entities require a wider scope and control.

At same time, the emerging new corruption scenarios and the liability of representative democratic structures, suggest a revision of public responsibility and responsibility of the persons willing to assume public role and leading positions. A discovery of the roles of the civil society, out of the competing political arena, where most of the units are often much more interested in their political role, than in the consequent responsibility they assume.

I would therefore stress the present real needed steps,

- the Bretton Woods 2
- the enlarging of the international political arena, with strict an empowered role of the IBS, the WB, the FMI and some new comers and the widening role of public social networks as instrument of poll and referendums which now seem to run freely out of any control or rule.

These measures may be a signal to a more likely civil society oriented world.

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FINANCIAL (IN)STABILITY IN SELECTED COUNTRIES: WHAT DID WE LEARN FROM THE CRISES?

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ABSTRACT

The global financial crisis of the late 2000s has renewed the policymakers' interest in the stability of financial systems. Micro-prudential tools demonstrated inefficiency in addressing systemic risk of financial sector and thereby policymakers are transitioning towards implementing macro-prudential tools. In this paper, we develop a composite indicator of financial stability on theoretical level. For that purpose, we use macro-prudential indicators of financial soundness such as the annual credit growth, non-performing loans to total loans ratio, capital adequacy ratio, liquidity ratio, annual growth of monetary aggregate M2 and annual volatility of the stock index. The methodology follows with assigning threshold values for each indicators, defining adjusted indicators and employing them to calculate the composite indicator. Guided by the calculated values of the composite indicator and the constituent indicators, we introduce an interval scale with signals of financial (in)stability and set scenarios of financial stability distress.

Keywords: *financial stability, composite index, macro-prudential policy, financial distress scenarios*

JEL classification codes: E44, E60, G01, G10, G18

INTRODUCTION

The financial landscape around the globe is rapidly changing every day. As the economy evolves, new financial players enter the market and old ones leave. One of the major events was certainly the bankruptcy of Lehman Brothers, which pointed to the vulnerability of financial institutions and triggered a surge of volatility across financial markets as well as a slump in asset prices. This event was the central point in the post-crisis debate about financial cataclysms. The recent global financial crisis has demonstrated the importance of understanding the sources of domestic and global vulnerabilities that may lead to a systemic financial crisis and crashes of the major financial organisations. Besides the American banks, the crisis has brought a large number of

European banks to the brink of collapse. Finding the sources of vulnerability and instability is of central importance since it allows targeted actions for repairing specific cracks in the financial system (Sarlin and Peltonen, 2013; Betz et al., 2013).

The global financial crisis has renewed the policymakers' interest in the stability of financial systems; yet many important questions on the topic remain unanswered. The liquidity problems, which the banks faced when using their off-balance-sheet instruments to better manage their portfolios comprised of complex credit securities, eventually lead to the outbreak of the global financial crisis of the late 2000s. These problems, along with information asymmetry, squeezed the banks' capital and increased the banks' exposure to the so-called 'toxic assets'. The effects from the downfall in the global financial system have mirrored in the real economy, contributing to a sharp economic slowdown across advanced economies.

Following the crisis, the global financial system underwent changes in the design of macroeconomic policies and in the use of the necessary tools in order to ensure financial stability. The objective of financial stability has gained increasing importance over the last decades. Traditionally, an important objective has been to keep prices stable, thereby managing inflation; but nowadays, monetary policy has become a blunt measure for stabilising the financial system due to the wide scope of its effects, such as reliable payments and adequate supervision.

Financial stability plays a dominant role in the modern financial systems and in financial theory. Moreover, financial stability is a commonly employed word in the financial literature. Once upon a time, the German Minister of Finance emphasised that stability is not everything, but without stability everything becomes nothing. The mission of De Nederlandsche Bank (DNB) can be summarised as follows: *stability to us is worth its weight in gold*. However, financial stability assessment has become more challenging. Several techniques are employed to assess financial stability, and each has its advantages, disadvantages and limitations (Jakubik and Slačák, 2013). First, early warning systems are constructed from potential leading indicators to predict the probability of a financial crisis. These indicators typically appear in the form of a discrete representation of the dependent variable. Second, stress testing offers a more precise analysis, which can estimate the financial system's resistance to adverse macroeconomic scenarios. Third, aggregate financial stability indices represent a quantitative method for measuring the stability of a financial system. Yet, key indicators on financial (in)stability are non-linear, time varying, and dependent on market sentiment (Jakubik and Slačák, 2013).

The main contribution of this paper is to explore and develop new measures of financial stability from a macro-prudential perspective. Since the beginning of the recent financial crisis, different economic authorities have been looking for sound financial regulation and better measures of financial stability. They have been seeking for better solutions to economic problems and for an expansion of the economic frontiers along theoretical and practical dimensions. Before the financial crisis, the debate about optimal regulatory structures was focused narrowly on a few issues. Nevertheless, the crisis has highlighted the need for a better regulatory framework and has geared towards ensuring the stability of financial systems in both developed and developing countries. Efficient and stable financial systems are deemed essential to achieve long-term balanced growth and to absorb various types of economic shocks (Prasad, 2010). Failing to provide them may result in inefficiencies, adverse selection, and moral hazard.

Our paper attempts to identify the main features of financial systems, the sources of domestic and external vulnerabilities, the policies and measures developed by the regulators, and the relationship between the financial system and the real sector along with the goal of securing long-run economic growth. In other words, the aim of this paper is to introduce the modern and appropriate measures for financial stability assessment in the development of a new early-warning composite indicator.

TOWARDS MACRO-PRUDENTIAL REGULATION

A stable financial system is one that ensures great economic performance in many dimensions, whereas an unstable financial system is one that results in devastating economic perspectives (Schinasi, 2004). If financial instability is severe enough, it can lead to almost a complete breakdown in the functioning of financial markets, a situation that is classified as a financial crisis. Financial instability occurs when shocks to the financial system interfere with information flows, so that the financial system can no longer do its job of channeling funds to those with productive investment opportunities (Mishkin, 1999). One of the lessons to be learned from the recent financial and economic crisis is that a very broad range of indicators must be monitored to be able to assess overall financial stability in a reliable manner (Jakubik and Slačák, 2013).

In this regard, one of the key questions facing policymakers today is how to increase stability within financial systems. Financial markets perform the essential function of channeling funds to those individuals or firms that have productive investment opportunities and creative entrepreneurial ideas. If the financial system does not perform this role well, then the economy cannot operate efficiently. Moreover, poorly performing financial systems can lead towards a decline in overall economic activity (Mishkin, 1999).

The micro-prudential tools unveiled their shortcoming of being inefficient in addressing the systemic risk of the financial sector and thereby the policymakers are transitioning towards implementing macro-prudential tools, which are efficient in capturing the system-wide distress. Central banks have begun using a wide range of new tools such as countercyclical capital requirement, time-varying reserve requirement, cap on loan-loss provisions and liquidity coverage ratio. The macro-prudential approach also found its place in Basel III as the Basel Committee on Banking Supervision has acknowledged the systemic significance of financial institutions. In that manner, Basel III was agreed upon to strengthen bank capital requirements, address pro-cyclicality, increase bank liquidity and decrease bank leverage.

The crisis has created a clear recognition of the need to evaluate and manage financial risks at the systemic level rather than at the level of individual institutions (Prasad, 2010). Global policymakers take substantial macro-prudential policy action and regulatory advancements towards a safer financial system. A number of countries have already announced and also implemented different macro-prudential measures. These include *systemic risk measures* aimed at mitigating vulnerabilities stemming from the significant size, inadequate competition practices, high concentration and interconnectedness of banking sectors. Different types of *residential property measures* have been adopted as well, with the aim of addressing unfavorable developments in real estate markets. For example, Slovenia decided to introduce *ad hoc* minimum requirements on changes in loans to the non-banking sector relative to changes in non-banking sector deposits. Further, Estonia adopted a systemic risk buffer requirement of 2% to all credit institutions because of structural vulnerabilities. The Netherlands also introduced a systemic risk buffer (SRB) and buffer for other systemically important institutions. Moreover, Belgium, Slovakia, Ireland and Estonia decided to introduce measures to address specific risks in the property markets (ECB, 2014).

Promoting safety and soundness of the financial system is crucial to preventing financial instability. When a financial crisis does occur, the financial system needs to be restarted so that it can resume its job of channeling funds to those with productive investment ideas. This process should be implemented at a two-tier level. At the international level, the international institution might help cope with these crises, and prevent them from spreading. At the national level, a government might reform the regulation and supervision of its banking system to reduce the risk of lending that disregards prudent risks. Prevention of financial instability requires a strong supervisory system to prevent excessive risk-taking on the part of financial institutions (Mishkin, 1999).

DEVELOPMENT OF FINANCIAL INDICATOR FOR (IN)STABILITY

The effects from the global financial crisis of the late 2000s have resulted in a growing attention among economists on the assessment of financial stability. The recent developments in the financial sectors accompanied by emerging of banking crises, stock market downfall and weakening of the corporate sector, decrease of investors' confidence and macroeconomic instability have greatly impacted the work of the policymakers in monitoring and analysing the financial sectors as well as in the conceiving of policies and measures that would restore stability. As already mentioned in this paper, one of the major changes in financial regulation was marked with the shift from micro to macro-prudential policies in assessing financial conditions, detecting financial vulnerabilities and aiming at financial stability, where the focus has been put on the financial system as whole instead of the individual financial institutions. This has also lead to broadening the set of financial indicators, identifying new determinants of the financial processes and developing new approaches in measuring stability.

Our main goal in this paper is to develop a composite indicator as aggregate measure which can be used in detecting the sources of potential financial distress and instability. For that purpose, the process of developing this indicator follows several steps. First, we define financial stability and set the main goal that has to be achieved with the developed composite indicator. Second, we identify the indicators of financial soundness which will be used in developing our composite indicator. Third, we determine threshold values for each of the indicators. Fourth, we make the necessary adjustments of the indicators, assign weights to each of them and construct the composite indicator. Fifth, we introduce an interval scale to explain the signals derived from the values of the constructed indicator. Sixth, we employ scenario analysis to investigate the distress in the financial sector.

As financial stability has been subject to intensive analysis by economists and central banks over the past years, there are different definitions that were introduced by authors and regulators. Schinasi (2004) attempts to introduce a definition based on the key principles of financial stability and states that financial stability presents "financial system's ability to facilitate both an efficient allocation of economic resources (...) and the effectiveness of other economic processes (such as wealth accumulation, economic growth, and ultimately social prosperity); (b) to assess, price, allocate, and manage financial risks; and (c) to maintain its ability to perform these key functions (...) primarily through self-corrective mechanisms."

According to the OFR (2012), financial stability enables: "(i) credit allocation and leverage; (ii) maturity transformation; (iii) risk transfer; (iv) price discovery; (v) liquidity provision; and (vi) facilitation of payments". A significant contribution to the definition of financial stability have been the Financial Stability Reports published by central banks. The European Central Bank in its *Financial Stability Review* defines financial stability as "a condition in which the financial system (...) can withstand shocks without major disruption in financial intermediation and in the effective allocation of savings to productive investment" (ECB, 2014).

But when speaking of the disturbances in the financial system, most of the analysts concentrate on the risks and vulnerabilities of the financial system as these are relatively easy to understand and quantify (Gadanecz and Jayaram, 2009). That said, the sources of distress of the financial system provoking instability are typically linked to the different type of crises that the countries may be hit by over time (e.g. banking crises, currency crises, debt crises, equity crises) and there are different ways of defining each of these crisis, from binary indicators (e.g. failure of a bank, suspension of debt payments by a sovereign creditor) to quantifiable indicators (e.g. number of insolvencies, magnitude of banking losses, GDP loss, magnitude of exchange rate fluctuation, decline of stock market index) (Gadanecz and Jayaram, 2009).

Interestingly, Glasser (2013) pointed out to the complexity of data analysis at the firm and supervisory levels due to the enormous volume of data, "different systems for collection and different conventions for defining and classifying data". In addition, "each regulator maintained its own view

of the data and no regulator had a mandate to consider risks to the financial system as a whole". Further, Hollo, Kremer, and Lo Duca (2012) developed Composite Indicator of Systemic Stress. They put more weight in the scenario where stress dominates in few market segments, at the same time, emphasising the systemic nature of financial stress and negative consequences of such risk that is spreading across economy. Sinenko, Titarenko, and Arins (2013) pointed out to the specificity of each country. There are few studies focused on individual countries and their financial stability indicators. Sinenko, Titarenko, and Arins (2013) did their study on Financial Stress Index of Lithuania. They have indicated that FSI can be used as an "early warning system" for country's financial stability.

The EMU member countries have shown different affects during the times of the financial crisis. Parrado-Martinez, Partal-Urena, and Aguado (2009), using International Monetary Fund (IMF) macro-prudential indicators combined with aggregate financial stability index, recognised "significant differences for the indicators of asset quality, capital adequacy, and banking sector profitability". Interestingly, their study suggested "greater financial vulnerability during the crisis in financially more developed countries". Cardarelli, Elekdag, and Lall (2009) pointed out that since 1980 there were 113 financial stress instances distressing 17 developed economies. Although in only 58 situations this led to serious economic slowdown or economic recession, the incurred economic losses were more significant than those triggered by other factors. Finally, Das, Quintyn, and Chenard (2004) suggest the need to develop an aggregate index that will include: "capital adequacy, asset quality, management quality, profitability, liquidity, and sensitivity to market risk".

As we can see, measuring financial stability is primary challenge for policymakers. Therefore, the main goal of our composite indicator is to detect the sources of vulnerabilities in order to explain the negative effects that they may have within the financial system and the economy as whole.

The identification of the financial indicators we use to construct our composite indicator relies on the financial soundness indicators developed by the IMF (2006) and the variables focusing on vulnerabilities in the external, corporate and household sectors, banking system vulnerabilities and market pressures (Hawkins and Klau, 2000; Nelson and Perli, 2005; Gray, Merton, and Bodie, 2007). Thus, to measure financial stability, we take into account three components: (1) financial sector, (2) monetary sector and (3) financial markets. Since the banking sector dominates in the financial sector of all selected countries that are subject to our paper, we concentrate only on the indicators of financial institutions in the banking sector. The financial sector as a component can be farther divided in three interrelated subcomponents, namely: (1) credit risk, (2) insolvency risk and (3) liquidity risk. To measure the credit risk, we opt for the annual credit growth and the non-performing loans to total loans ratio; for the insolvency risk, we employ the capital adequacy ratio; and for the liquidity risk, we use the liquidity ratio calculated as a coefficient of the liquid assets to the short-term liabilities. The operations of the central bank can both impact on the financial sector and the economy and they can be considered a major factor in ensuring financial stability. Typical measures that proxy for the monetary sector are the monetary aggregates. For the sake of our paper, we use the annual growth of the monetary aggregate M2. The movements in the financial markets are tightly connected to those in the financial sector as they usually reflect or affect the financial conditions. In that regard, as proxy for movements in the financial markets we use the annual volatility of the stock index.

After we have identified all financial indicators that will be used in constructing the composite indicator, the next task is to determine the "excessiveness" in the value for each indicator and explain the consequences that may follow from those excessive values. The term "excessiveness" can be defined as condition in which the value of a specific financial indicator crosses the pre-determined threshold value. The threshold values with explanations on the consequences of the excessive values for each of the indicators are presented in turn.

- *Annual credit growth.* A rapid credit growth accompanied by large annual credit growth rates is usually linked to the declined standards for extending loans. This may lead to

- increased information asymmetry and moral hazard as well as increased probability of default. The threshold value we set for the annual credit growth is 20%.
- *Non-performing loans to total loans ratio.* Excessively high values for this ratio indicate to a lower quality of the bank assets, increased probability of default and can be seen as an early sign for a banking crisis. As for the annual growth rate, we assign a threshold value of 20% for this ratio. *Capital adequacy ratio.* Very low values of the capital adequacy ratio indicate to a modest cushion size of the financial institutions in the banking sector and increased difficulty in recovering from unexpected losses. We set the minimum threshold for the capital adequacy ratio at 12%.
 - *Liquidity ratio.* Excessively low values of this ratio mean that banks may not be capable to meet their short-term liabilities and may run into liquidity problems. This can be properly seen as an early sign of liquidity crisis that may evolve into a systemic crisis. Our threshold value for this ratio is set at 40%.
 - *Annual growth of monetary aggregate M2.* High growth rates of the monetary aggregate M2 may signal inflationary pressures on the long run and are early sign of macroeconomic instability and financial crisis. For this indicator, we determine a threshold value of 20%.
 - *Annual volatility of the stock index.* A higher annual volatility of the stock index implies higher volatility of the stock prices and can be described as condition with increased uncertainty, decreased investors' confidence and lack of proper inclusion of the new information in the stock prices by the market. For this indicator, we determine a threshold value of 100%.

The listed indicators with their threshold values, however, cannot be used to develop the composite indicator without making prior adjustments. Firstly, the changes in the annual credit growth, the non-performing loans to total loans ratio, the annual growth of M2 and the annual volatility of the stock index that signal vulnerability are in opposite direction to those in the capital adequacy ratio and the liquidity ratio. Secondly, the magnitude of the values for these indicators differs and it is necessary to normalise them. To overcome these problems, we calculate the adjusted indicators as index points of the percentage change of the determined thresholds using the following formula:

$$I_{it}^a = \frac{I_{it} - I_i^t}{I_i^t} \cdot 100,$$

where I_{it}^a stands for the adjusted indicator i at time t , I_{it} represents the actual value of the indicator and I_i^t is the threshold value. Then, the adjusted indicators for the annual credit growth, the non-performing loans to total loans ratio, the annual growth of M2 and the annual volatility of the stock index are multiplied by a factor of -1 in order to get negative index points in the case of excessively high values. The multiplication for the other adjusted indicators is not necessary as their changes have opposite direction.

The last step before constructing the composite indicator is to assign weights for each of the components, subcomponents and indicators. One common method is to weight all the indicators equally (e.g. Albulescu, 2010; Lo Duca and Peltonen, 2012), another method is to use a principal-component analysis to estimate the weights (e.g. Stock and Watson, 2002; Illing and Liu, 2003), while some authors have implemented alternative methods (e.g. van den End, 2006). The development of our composite indicator follows the weighted-sum approach, whereby we give largest weight to the financial sector (75%), second largest to the monetary sector (15%) and smallest to the financial markets (10%). Further, equal weights of 25% are determined for the credit risk, solvency risk and liquidity risk subcomponents, while within the credit risk subcomponent, a weight of 15% is assigned for the non-performing loans to total loans ratio and 10% for the annual credit growth rate.

Table 1 shows details about the indicators taken into consideration in the development of the composite indicator of financial (in)stability.

Table 1: Financial indicators used in the development of the composite indicator for financial (in)stability

Component	Indicator	Threshold	Direction	Weight
Financial sector				75%
Credit risk	Annual credit growth	20%	↑	10%
	Non-performing loans/Total loans	20%	↑	15%
Solvency risk	Capital adequacy ratio	12%	↓	25%
Liquidity risk	Liquid assets/Short-term liabilities	40%	↓	25%
Monetary sector	Annual growth of M2	20%	↑	15%
Financial markets	Volatility in the stock index	100%	↑	10%

The composite indicator of financial (in)stability *CIF* is calculated as a weighted sum of the values of all adjusted indicators:

$$CIF = \sum_{i=1}^n \alpha_i I_{it}^a,$$

where I_{it}^a represents the adjusted indicator i at time t and α_i is the corresponding weight. Depending on the movements in the values of the employed indicators, the composite indicator may be positive, negative or equal to zero. The signals from its value can be explained using the following rule: the higher positive value, the higher financial stability. Yet, it should be noted that extremely high positive values indicate a conservative behaviour with low credit activity and very little stimulus for development of the corporate sector and future economic growth. On the basis of the data for the analysed countries, we determine several intervals of values with explanations of the signals that they give regarding financial stability. The financial sector is considered stable and capable of avoiding minor vulnerabilities and disturbances when its values are greater than 20. This is usually the case when none of the indicators pass over its threshold and there are no signs of any crisis. If the values are greater than 30, then there is room for expanding the credit activity of the banking sector, while values over 40 indicate to a conservatism in the banking sector with very low credit activity. The values in the interval between 10 and 20 imply that the financial sector is vulnerable to shocks and disturbances. These are scenarios in which the values of the indicators approach the thresholds or there is already an indicator that crosses its threshold value. The next interval encompasses the range from 0 to 10 and describes a case associated with large disturbances in some segments of the financial sector, prompting rapid worsening of the financial conditions, raised warnings for the emerging of a crisis. As the values approach closer to zero, it is likely that some crisis have already occurred. In case of negative values for *CIF*, there are negative trends in the movements in most segments of the financial sector, different sorts of crises have already appeared and the adverse effects from the financial instability have already affected the other sectors in the economy. The interval scale of the values for *CIF* are presented in Table 2.

Table 2: Interval scale of values for CIF with signals of financial instability

Interval	Signals
over 20	The financial sector is stable. It can easily cope minor disturbances and has the potential to incentivise sustainable economic growth on the long-run. If the value exceeds 40, it signals conservatism and prompts overtaking immediate measures for increasing credit activity and restoring investor's confidence; if it exceeds 30, there is a room for expanding credit activity; if it approaches 20, it signals rising pressures on some segments of the financial sector.
10-20	The financial sector is vulnerable. Shocks and disturbances occur in some segments and are early signs of crises. The regulatory authorities have to react in order to prevent more severe effects and spreading to other segments. If the value is slightly below 20, it usually signals worsening in the financial segments of the financial sector; if it approaches 10, there is a more severe distress which evolves into a warning.
0-10	The financial sector fragile. It is difficult to cope the shocks and disturbances that hit the financial sector. The early signs of crises spread as contagion and affect other segments. There are raised warnings for the emerging of crises, while some sorts of crises have already occurred. If the value is slightly below 10, it is a warning of financial fragility and onset of a crisis; if it is closer to 0, the financial sector is already hit by crises with the potential to affect other sectors in the economy.
under 0	The financial sector is instable. Most sectors of the financial sectors are hit by crises that are difficult to cope. The effects from these crises have high impact on the other sectors in the economy.

Because of the strong interconnectedness in the financial sector in practice, a shock in one financial indicator is usually followed by changes in negative direction for other indicators. That said, the probability that shocks in the values of some indicators may be compensated by stability in the movement in other indicators is not very likely. However, we find that the analysis of the constituent indicators is helpful in explaining the source of distress in the financial sector and the nature of the crises which may occur. Thus, depending on the number of indicators deviating from their threshold values, we differentiate between the following types of distress: "sign", "warning" and "crisis". A "sign" is a case in which only a small segment of the financial sector exhibits vulnerability. This vulnerability in most of the cases may spread as contagion and affect other segments to provoke greater instability. In our paper, a sign occurs when only one indicator passes over its threshold value. Considering that the vulnerability to a single segment spreads as contagion to other segments, the probability of a crisis significantly increases. That said, we define a "warning" as a case in which the vulnerability has affected a larger segment or has spread to another segments of the financial sector. The warning arises when two indicators deviate from their threshold values. Finally, we define a "crisis" as a case in which a large part of the financial sector has been affected and it already has the potential of significantly harming other sectors in the economy. This is a case when at least three indicators cross their threshold values. Different scenarios with the types of distress that they signal can be seen in Table 3.

Table 3: Scenarios of financial stability distress

Indicator	Type of distress	Signal
Annual credit growth	sign	early sign for a banking crisis
Non-performing loans/Total loans	sign	early sign for a banking crisis
Capital adequacy ratio	sign	early sign for a solvency crisis
Liquid assets/Short-term liabilities	sign	early sign for a liquidity crisis
Annual growth of M2	sign	early sign for inflationary pressures
Volatility in the stock index	sign	early sign for a financial crisis
<i>Annual credit growth and</i>		
Non-performing loans/Total loans	warning	warning for a banking crisis
Capital adequacy ratio	warning	warning for a solvency and systemic crisis
Liquid assets/Short-term liabilities	warning	warning for a liquidity and systemic crisis
Annual growth of M2	warning	warning for a banking crisis
	sign	early sign for macroeconomic instability
Volatility in the stock index	warning	warning for a banking and financial crisis
<i>Non-performing loans/Total loans and</i>		
Capital adequacy ratio	warning	warning for a systemic crisis
Liquid assets/Short-term liabilities	warning	warning for a systemic crisis
Annual growth of M2	warning	warning for a banking crisis
	sign	early sign for macroeconomic instability
Volatility in the stock index	warning	warning for a banking and financial crisis
<i>Capital adequacy ratio and</i>		
Liquid assets/Short-term liabilities	warning	warning for a systemic crisis
Annual growth of M2	warning	warning for a solvency crisis
	sign	early sign for macroeconomic instability
Volatility in the stock index	warning	warning for a solvency and financial crisis
<i>Liquid assets/Short-term liabilities and</i>		
Annual growth of M2	warning	warning for a liquidity crisis
	sign	early sign for macroeconomic instability
Volatility in the stock index	warning	warning for a liquidity and financial crisis
<i>Annual growth of M2 and</i>		
Volatility in the stock index	warning	warning for a financial crisis
<i>Annual credit growth and</i>		
Non-performing loans/Total loans and	crisis	banking crisis
Annual growth of M2	warning	warning for macroeconomic instability
<i>Annual credit growth and</i>		
Non-performing loans/Total loans and	crisis	banking and financial crisis
<i>Volatility in the stock index</i>		
any combination of three involving	warning	warning for macroeconomic instability and financial crisis
Annual growth of M2 and		
Volatility in the stock index		
any other combination of three involving	crisis	systemic and financial crisis
Volatility in the stock index	crisis	systemic crisis
any other combination of three	crisis	systemic crisis
any combination of more than three	warning	warning for macroeconomic instability

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BANK-SPECIFIC DETERMINANTS OF PROFITABILITY IN MACEDONIA

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ABSTRACT

The aim of this paper is to examine bank-specific determinants of profitability in Macedonia over the period from 2007 to 2013, which corresponds to the Global financial and economic crisis. The main motivation behind the paper stems from the fact that, given the dominant role of banks, it is obvious that sound and profitable banking sectors are crucial for the stability of the country's financial system. Bank profitability as measured by ROA is specified as a function of the following bank-specific factors: bank size, capitalisation, asset composition, asset quality, liquidity, funding, cost management, and diversification of bank activities. The empirical panel data model is estimated by employing the generalised least squares estimator with fixed-effects. The main findings from the study are as follows: operating expenses and the quality of loan portfolio are the most important determinants influencing bank profitability in Macedonia. Also, market share and capital ratios have important positive effects on profitability and, to a somewhat lower extent, this is true for diversification of bank activities as well as the reliance on deposits as a source of funding. On the hand, liquidity, bank size and long-term lending are inversely associated with bank profitability.

Keywords: Bank profitability, Macedonia, Panel data models.

JEL classification codes: G21, M21

INTRODUCTION

Though, compared to the EU average, Macedonia's banking sector is still underdeveloped in terms of financial intermediation indicators, banks have a dominant share in the financial system. The dominant position of banks could be illustrated by comparing the size of the banking sector vis-a-vis the size of the non-banking financial institutions (measured by their assets/GDP ratio) and the size of the capital market (measured by the stock market capitalization as a percentage of GDP). For instance, by the end of 2013, banks accounted for 87.6% in the total assets of the financial sector in Macedonia, i.e. their total assets were 7.5 times larger compared with those of non-depository financial institutions, such as: pension funds, insurance companies, leasing companies, investment funds, and finance companies. Similarly, the total assets of the banking sector have exceeded the stock market capitalisation by 3.8 times (NBRM, 2014a).

Given the predominant role of the banking sector, it is obvious that sound and profitable banks are crucial for the stability of the financial system. In these regards, high and sustainable profitability seems to be a necessary condition for improving the capacity of banks to preserve solvency in the wake of negative shocks. This is best illustrated by the recent experience during the Global financial and economic crisis: though it has had a considerable impact in the whole region, its effects on the Macedonia's banking sector remained modest. On the other hand, profitability is a reflection of some important qualitative aspects in the operation of banks, such as: the quality of the management, corporate governance, banks' strategies, risk management systems etc.

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The main motivation behind the paper stems from the fact that, given the dominant role of banks, it is obvious that sound and profitable banking sectors are crucial for the stability of the country's financial system. Bank profitability as measured by ROA is specified as a function of the following bank-specific factors: bank size, capitalisation, asset composition, asset quality, liquidity, funding, cost management, and diversification of bank activities. The main findings from the study are as follows: operating expenses and the quality of loan portfolio are the most important determinants influencing bank profitability in Macedonia. Also, market share and capital ratios have important positive effects on profitability and, to a somewhat lower extent, this is true for diversification of bank activities as well as the reliance on deposits as a source of funding. On the other hand, liquidity, bank size and long-term lending are inversely associated with bank profitability. The rest of the paper is organized as follows: Section 2 provides an overview of the empirical literature, Section 3 describes data and methodological issues, while Section 4 discusses the empirical findings. The final section concludes.

REVIEW OF THE EMPIRICAL LITERATURE

Given the importance of banks for a country's financial system, a large strand of empirical literature on the determinants of bank profitability has been accumulated over time. The studies differ with the methodology employed as well as the measure of bank profitability. Also, some studies focus on individual countries, while other researchers work within a multi-country setting. Among the former, Haslem (1968, and 1969) studies the effects of management, bank size, location and economic environment on US banks' profitability in 1963-1964. Berger (1995a) provides empirical evidence of a positive relationship between bank profitability and capitalisation in the USA during 1983-1992. Angbazo (1997) investigates the determinants of US banks' interest margin during 1989-2003, finding that management efficiency, default risk, opportunity cost of bank reserves and leverage have positive effects on interest margins. Kosmidou et al. (2005) investigate the profitability of UK banks during the period 1995-2002. Among bank-specific factors, they show that operating expenses, capital strength, liquidity, and bank size have dominant influence on profitability.

Heffernan and Fu (2008) study the performance of Chinese banks during 1999 - 2006 and provide evidence that it is mostly influenced by type of banks as well as macroeconomic factors, while bank size and foreign ownership do not matter. García-Herrero et al. (2009) analyze bank profitability of Chinese banks for the period 1997-2004. Their results imply that well-capitalised banks and those with relatively larger share of deposits are more profitable, while bank inefficiency, government ownership and a higher market share tend to reduce profitability.

Alper and Anbar (2011) provide evidence that bank size, non-interest income, loan volume and non-performing loans are the main bank-specific determinants of profitability in Turkey. Guru et al. (2002) analyse the profitability of Malaysian banks, finding that bank profits are mainly determined by the share of loans and deposits in total assets, operating expenses, and capital ratios. Sufian and Chong (2008) examine the determinants of Philippine banks profitability during the period 1990-2005. Their main findings are as follows: bank size, credit risk, and staff expenses are negatively linked with profitability, while non-interest income and capitalisation have positive effects on profits. Sufian and Habibullah (2009) examine the performance of Bangladeshi banks, showing that the main determinants of bank profitability are the volume of loans, bank size, loan loss provision, and non-interest income. Studying the performance of Macao banks, Vong and Chan (2009) show that capital strength leads to higher bank profits, while loan loss provision and reliance on deposits as a source of funding reduce profitability. Finally, investigating determinants of bank profitability in Korea, Sufian (2011) provides evidence that the volume of loans, diversification of

bank activity, and market concentration have positive effect on profits, while liquidity, credit risk and overhead costs reduce profitability.

As for the multi-country studies, Bourke (1989) studies the determinants of bank profitability on a sample of industrialised economies. He finds a positive relation between profitability and capital adequacy, liquidity, and concentration, while confirming the negative effects of operating expenses. Molyneux and Thornton (1992) examine the determinants of bank profitability for a panel of 18 European countries. They find a positive relationship between bank profitability and capitalisation, staff expenses, and bank concentration. On the other hand, the level of bank's liquidity is negatively related with profitability. Goddard et al. (2004a, and 2004b) investigate the interactions between bank growth and profitability in several EU countries. They show that capitalisation and liquidity have the strongest effects on bank profits and, also, provide some evidence of a positive association between bank profitability and the concentration of the banking sector. Iannotta et al. (2007) evaluate the impact of ownership models and the degree of ownership concentration on bank performance in 15 European countries. They find that mutual banks and government-owned banks have lower profitability than private banks. Also, bank size, volume of loans, loan losses, and capitalisation all have positive effects on profitability. Similarly, Pasiouras and Kosmidou (2007) study bank performance in 15 EU countries, finding that, along with several bank-specific factors, financial market structure and macroeconomic environment are important determinants of bank profits. Finally, Saunders and Schumacher (2000) investigate the determinants of interest rate margins in seven OECD countries, finding that the margins are higher in countries with market imperfections (regulatory taxes, especially interest restrictions on deposits), high reserve requirements, high capital ratios, non-competitive market structures and macroeconomic instability (interest rate volatility).

Based on a sample of 41 Sub-Saharan African countries, Flamini et al. (2009) find that credit risk, bank size, and diversification of bank activity all have positive effects on bank profitability. Olson and Zoubi (2011) study the link between bank efficiency and profitability in 10 Middle East and North Africa countries. They show that loan/assets ratio, capitalisation, and government ownership have positive effects on bank profits, while operating expenses and the securities/assets ratio have negative effects. Demircuc-Kunt and Huizinga (1999) study bank-specific, legal, institutional and macroeconomic determinants of bank profitability in 80 countries during 1988-1995. Their main findings are as follows: well-capitalized banks are more profitable, while banks with high non-interest earning assets and retail banks are less profitable; foreign banks have higher profits compared to domestic banks only in developing countries; and concentration in the banking sector and bank size positively affect bank profitability. Claessens et al. (2001) and Micco et al. (2004) come to similar results.

There are several papers dealing with bank efficiency and/or profitability in Central and Eastern Europe (CEE). For instance, Havrylchyk and Jurzyk (2006) analyse the determinants of bank profitability in 10 CEE economies. Their results imply that capitalisation and market concentration exert positive effects on profitability, while loan growth has negative effects. Grigorian and Manole (2002) analyse bank efficiency in 17 transition countries. They find a positive link between efficiency and capitalisation, market share and foreign ownership. Similarly, Bonin et al. (2005) study the effects of foreign banks on bank performance in eight transition economies. Their findings suggest that government banks are less efficient than private ones; while foreign ownership improves efficiency. As for bank profitability, they provide evidence that retail banks and banks with high non-interest expenses have lower profitability.

The empirical evidence on the determinants of bank profitability in SEE is quite limited consisting of several papers focused mainly on Greece. For instance, Athanasoglou et al. (2008), Mamatzakis and Remoundos (2003), Spathis et al. (2002) provide evidence that bank profits are mainly influenced by bank size, operating expenses, the share of loans, non-performing loans, and capitalisation. Athanasoglou et al. (2006) analyse bank-specific, industry-related and

macroeconomic determinants of bank profitability in SEE. They find that, among bank-specific variables, credit risk, capitalisation, and operating expenses are crucial determinants of bank profitability. Iloska (2014a, 2014b) studies bank profitability in Macedonia and finds that operating expenses and loan-loss provisions exhibit negative relationship with bank profitability, while staff expenses, bank size and the share of loans in total assets have positive effects on profitability.

DATA AND METHODOLOGY

I choose the return on assets (ROA) as a measure of profitability instead of the return on equity (ROE), because the latter disregards bank's financial leverage. Given that profits are a flow variable, while assets represent a stock, I calculate ROA in terms of average assets by taking the average value of assets of two consecutive years as a denominator. Regarding data issues, the sample consists of all privately-owned banks in Macedonia, i.e. 15 banks with a total of 105 annual observations. The sample covers the period from 2007 to 2013, which corresponds to the Global financial and economic crisis. The sample choice is determined by data availability as well as the desire to avoid the potential structural break problems. The data on bank-specific factors were manually collected from the financial statements of each bank (as included in their annual reports), which could be found on their websites.

I specify bank profitability as measured by ROA as a function of the following bank-specific factors: bank size (log of total assets), capitalisation (equity/total assets ratio), asset composition (loans/total assets ratio, long-term loans/total loans ratio, retail loans/total loans ratio), asset quality (loan loss provision/total loans ratio, non-performing loans/total loans ratio), funding (deposits/assets ratio), cost management (cost/income ratio, wage expenses/total assets ratio), diversification of bank activities (off-balance items/total assets ratio), and market share (the share of individual bank's assets in the total assets of the banking sector). The descriptive statistics for the variables included in the analysis is given in Table 1.

Therefore, I estimate the following general model:

$$Y_{it} = \beta_0 + X'_{it} \beta_1 + u_{it} \quad (1)$$

where: Y_{it} is the dependent variable; X'_{it} is the vector of explanatory variables; β_0 is the intercept; β_1 is a k -dimensional vector of regression parameters; u_{it} is the error term; while i and t refer to country and time specific subscripts.

The panel consists of N cross-sectional units, denoted $i = 1, \dots, N$ ($N = 15$ banks), observed at each of T time periods, $t = 1, \dots, T$ ($T = 5$ years), which gives 105 ($N \times T$) total observations. In what follows, I provide a brief justification for including the explanatory variables in the empirical model along with their expected signs.

Table 1: Summary statistics of the variables

Variable	Obs.	Mean	Median	Minimum	Maximum	Std. Dev.
<i>roa</i>	105	- 0.006507	0.0022863	-0.111400	0.045406	0.029792
<i>cap</i>	105	0.196498	0.137840	0.071372	0.904745	0.154717
<i>la</i>	105	0.550130	0.592637	0.123656	0.913125	0.170780
<i>da</i>	105	0.658867	0.670867	0.048776	0.857492	0.154721
<i>llpl</i>	105	0.032445	0.018008	0.000696	0.539281	0.059620
<i>logta</i>	105	16.01328	15.89152	13.04932	18.27951	1.328114
<i>wta</i>	105	0.020889	0.017317	0.009306	0.077510	0.012546
<i>share</i>	105	0.066667	0.032439	0.001838	0.252490	0.081401
<i>cir</i>	105	0.894433	0.805412	0.386489	4.215043	0.493608
<i>long</i>	94	0.487617	0.493200	0.058600	0.777800	0.143412
<i>retail</i>	104	0.401024	0.371650	0.075100	0.876000	0.205894
<i>loanq</i>	102	0.138407	0.097400	0.549000	0.004000	0.107207
<i>offta</i>	104	0.119082	0.109080	0.023328	0.319578	0.060929

Source: Author's own calculations

Measuring the share of loans in the total assets, the variable termed *la* can serve as a proxy for bank's liquidity. For obvious reasons, one should expect an inverse relationship between liquidity and profitability: banks that hold their assets in liquid instruments (which are less risky and offer lower returns) are expected to show lower profitability (Rose and Rose, 2001; Koch and Macdonald, 2003). Hence, the regression coefficient of this variable is expected to be positive.

Credit risk is one of the most important factors that affect bank profitability. In fact, the variable *la* can be interpreted as a measure of the bank's credit exposure, too. Since loans are much riskier than alternative bank assets, it follows that the larger the bank's loan portfolio the higher bank's profitability. However, large fractions of high-risk loans usually imply large loan loss provision, which reduce their profitability. As a result, when one views the relation between credit risk and profitability in terms of the quality of loans, this variable is expected to have a negative sign. In the empirical model I use two alternative measures of the quality of bank's loan portfolio: the variable *llpl* denotes the loan loss provision/total loans ratio while the variable *loanq* shows the lower quality loans to total loans. In these regards, lower quality loans comprise bank's loans that belong to the risk categories C, D and E. This variable does not coincide but it is very close to the share of non-performing loans.

For obvious reasons, the sources of funding have an important effect on bank profitability. Hence, banks that rely predominantly on deposits, which are the most stable and the cheapest sources of funds, should exhibit higher profitability. In other words, the coefficient before the variable *da* (the share of deposits to total assets) is expected to have a positive sign.

Though capitalisation (*cap*) is a "natural" candidate as a factor that affects bank profitability, the sign of this relationship is ambiguous. On the one hand, higher capitalisation ratio fosters bank's creditworthiness, thus, increasing its borrowing capacity in the capital market. As a result, well-capitalised banks face lower costs of funding leading to higher profitability. In addition, since capital serves as a cushion for absorbing potential losses, higher capitalisation allows a bank to make riskier loans, thus raising profitability. On the other hand, the relationship between capitalisation and bank profitability may be negative as the higher capital ratio could imply a low volume of risk-weighted assets (Berger, 1995a). Finally, the discussion on the effects of capitalisation on profitability should

acknowledge the fact that bank capital is endogenous since higher profit increases the capital through retained earnings.

Intuitively, lower operating expenses should lead to higher bank profitability (Bourke, 1989). Hence, *a priori* one should expect a negative relationship between the cost-to-income ratio (*cir*) and bank profitability. On the other hand, when we use the payroll expenses/total assets ratio (*wta*) as a proxy for operating expenses (under the justification that these account for the lion's share in total operating expenses - 40% in 2014), the sign of the regression coefficient might be positive, too. For instance, if a bank employs highly qualified personnel, it might pay efficiency wages in order to stimulate and labour productivity.

Bank size, measured by the log of total assets (*logta*), is considered one of the most important determinants of profitability, though, here, too, there is no consensus on the sign of the relationship. On the one hand, large banks are able to exploit the economies of scale, thus, reducing operating expenses and increasing their profitability. Also, some authors link bank size to capital ratios, arguing that, through this channel, larger banks are able to lower the costs of funding and to increase their profitability (see Bourke, 1989; Goddard et al., 2004; Haslem, 1968; Molyneux and Thornton, 1992; Short, 1979). On the other hand, large banks represent complex organizations which are difficult to manage, which could result in scale diseconomies and lower profitability (Berger et al., 1987).

The variable *share* reflects the individual bank's market share, i.e. its share in the total assets of the banking sector. As for its expected sign, higher market share should be associated with higher profitability. Indeed, the Structure-Conduct-Performance (SCP) hypothesis predicts that banks with large market shares are able to exercise market power and earn monopolistic profits. Similarly, the Efficient-Structure (ES) hypothesis argues that more efficient banks are more profitable and, at the same time, they are able to gain a larger market share (Berger, 1995b). Hence, notwithstanding whether higher market share reflects efficiency or oligopolistic market structure, the regression coefficient before the variable *share* is expected to have a positive sign.

Finally, the regression model includes variables reflecting the composition of loan portfolio as well as the diversification of bank activities. Among the former, the variables *long* (the share of long-term loans in total loans) and *retail* (the share of retail loans in total loans) should be positively related with bank profitability. Specifically, long-term loans (defined as those with residual maturity of more than a year) usually bear higher risk, which should be compensated by higher interest rates. As for the retail loans, banks are able to charge higher interest rates due to their lower interest rate elasticity and/or the lower bargaining power of retail consumers (Rose and Rose, 2001). The diversification of bank activities is proxied by the variable denoted *offta* (off-balance items/total assets ratio). Since diversification should foster profitability, the expected sign of the coefficient is positive.

I analyse the bank-specific determinants of profitability by means of the fixed-effects panel data model for the following reasons: *First*, I am only interested in the relationship between profitability and bank-specific determinants in Macedonia, i.e. neither I generalise the results from the study to the whole population nor I am interested in analysing the effects of the country's macroeconomic and institutional factors on bank profitability, such as: output, inflation, monetary policy etc.; *Second*, following Wooldridge (2002), I discard the random effects model because the assumption of non-correlation between the bank-specific term and the regressors does not seem likely. Formally, the last argument in favour of using fixed over random effects model is confirmed by the results from the Hausman-test (Hausman, 1978). As shown in Table 2, in all regressions, the null hypothesis of the Hausman-test can be rejected, implying that the fixed effects model is preferred over the random effects model.

ESTIMATION AND DISCUSSION

Table 2 presents the estimates of several specification of the fixed effects model, estimated by the Generalised Least Squares with robust standard errors. In the general model (regression 1), I regress *roa* to all bank-specific variables: *wta*, *da*, *offta*, *la*, *llpl*, *logta*, *long*, *share*, *retail*, and *cap*. In the lower part of the first column one can observe the relatively high R^2 of the regression. As can be seen, the results indicate that all regression coefficients are statistically significant at least at the 5% significance level with the exception of *retail*. Hence, it seems that the orientation towards retail lending does not contribute to higher profitability. In fact, the coefficient before this variable is negative implying that retail lending, in fact, worsens profitability. These explanation behind these findings could be sought in two directions: *first*, most of the loans made by the banks in Macedonia are small as measured by international standard, and *second*, due to their small size, these loans are associated with large operating costs.

Table 2 Estimation output from the regression model

Variables	(1)	(2)	(3)	(4)
<i>const</i>	0.204536*** (0.069843)	0.222751*** (0.065813)	-0.000308 (0.063792)	0.157392*** (0.031174)
<i>wta</i>	-0.943838*** (0.311862)	-0.990761*** (0.303841)	-0.499386** (0.235456)	
<i>cir</i>				-0.035834*** (0.005008)
<i>da</i>	0.025663** (0.011981)	0.021749* (0.011884)	0.034507 (0.020958)	0.027523** (0.011381)
<i>offta</i>	0.033434*** (0.010609)	0.035886*** (0.010256)	0.027917 (0.017915)	0.024772** (0.010313)
<i>la</i>	0.025221** (0.011601)	0.027673** (0.011433)	0.024059 (0.016926)	0.018953** (0.008327)
<i>llpl</i>	-0.433760*** (0.043056)	-0.433887*** (0.042914)		-0.442979*** (0.030540)
<i>loanq</i>			-0.105891*** (0.033671)	
<i>logta</i>	-0.014225*** (0.003812)	-0.015591*** (0.003469)	-0.001919 (0.003256)	-0.009538*** (0.001854)
<i>long</i>	-0.012296** (0.005668)	-0.012387*** (0.004592)	-0.023964** (0.009267)	-0.010043** (0.004147)
<i>share</i>	0.144608** (0.056906)	0.161244*** (0.035870)	0.011183 (0.039972)	0.057538 (0.035378)
<i>retail</i>	-0.013391 (0.014424)			
<i>cap</i>	0.071608*** (0.020977)	0.066929*** (0.020533)	0.099355*** (0.025647)	0.010480 (0.016779)
Hausman-test	0.0086	0.0047	0.0425	0.0358
Adjusted R ²	0.823617	0.831550	0.903650	0.682914
Obs.	94	94	94	94

Notes: White heteroskedasticity robust standard errors in parentheses.

*** / ** / * denotes significance at 1%, 5% and 10% level of significance, respectively.

As for the statistically significant regressors, most of them have the *a priori* expected signs. Specifically, the regression results suggest that operating expenses (as proxied by the staff expenses) and higher credit risk exert a negative influence on bank profitability. In addition, these two regressors have the highest coefficients point to their economic importance as determinants of bank profitability in Macedonia. These findings are quite expected having in mind the relatively high percent of non-performing loans as well as the observed low cost efficiency of the Macedonia's banking sector. For instance, by end of the third quarter of 2014, non-performing loans stood at 12.2%, staff expenses accounted for 22% of total income, and the cost-to-income ratio was 56% (NBRM, 2014b).

On the other hand, the coefficients of three variables (*da*, *offta*, and *la*) are positive, suggesting that reliance on deposits as a source of funding, diversification of bank activity (as reflected in the increased share of off-balance services), and larger credit exposure (or, equivalently, lower holdings of liquid low-return assets) foster bank profitability. Further on, the variable *share* has the expected positive sign, too. As mentioned in Section 3, this result may be explained by two different theoretical models. The SCP hypothesis predicts that banks with large market shares are able to exercise market power and earn monopolistic profits. Given the highly concentrated banking sector in Macedonia with six banks holding 80% of total assets in 2014 (NBRM, 2014b), the coefficient before *share* could be interpreted as providing empirical support to the SCP hypothesis. Similarly, the ES hypothesis argues that more efficient banks are more profitable and, consequently, they are able to gain a larger market share. Although I cannot provide direct evidence in favour of the ES hypothesis, as shown above, the regression results imply that better control of operating expenses indeed leads to higher profitability.

Within the first block of regression results three variables (*logta*, *cap*, and *long*) are statistically significant, but their signs require special interpretation. For instance, banks size, as measured by the logarithm of bank assets, is negatively associated with bank profitability. This finding suggests that larger banks in Macedonia are not able to exploit the economies of scale, which probably disappear relatively quickly. On the contrary, the negative sign before *logta* implies that large banks are complex organizations, thus, facing scale diseconomies. As for capitalisation, the positive coefficient before *cap* suggests that higher capital ratio increases bank profitability through two possible channels: *first*, by enhancing bank's creditworthiness and increasing its borrowing capacity in the capital market; and *second*, by enabling banks to absorb potential losses and to make riskier loans. Finally, the negative coefficient before *long* seems counterintuitive since loans with longer maturity should normally bear high credit risk and, hence, higher returns. However, this result indicates that higher interest rates might not compensate fully for the increased credit risk associated with these loans, which has an adverse effect on profitability. Also, the negative relationship between loan maturity and bank profitability may reflect the increasing share of housing loans in the loan portfolio of Macedonia's banks. Since these loans are made against collateral, banks are able to charge lower interest rates despite their long maturity.

The second column of Table 2 shows the results from the empirical model after excluding the only statistically insignificant variable (*retail*). Here, the regression coefficients have retained virtually the same magnitude with some small changes in their statistical significance. More precisely, *da* has become less significant, while the significance of *long* and *share* has improved. Also the adjusted R^2 has remained the same as in the general model, thus confirming that *retail* is indeed a redundant variable. Therefore, I will not comment the results from this slightly modified specification any further.

The third regression of Table 2 presents the results with *loanq* as a proxy for the quality of the loan portfolio. The general conclusion regarding the relationship between credit risk and bank profitability remains unchanged, i.e. this variable, too, is highly significant and has the "correct" negative sign. Yet, the magnitude of the regression coefficient is much lower compared to *llpl*. However, the inclusion of *loanq* in the regression has produced substantial changes in the statistical

significance of the rest of coefficients: *da*, *offta*, *la*, and *share* have become insignificant; the size of the coefficient of *wta* has almost halved; while the coefficient of *cap* has increased in magnitude. Also, the adjusted R^2 of the regression has increased.

The last column of Table 2 presents the regression specification in which *wta* has been substituted by *cir* as a measure of bank's operating costs. This variable, too, is statistically significant and with the expected negative sign, though its magnitude is much smaller than *wta*. This is probably due to the way this variable is calculated: it is a ratio between operating expenses (staff expenses, depreciation and other expenses) and net-operating income (net-interest income, net-fee income, net-foreign exchange income, net-gains on financial instruments held for trading and other income). Since its denominator is the operating income on net basis, it seems that *cir* is inferior as a proxy of operating expenses. Nevertheless, the overall conclusion on the negative relationship between operating expenses and bank profits remains unchanged. As for the other regressors, their magnitude and statistical significance is virtually the same as in regressions 1 and 2, with *share* and *cap* being notable exception: not only have they become insignificant, but, also, the size of the coefficients is much lower. Finally, the adjusted R^2 of regression 3 has declined dramatically.

CONCLUSIONS

In this paper, I investigate the influence of several bank-specific determinants on profitability in Macedonia over the period from 2007 to 2013. I employ the fixed-effects panel data model estimated with Generalised Least Squares robust estimator. The results obtained from the study suggest that operating expenses and the quality of loan portfolio are the most important determinants influencing bank profitability in Macedonia. Also, I provide evidence that market share and capital ratios have important positive effects on profitability and, to a somewhat lower extent, this is true for diversification of bank activities as well as the reliance on deposits as a source of funding. On the hand, liquidity, bank size and long-term lending are inversely associated with bank profitability. The latter findings suggest that large banks in Macedonia face diseconomies of scale (probably related to overemployment) and that interest rates on long-term loans cannot compensate for the higher credit risk. In the future, the present research may be augmented in the following directions: *first*, by including macroeconomic as well as institutional determinants; *second*, by introducing dynamics in the empirical model; and *third*, by a multi-country analysis (for instance, focusing on South-East Europe).

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DETERMINANTS OF PROFITABILITY IN BANKING INDUSTRY: EMPIRICAL RESEARCH ON SELECTED BALKAN COUNTRIES

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ABSTRACT

Banks in their function of financial intermediaries play a very important role in the operation of every economy. Although the relative importance of banks varies substantially in different economies and different time periods, it is a widely held view that banks are essential for the performance of every modern economy. The stability of the financial system relies on the assumption that banks are sound and profitable enough to resist adverse shocks (Flamini et al., 2009).

The purpose of this paper is to examine the effect of bank-specific, industry-related and macroeconomic variable on bank profitability, using an empirical framework incorporating both the traditional structure-conduct-performance (SCP) and the efficiency hypothesis. In order to account for the dynamic nature of bank profits, we use a GMM estimator in testing the determinants of bank profitability on the case of the Balkan countries (Slovenia, Croatia, Serbia, Bosnia and Herzegovina, Montenegro and Macedonia) covering the period 2005-2010. The estimation results suggest that profits persist to some extent, indicating that the deviation from a perfectly competitive market structure is marginal. Among the bank-specific variables only size and market share variables are reported insignificant, the rest of the variable affect bank profitability in the anticipated way. The industry concentration variable is insignificant in explaining profitability. Finally, the results suggest that both inflation, and economic growth have no impact on bank profitability.

Keywords: Bank profitability, Balkan countries, macroeconomic, microeconomic and specific variables.

JEL classification codes: G21, C22, C51, C58

INTRODUCTION

Banks as financial intermediaries play a very important role in the operation of every economy. Although the relative importance of banks varies substantially in different economies and different time periods, it is a widely held view that banks are essential for the performance of every modern economy. The stability of the financial system relies on the assumption that banks are sound and profitable enough to resist adverse shocks (Flamini et al., 2009). Levine (1997), Rajan and Zingales (1998) argued that the economic literature offers both theoretical and empirical evidence suggesting a positive relationship between developments in the financial sector and economic growth. Thus, the health of the financial sector is crucial to the health of the general economy. In addition to this, the study of bank's performance becomes even more important in the view of the most recent events. The ongoing financial and economic crises clearly pointed out that the world-wide economic activity would be significantly damaged if the most prominent intermediate financial

agents are not able to conduct their function properly. Investigating the determinants of bank profitability can help managers as well as investors in dealing with the uncertainty related with globalized markets. In line with this, Mamatzakis and Remoundos (2003) argue that one of the advantages of investigating performance determinants is that it allows economic agents to observe areas in which adjustments should be made, and the instruments with which these adjustments can be achieved. Moreover, this will also benefit economic policy makers in a way that will allow them to understand, and measure the impact that corporate performance has on the economy and form policy accordingly.

As mentioned previously, understanding the determinants of bank profitability has been a matter of a wide theoretical and empirical debate. However, this paper differs from other studies conducted in this area in several aspects. First, to the best of our knowledge there are only few papers testing this relationship in countries of South Eastern Europe with none of them that focus on the Balkan countries. In the past two decades, the financial systems of these countries have been through a great deal of reforms affecting both the macroeconomic and institutional stability of these countries. Although the reforms have been successful in improving the institutional and supervisory framework of the financial institutions, the financial markets of these countries still lags behind the quality of the developed markets in the EU (European commission, 2011). Following the ratio total assets of all banks in the industry to GDP for each of the countries, it is clear that the role of banks remains central in the financing of economic activity. Second, unlike other studies, this paper represents a recent analysis covering the years 2005-2010, thus, capturing the extent to which these countries were affected by the global financial destabilization. Third, we extend previous studies by adding a bank-specific variable explaining individual bank cost efficiency. The efficiency estimates are obtained using a stochastic frontier analysis which captures the effect more accurately than any accounting calculations of efficiency (Atanasovska, 2015). Thus, the purpose of this paper is to investigate the profitability behaviour of bank-specific, industry-related and macroeconomic factors in the six countries: Bosnia and Herzegovina, Croatia, Macedonia, Montenegro, Serbia, and Slovenia, covering the period 2005-2010.

THEORETICAL BACKGROUND

Throughout the literature, the study of bank profitability has been investigated through the perspective of different theories or hypotheses. Initially, the conventional price theory resulted in the Structure-Conduct-Performance (SCP) paradigm. This hypothesis is a general statement on the determinants of market performance (Mamatzakis and Remoundos, 2003). By investigating the relationship between industry structure and performance, the Harvard School of thought argued that firms in more concentrated markets will earn more profits, irrespectively of their efficiency. This is because concentrated industries are generally associated with more market power (Carlton and Perloff, 2005, p.239). In other words, the SCP paradigm proposes that high barriers of entry lower the cost of collusion between firms and results in higher than normal profits for all market participants (Evanoff and Fortier, 1988). Thus, measures of industry structure can be used for explaining the differences in market performance across industries. Bain (1951) was the pioneer in the structure-profitability studies. He analyzed the relationship between rates of return, industry structure and barriers of entry looking at the American manufacturing industry in the period 1936-1940. Following his results, he presented the hypothesis that profits should be higher in industries with high concentration ratio and high barriers to entry, suggesting that concentration leads to non-competitive behaviour among the economic agents. Following Bain's research, Mann (1966), investigated the relationship between seller concentration, barriers of entry and profits. By examining the correlation between profits and his own estimates of barriers to entry, Mann (1966) confirmed Bain's findings suggesting that the results hold even for the period following the Great

Depression. By using the price-cost margin as a measure of performance, Collins and Preston (1968) attempted to identify the relationship between the market concentration and the industrial performance by observing the food manufacturing industry. The authors also found a significant positive relationship between price-cost margins and concentration. The SCP paradigm is one of the most tested hypotheses in the industrial organization literature (Evaboff and Fortier, 1988), and it has been criticised on many grounds among which is the weak theoretical framework of the concentration-performance relationship.

The Chicago School of thought offered an alternative view explaining the link between market structure and performance. Demsetz (1973) challenged the traditional Structure-Conduct-Performance paradigm by arguing that there is no reason to assume that competitive behaviour does not lead to market power. In his view, companies that explore better ways to satisfy consumer's needs, and employ better technology in their production process are more likely to enjoy a certain degree of market power with respect to their rivals. With his research results he gave rise to an alternative explanation regarding the positive relationship typically found between industry structure and performance. He argued that superior efficiency of large firms is the reason why some firms acquire greater market share which results in increased level of concentration. Thus, firms gain greater profits not due to collusive behaviour but because of their higher efficiency (comparative superiority). Following Demsetz (1973) footsteps, Webster (1996) made an attempt to further investigate the relationship between concentration and profitability by including a measure of economies of scale. In other words, Webster (1996) tried to determine whether or not "the impact of concentration on profitability varies with economies of scale". His results suggested that the nature of the concentration-performance relationship changes with prevailing scales of economies suggesting that superior talent and technology is what drives efficiency which in turn leads to a greater share and higher profits.

In testing both the SCP and the efficiency hypothesis, virtually all studies using manufacturing data have reported a positive relationship between concentration and profitability thus, it is only logical to expect such a relationship to hold in the banking industry (Weiss 1974). However, both the SCP and the efficiency hypotheses have frequently been evaluated with mixed results. A key result in the work of Short (1979), Bourke (1989), Molyneux and Thornton (1992), Athanasoglou et al. (2006), and Pasiouras and Kosmidou (2007) is that the effect of concentration on bank performance is positive and statistically significant which provides evidence in support of the SCP hypothesis in the banking industry. On the other hand, Mamatzakis and Romoundos (2003) and Staikouras and Wood (2003) reported results that are not consistent with the traditional structure-conduct-performance paradigm, they report no relationship between industry concentration and bank profitability. One of the main purposes of this paper is to distinguish between the SCP and efficiency hypotheses in evaluating the main determinants of bank performance on the example of the selected Balkan countries.

MODEL SPECIFICATION AND DATA

Background

The Balkan region provides an interesting context for analyzing bank profitability. Although these countries are different in terms of their history, the banking sectors went through similar transition process. Each country was faced with a delayed implementation of major economic reforms due to political events. This resulted in prolonged inadequate bank regulation that finally led to the financial crises that took place in the late-1990s. Subsequent to such crises, governments change their former policies, and the processes of liberalization, consolidation and privatization took place. In the transition process, the banking sectors were transformed from the former socialist mono-bank systems to market oriented, privately owned sectors (Fang et al., 2008). Although this

restructuring process received considerable interest, very few papers focus on the former Yugoslavian region. One possible reason for this is unavailability of data; it is only recently that sufficient necessary and reliable data became available to permit an empirical analysis of the banking industry (Fang et al., 2008).

The model

This study employs an unbalanced annual data for all six Balkan countries: Bosnia and Herzegovina, Croatia, Macedonia, Montenegro, Serbia and Slovenia during the period 2005-2010. The main source of bank-specific information is BankScope database. The macroeconomic variables are obtained from the World Bank database and the index for banking reform is obtained from the European Bank for Reconstruction and Development (EBRD). To test the relationship between bank profitability and the bank-specific, industry related and macroeconomic determinants, we estimate a model in the following general linear form:

$$\Pi_{it} = \alpha + \sum_{j=1}^J \beta_j BSV_{it}^j + \sum_{l=1}^L \beta_l ISV_{it}^l + \sum_{n=1}^N \beta_n MV_{it}^n + \varepsilon_{it} \quad (1)$$

where Π_{it} is the profitability of bank i in year t , with $i=1, 2 \dots I$; $t=1, 2 \dots T$. α is a constant term, BSV are the bank-specific variables, ISV refers to the industry-specific variables, MV are the macroeconomic variables and ε_{it} is the disturbance which is a sum of the unobserved bank-specific effect¹²² and the idiosyncratic error¹²³.

Following Berger et al. (1995), Goddard et al. (2004), Mamatzakis and Remoundos (2003), Athanasoglou et al. (2008) and Flamini, McDonald and Schumacher (2009) bank profits show tendency to persist over time. This reflects “impediments to market competition, informational opacity and/or sensitivity to regional/macro-economic shocks to the extent that these are serially correlated” (Athanasoglou et al., 2008, p.126). In other words, due to market structure imperfections or high sensitivity to autocorrelated regional or macroeconomic factors profits remain persistent over time (Flamini et al., 2009). Therefore, we opt for a dynamic transformation of equation (1). Additionally, in the opinion of Mamatzakis and Remoundos (2003) a dynamic model incorporates more information and as a result the detrimental factors of the profitability are more efficiently estimated.

The transformed model is as follows:

$$\Pi_{it} = \alpha + \gamma \Pi_{i,t-1} + \sum_{j=1}^J \beta_j BSV_{it}^j + \sum_{l=1}^L \beta_l ISV_{it}^l + \sum_{n=1}^N \beta_n MV_{it}^n + \varepsilon_{it} \quad (2)$$

where $\Pi_{i,t-1}$ is the lagged profitability by one period and the coefficient γ is the speed of adjustment to equilibrium. The γ coefficient takes values from 0 to 1. A value close to 0 reflects high speed of adjustment, and suggests relatively competitive market structure, whereas coefficient value close to 1 implies less competitive markets and slower adjustment

¹²² The unobserved bank-specific effect captures all unobserved, time-constant factors that affect profitability (Wooldridge, 2006).

¹²³ Idiosyncratic error is defined as time-varying error and represents the unobserved factors that change over time and affects bank profitability (Wooldridge, 2006).

Variables specification

Table 1 lists the definitions, notations and the expected effect of the variables used in this model.

Table 1. List of variables used

Variable	Measure	Notation	Expected effect
Dependent variable			
Profitability	Net profits before taxes/assets or Net profits before taxes/equity	ROA or ROE	
Determinants			
Bank-Specific			
Size	Total assets and (total assets) ² in logs	SIZE and SIZES	?
Loan to Deposits Ratio	Loans to deposits and short-term funding	LD	?
Activity Mix	Net interest revenues/other operating income.	AM	Positive
Loan Loss Provisions Ratio	Loan loss provisions to gross loans	LLPGL	Negative
Capital	Equity/total assets	EA	Positive
Market Share	Individual bank assets/assets of all banks in a country	MS	?
Efficiency	Cost efficiency	EF	Positive
Net Interest Income Ratio	Net interest income/average earning assets	NII	Positive
Ownership	Dummy variable equals to one for banks that are 51% or over in foreign ownership	OW	?
Industry-Specific			
Concentration	Herfindahl-Hirschman index	HHI	?
EBRD index for banking system reforms	Values from 1 to 4+	EBRD	Negative
Macroeconomic			
Inflation	Current period inflation rate measured by CPI	INF	?
Cyclical Output	GDP growth rate	GDPG	Positive

EMPIRICAL RESULTS

This section presents the descriptive statistics, the estimation method and the empirical results of our research. As mentioned previously, this paper uses an unbalanced panel data set of 127 commercial banks from 6 countries (Bosnia and Herzegovina, Croatia, Macedonia, Montenegro, Serbia, and Slovenia).

Descriptive statistics

Table 2 presents the summery statistics for the variables used in this model.

Table 2. Summary statistics

Variable	Obs	Mean	Std. Dev.	Min	Max
ROA	737	0.700144	2.82641	-28.11	28.74
ROE	734	4.545783	16.11504	-106.64	124.36
SIZE	736	12.68226	1.537653	8.933225	16.81124
SIZES	734	23.22346	5.537146	8.933225	33.62249
EA	736	17.79379	12.82217	2.84	92.36
LtoD	733	84.46127	35.0388	0.01	504.23
AM	731	25.47399	80.26855	-418.5	1057.33
EF	558	0.892527	0.059031	0.36	0.99
LLPGL	741	0.02262	0.047233	-0.07054	0.607795
NII	734	5.70517	3.527725	0.76	24.57
MS	753	4.846519	6.725017	0	41.44505
CONC	756	1290.644	449.5989	664.3105	2600.167
INF	756	4.686191	3.917868	-0.74	16.12
GGDP	756	2.754907	3.925724	-8.01	10.7
EBRD	756	3.179048	0.5096	2.33	4
OW	756	0.619048	0.485942	0	1

Econometric Methodology

As stated previously, the literature suggests that profits have tendency to persist over time. In other words, it takes time for profits to converge towards their long-run equilibrium values (Goddard et al, 2004). This dynamic nature of the model prevents the usage of standard OLS estimators which will produce biased and inconsistent coefficient. Following Mamatzakis and Remoundos (2003), Goddard et al. (2004), Athanasoglou et al. (2008), and Flamini et al. (2009), in order to solve for the errors and biases, we use the Arellano-Bond General Methods of Moments (GMM) approach. Following Gujarati (2006) for a model with many panels units, few periods, and under the assumption of no correlation in the idiosyncratic errors, the GMM estimator removes the panel-specific heterogeneity. Moreover, this approach offers advantage for dealing with potential endogeneity. More specifically, it accounts for the loop of causality between the independent and the

dependent variable. Our model may suffer from the issue of endogeneity due to the simultaneous nature of our basic model. As elaborated previously, the positive relationship typically found between structure and performance can be explained in one of two ways. It could be the case that high levels of industry concentration lower the cost of collusion which leads to higher profits (Shmirlock, 1985), meaning conduct influences performance. On the other hand, there is also evidence that performance influences conduct in a way that firms with superior efficiency obtain greater market share. Thus, the endogeneity inherent in the structure-profitability relationship may cause biased and inconsistent estimates. For this reasons we model industry concentration (measured via the HHI) as endogenous.

Empirical Results

The dynamic panel estimation reflects the direction of change in profitability for a given change in the explanatory variables for any individual bank from year to year. Table 3 reports the empirical results of our preferred model using ROA as the profitability variable. Since we were unable to consider changes of the ownership variable during the sample period, this variable is excluded from the dynamic model. Additionally, the significance of the cost efficiency variable improves greatly by the exclusion of the two risk variables: i) loans to deposits and short term funding, and ii) activity mix variable. Moreover, these variables were not reported significant at any point during the process of model specification thus, those too were excluded from the model.

Table 3. Preferred GMM estimation results

	Coef.	WC-Robust Std. Err.	Z	P value
roaL1.	0.1156293	0.0694652	1.66	0.096
conc	-0.0010706	0.001963	-0.55	0.585
size	0.5244877	1.271.272	0.41	0.680
sizes	0.0520517	0.0534008	0.97	0.330
Ea	0.1374482	0.0318876	4.31	0.000
Ef	5.835.066	3.537.867	1.65	0.099
llpgl	-6.127.248	4.418.483	-13.87	0.000
nii	0.2524439	0.0876937	2.88	0.004
ms	0.0055051	0.129351	0.04	0.966
inf	0.0752527	0.0721046	1.04	0.297
ggdp	0.1137053	0.0807335	1.41	0.159
ebrd	-2.356.178	0.8703625	-2.71	0.007
year2007	-0.6534951	1.271.285	-0.51	0.607
year2006	-1.124.808	1.146.954	-0.98	0.327
year2008	-1.786.166	1.104.779	-1.62	0.106
_cons	-5.964.436	1.839.709	-0.32	0.746

The magnitude and significance of the coefficient of the lagged dependent variable confirms the dynamic nature of our model (significant at 10% l.s). The estimated coefficient of 0.11 reflects relatively competitive market structure. It suggests that the deviation from perfect competition is marginal and that bank profits adjust relatively fast to their long-run equilibrium levels.

Turning to the bank-specific explanatory variables, there is no evidence of any relationship between bank size and profitability, the estimated coefficient is positive but insignificant. A possible explanation for this is that banks will try to grow faster even at the expense of their profitability (Athanasoglou et al., 2008). Moreover, following the data collects, the number of foreign-owned banks has increased in all of the sample countries, and newly established banks are not particularly profitable in the first years of their operation. Our result are in line with the results of Goddard et al (2004), and Athanasoglou et al. (2008) who also use GMM estimator for analyzing determinants of bank profitability.

The equity to total assets ratio is positive and highly significant suggesting that well capitalized banks are more profitable. The effect of this variable on profitability is expected to be negative since well capitalized banks are consider safer and hence, less profitable compared to those with lower equity ratios. However our results stand in line with the empirical evidence of most bank profitability studies among which Demnirguc-Kunt and Huizinga (1999), Mamatzakis and Remoundos (2003), Mendes and Abreu (2003), Staikouras and Wood (2004), Pasiouras and Kosmidou (2007), and Liu and Wilson (2010). The positive relationship between equity ratio and bank profitability suggests that banks with sound capital will be better able to pursue business opportunities and resist negative shocks which will make them more profitable.

As it can be seen from Table 3 the cost efficiency variable is positive and statistically significant (at 10% level of significance – l.s.). This provides evidence in favour of the efficiency hypothesis which states that higher efficiency allows banks to increase both market share and profitability. Consistent with this is the statement that industry concentration does not signal the collusive behavior but rather the superior efficiency of the leading banks in the industry. Smirlock (1985) argues that if market share can be considered a proxy for efficiency, once it is included in the bank profitability model, the concentration variables will lose its explanatory power. In his view, this is evidence in favour of the efficiency hypothesis. In our case, industry concentration and market share are reported to have no direct effect on bank profitability. Both variables are not statistically different from zero. We also use an accounting based measurement of efficiency which is the net interest income over other earning assets. The positive and significant coefficient of this variable also suggests that banks with higher efficiency are more profitable.

The loan loss provision to total loans ratio is negatively and significantly related to bank profitability. This suggest that banks should focus more on credit risk management in the future since serious problems may arise from the failure of banks to recognize impaired loans (Athanasoglou et al. 2006). Our results stand in line with the work of Mendes and Abreu (2003), Staikouras and Wood (2004), Athanasoglou et al. (2006 and 2008), and Liu and Wilson (2010).

The EBRD index suggests a negative and highly significant effect on bank profitability. This result suggests that banking system reforms have positively contributed to competition. In the opinion of Athanasoglou et al. (2006) the improved regulatory framework, the credit expansion and the adoption of sound macroeconomic policies led to higher levels of competition which in turn lowers profitability.

Turning to the macroeconomic variables, the inflation variable appears not to assert a significant statistical impact on profitability. This is in line with the results presented by Mamatzakis and Remoundos (2003), Staikouras and Wood (2004), and Athanasoglou et al. (2008). The economic growth does not reflect any aspects of bank profitability. The estimated coefficient is positive but insignificant.

Interpretation of the coefficients is presented in the Table 4.

Table 4. Coefficient interpretation

Variable	Estimated Coefficient (p value)	Expected sign	Economic interpretation
roaL1		+	If profitability in the previous period increases by 1%, then on average, profitability in the current period will increase by 0.11 %, ceteris paribus.
conc	-0.0010706 (0.585)	?	On average, if industry concentration increases by 1 point, bank profitability will decrease by 0.001%, ceteris paribus.
size	0.5244877 (0.680)	?	If the size of the bank increases by 1%, profitability will increase by a 0.524%, on average, ceteris paribus.
ea	0.1374482 (0.000)	+	All else the same, 1 % change in the equity to total asset ratio, on average will increase bank profitability by 0.14%.
ef	5.835066 (0.099)	+	If cost efficiency increases by 1%, all else the same, profitability will increase by 5.8 %, on average.
llpgl	-6.127248 (0.000)	-	On average, if the loan loss provisions ratio increases by 1%, bank profitability will decrease by 6.12%, ceteris paribus.
nii	0.2524439 (0.004)	+	If efficiency measured via the net interest income ratio increases by 1%, profitability will increase by 0.25 %, on average, ceteris paribus.
ms	0.0055051 (0.960)	?	If bank's market share increases by 1%, all else the same, bank profitability will increase by 0.005%, on average.
inf	0.0752527 (0.297)	?	On average, if the inflation rate increases by 1%, profitability of the bank will increase by 0.07 %, ceteris paribus.
ggdp	0.1137053 (0.159)	?	If the GDP growth rate increases by 1%, on average, bank profitability will increase by 0.11 %, ceteris paribus.
ebrd	-2.356178 (0.007)	-	If the EBRD indicator of banking system reforms increases by 1 point, on average, profitability will decrease by 2.35 %.

CONCLUSION

In this paper we specified an empirical framework for investigating the effect of bank-specific, industry-related and macroeconomic determinants of the profitability of banks from selected Balkan countries. So far, there have been quite few econometrical studies examining the important issue of bank profitability determinants focusing on countries from South Eastern Europe, and none that focuses on the Balkan countries even though these countries provides an interesting context for analyzing bank profitability. In the process of economic transition, these countries went through a difficult process of restructuring with the purpose of developing privately owned banking sectors. An efficient and profitable banking system is what stands between underdeveloped countries and the rest of Europe (Fang et al., 2008). Additionally, the analysis of bank profitability determinants becomes even more important in view of the ongoing economic and financial crisis, especially for countries where the role of banks is central in the financing of economic activity.

The expected relationship between market structure, bank conduct, and bank performance forms the theoretical framework of our research with both traditional SCP and efficiency hypothesis being considered. Following Weiss (1974), the vast majority of studies that use manufacturing data support the positive relationship typically found between concentration and profitability hence, it is logical to expect the same result in studies analyzing determinants of bank profitability. However, the results have been inconclusive, and thus one of the main purposes of this thesis is to distinguish between the traditional, and the alternative hypothesis explaining the link between industry concentration and bank profitability.

Besides the common bank-specific variables, our regression model includes the influence of a cost efficiency variable obtained with a stochastic frontier analysis. This variable together with the industry concentration and the market share variable serve the purpose of distinguishing between the traditional SCP and efficiency hypothesis. These factors together with other included individual characteristics about banks, macroeconomic conditions and industry environment contribute to a better understanding of what determinates bank profitability.

Our results clearly point to the large heterogeneity in profitability between banks in our sample. They also suggest that the included variables explain the variations in profitability well. By using the General Method of Moments (GMM) as the best estimation technique for our model we find that capital is important in explaining bank profitability in a way that better capitalized banks appear to be more profitable. The effect of bank size does not provide evidence of economics of scale in the banking industry since the estimated coefficient is not reported significant. Also, the result show evidence in favour of the efficiency hypothesis as the estimated cost efficiency variable is positive and statistically significant. The accounting based measurement of efficiency, which is the net interest income ratio over total earning assets is also reported highly significant in explaining profitability variations. Additionally, the effect of industry concentration was found insignificant. Likewise, the market share of banks is insignificant in explaining profitability. Therefore, these results are in line with the hypothesis according to which concentration is not related to profitability, once it is controlled for bank efficiency in the model.

The EBRD index indicated a negative and significant effect on bank profitability confirming that banking system reforms increase the level of competition in the banking sectors of the sample countries, and furthermore decrease bank profitability. The estimated negative coefficient is in line with the contestable market theory.

Coming to the macroeconomic variables, this thesis finds that inflation has no impact on bank profitability. Moreover, economic growth does not reflect any aspects of bank profitability since the estimated coefficient is reported insignificant.

The ownership status of the banks was included only in the basic OLS estimation, and was found negative and statistically significant, denoting that foreign-owned banks make relatively lower profits compared to domestic banks. However, the diagnostic tests of the OLS model suggested that

this was not the best model for the data and hence, the economic interpretation of the ownership status variable may be misleading.

In conclusion, the empirical results provide evidence that efficiency is one of the main but not the only determinant of bank profitability. Profitability of banks is defined by a combination of bank-specific, industry related and macroeconomic variables. We have to point out that there are some measurement problems with the explanatory variables included in the model. Namely, the data used in our analysis is obtained from the BankScope database, and therefore it depends on how many banks in each country are reporting balance and income sheet data to Fitch-IBCA. An additional problem is related to the loan loss provision ratio, as banks keep changing the methodology for calculating this ratio causing problems of inconsistency with the data. These issues should be addressed in future work on the topic of bank profitability.

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CONSOLIDATION OF THE BANKING SECTOR IN MACEDONIA: EFFECTS AND BENEFITS

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ABSTRACT

Modern-day banking is characterized by constant change and development, as a result of the globalisation in the world economy. It is currently passing through its most turbulent period ever since its inception, considering the ever-growing and fierce competition, the constant changes of technologies, the financial innovations, the entrance and domination of foreign banks on the market, the decrease of the prices of bank services and decrease of interest rates as well as the slow recovery from the Global financial crisis.

Ever since the global financial crisis occurred, banks all over the globe are struggling and facing decreased efficiency and profitability, especially small banks that are limited in many ways - they cannot diversify their portfolios nor use economies of scale, not to mention their limited access to new customers, new technologies and financial innovations. The case in the transition countries is even more dramatic, due to the fact that the financial system itself has not been developed enough and the entrance of foreign fierce competitors is more noticeable.

This paper revolves around the group of small banks in the Macedonian banking market, who have been facing negative financial results ever since the Macedonian economy has noticed the effects of the global financial crisis, due to the limited bank assortment, the small participation in overall loans and deposits and the limitations of being small in a globalized market.

The main objective of this paper is to emphasize the benefits of the consolidation in the banking sector in the Republic of Macedonia and to stress its inevitability. Consolidation will bring strong competition among quality competitors, higher quality of bank services, diversification of the assortment of bank services, lower cost of capital, branch optimization, change of the business models, implementation of up-to-date methods for risk management and most importantly, higher profitability and higher efficiency of the banks and the banking system as a whole. Furthermore, M&A influence the concentration in the banking sector; they bring higher competitive advantages and transfer of technologies, know-how, knowledge and innovative thinking. The synergy created by M&A's should not be underestimated.

Our research and the results of the valuation methods used strongly encourage banks' managements to consider the proposed consolidation, in order to gain higher efficiency, competitive advantage and opportunity to grow.

Thus, we suggest that consolidation of the banking sector is an inevitable process which Macedonian banks must implement, the sooner the better. However, it does require structural change of the banking sector and organizational transformation of the banks, but that is a small price to pay for the benefits the banks will enjoy.

Keywords: banks, consolidation, banking sector, efficiency, mergers, Republic of Macedonia

JEL classification codes: G21, G20, G34

INTRODUCTION

Considering the Macedonian bankocentric financial system, banks represent by far the most important institutions in the financial system. This is expected to change with the development of the financial system and financial markets. However, until then, banks hold a very important role in the growth of the financial system as well as the growth of the economy. These past 15 years have been characterized with many structural changes in the banking sector, most of them as a result of the globalization and its side effects.

Bank consolidation has been gathering pace in many transition countries as part of a global concentration trend following bank deregulation processes.¹²⁴ The reform process that took place in the Western Balkan countries attracted the penetration of international banks.¹²⁵ Many European banks have penetrated the Western Balkan's banking sectors, acquiring the local state-owned or private banks. Thus, many changes in the banking sectors have happened.

Foreign banks prefer entering transition countries' markets by M&A, since it is the best way to secure a significant part of the market in a very short notice, as well as to use the domestic base of clients and the current distribution channels.¹²⁶ However, the processes of M&A have led to significant development in the target countries as well. For instance, the banking sectors have consolidated, the market concentration got higher and the financial intermediation has developed further more.

This study is an attempt to address the issue of the benefits of the consolidation in the banking sector in the Republic of Macedonia and to stress its inevitability. Consolidation usually brings strong competition among quality competitors, higher quality of bank services, diversification of the assortment of bank services, lower cost of capital, branch optimization, change of the business models, implementation of up-to-date methods for risk management and most importantly, higher profitability and higher efficiency of the banks and the banking system as a whole. Furthermore, M&A influence the concentration in the banking sector; they bring higher competitive advantages and transfer of technologies, know-how, knowledge and innovative thinking. The synergy created by M&A's should not be underestimated. These facts have been proven in this study, i.e. the effects and benefits of the consolidation have been validated. This is why this process in the banking sector is more than welcome.

RELATED LITERATURE

Researches in the area of mergers and acquisitions show mixed evidence on the relationship between M&As, profitability and performance. The area of M&A in general is a very specific business and academic area. Furthermore, the M&A in the banking is very tempting for researchers and investment bankers, due to the many aspects it involves.

Beck, Demirgüç-Kunt and Levin (2006) find no argument that the bank concentration increases the fragility of banks, rather, the banking system concentration is associated with a lower probability that the country suffers a systemic banking crisis. Their findings support the theory that greater bank concentration is associated with a lower likelihood of suffering a crisis.

According to Almeida and Jayme (2008), the consolidation of the banking sector reduces the number of loans granted. Their explanation and research showed that the presence of bank branches and head offices in the regions is positively related to lending. Accordingly, the relocation of branches

¹²⁴ Almeida Castro d.B.D., Jayme Jr. F.G., (2008), "Bank consolidation and credit concentration in Brazil (1995-2004)", *Cepal Review* 95, August 2008, iss. 95, pp. 155-71

¹²⁵ Filimonović D., Radovanović B. (2011), „Mergers and acquisitions in banking sector: the case of Western Balkan countries“, Chapter 28- Contemporary issues in the integration processes of the Western Balkan countries in the European Union, pp.460-477, Institute of Economic Studies, Belgrade

¹²⁶ Mašić S. (2010), „Mergers and acquisitions as cross-border growth strategy for European banks“, XII international symposium "SymOrg 2010", Zlatibor, Srbija, 2010

in the country's most developed regions, together with the regional concentration of bank head offices, reduces the per capita credit stock in the other regions.

Dolar and Burak (2014) have stated that in the last two decades, the extensive consolidation of the banking industry, and its likely consequences of increased presence of large banking institution as well as concentration in local banking markets, have raised concerns about the ability of small businesses to obtain funds. The effects of consolidation on small business lending may be more pronounced during a credit squeeze when the supply of loans becomes increasingly scarce. Their findings suggest that small business lending growth declined in California's moderately concentrated and highly concentrated urban banking markets relative to unconcentrated ones after the financial crisis of 2008. They also found that the effect of market share structure on small business lending growth is moderated by market concentration in the post-crisis era.¹²⁷

Most of the economic literature has justified banking M&A on the ground that it enhances shareholder value (Ayadi, Arnaboldi, 2008). Prior studies show that the stock prices of the target bank significantly increase at and around the announcement of a takeover. The research of Figuera C. and Nellis A. (2007) implies that banks involved in M&A activity are more efficient after the M&A when compared with other large banks, which have chosen alternative routes of development. They suggest that country-specific characteristics appear to play an important role in explaining the results.

Andrade, Mitchell and Stafford (2001) study the stock market reaction in bank mergers, and the creation of shareholders' value, with most of the gains accruing to the target company. They found that the target firm shareholders are clearly winners in merger transactions.

Antić (2007) argues that the M&A operations in banking have potential to create value through benefits, which can be seen as either in the sense of market power or in the sense of higher efficiency. Regarding the efficiency, it can be achieved through reduction of the costs (cost synergy), increase of the revenues (revenue synergy), exchange of best practice and diversification of the risks.

Kraft (2004) points out that foreign bank entry has often been accompanied by a consolidation process that has increased concentration in banking markets. This may actually increase effective competition, as a small number of strong banks are able to contest markets effectively, as opposed to a large number of very small banks competing against one or a small number of large banks held over from socialism. Consolidation may also enhance financial stability.

Block (2006), on the other hand, states that the overall literature on mergers is not encouraging. He has sublimated many prior studies regarding the impact of the merger on the stock value of the acquiring and the target bank, and has found out that the target banks have experienced positive and substantial, whereas the bidder returns are mostly negative.

Our study is consistent with the findings of Filipović (2012), who claims that the company's size has a great impact on the takeover's success. Furthermore, he documents that the smaller the relative size ratio of the target company compared to the acquirer, the more successful is target company's performance after the takeover. This fact is an additional argument for the consolidation of the small group banks in the Republic of Macedonia.

Our research has been driven by several factors. First, number of studies have examined the effects of consolidation on competition and market structure of banking industry; however, these studies have concentrated on developed markets and transition markets, but very few findings regarding the Macedonian banking sector. Our study contributes to the literature by comparing the market structure of Macedonian banking industry pre- and post-consolidation periods.

¹²⁷ Dolar, Burak, (2014), „Bank consolidation and small business lending in the aftermath of the US financial crisis: evidence from California's banking markets“, *Journal of International Business Disciplines*, May 2014, Vol. 9 Issue 1, pp.1-26

BANKING IN THE 21ST CENTURY

Modern-day banking is characterized by constant change and development, as a result of the globalization in the world economy. It is currently passing through its most turbulent period ever since its inception, considering the ever-growing and fierce competition, the constant changes of technologies, the financial innovations, the entrance and domination of foreign banks on the market, the decrease of the prices of bank services and decrease of interest rates as well as the slow recovery from the Global financial crisis.

Speaking of changes, there are two tendencies that can be determined in the international banking: 1) increased competition that influence on the banking products and prices, and 2) technology improvements that affect the distribution channels of selling and the operating cost of the banking activities.¹²⁸ These two factors affect simultaneously and are interrelated.

The ever-growing competition in the banking sector (especially by nondepository institutions), the deregulation in the industry, the inevitable effects of the globalization and the constant changes in the technology, market approach and clients' preferences are strongly influencing the nature of commercial banking whereas the ability of banks to adapt to the changes and the new trends in the industry dictates their market position and therefore their performance.

The globalization of the world economy has been supported and initially stimulated by the growth and development of technology, in particular in three important domains: the computerization of the trading networks (enabling the supply and demand to meet without physical), the satellite communication (which enables very quick data transfer) and the Internet, who has changed the way businesses operate. As an indirect consequence of the globalization, many new players have appeared in the banking sectors throughout the world. There are pension, hedge and private equity funds that slowly take over many traditional functions of the commercial banks. Financial and banking innovations have increased over the past decade due to the growth and development of technology, i.e. banking software, applications and channels.

The idea of a 'global market' has given companies and banks from throughout the world an opportunity to embrace the changes and open themselves up to the new information era, where they all could benefit. However, some businesses (especially small businesses in transition countries) are reluctant to change and are therefore staying behind. The new economic order, the time when globalization has an impact on the growth of all businesses and countries, offers many advantages for those interested to stay in the game, i.e. for the companies ready to embrace the changes in the market and keep the pace.

The banking industry is a very specific industry that is by default very conservative and usually, if not always, banks are very big systems, with a lot of administration, processes and operations, which does not leave them with much space for adaptation to the new time. The fast growth and implementation of IT solutions in banking, however, affects their financial transactions' costs, by dramatically decreasing them. In recent years, technology has become increasingly important to the bank's growth and development of new electronic products.

The modern economic theories have selected a few main reasons for growth of banks through the processes of M&A: technological development, deregulation, globalization of the market and better financial services in a bigger financial sector.

¹²⁸ Nenovski T., Jolevska Delova E., Andovski I., (2012) "Banking services in terms of changing environment: the case of Macedonia", *Procedia-Social and Behavioral Sciences* 44, 2012, pp.347

THE BANKING SECTOR IN THE REPUBLIC OF MACEDONIA: STRUCTURE AND CONDUCTED CONSOLIDATION

The banking sector in general is a quite specific field for research, this is why we found it so tempting. However, the banking sector in the Republic of Macedonia has an additional value for researchers, since it differs from other countries' banking sectors.

The Macedonian banking system has not yet been affected by the increasing competition from new players and non-depository institutions¹²⁹, as other banking sectors in the region. As a matter of fact, the banks in the country have made their position stronger, dominating in the financial system (as showed in table 1).

Even though the non-depository institutions have been gaining part of the market, it is still insignificant and still not a remarkable change. This only confirms the crucial role of commercial banks in the bankocentric Macedonian financial system.

Table 1: The structure of the total assets of the financial system in Macedonia (in %)

Structure of the total assets of the financial system in the Republic of Macedonia (in %)								
	2006	2007	2008	2009	2010	2011	2012	2013
Depository financial institutions	90,1	91,67	90,5	89,7	90,1	89,5	89,2	88,3
Banks	88,9	90,5	89,2	88,6	89,2	88,6	88,5	87,6
Saving houses	1,19	1,17	1,2	1,1	0,9	0,8	0,7	0,7
Non-depository financial institutions	9,9	8,33	9,5	10,3	9,9	10,5	10,8	11,7
TOTAL	100	100	100	100	100	100	100	100

Source: National Bank of the Republic of Macedonia, Financial Stability Reports (2006-2013)

When analyzing table 2, it seems that the percentage of foreign capital is relatively the same in all three groups of banks. However, the fact that the small banks are limited in the number of clients and assets, it might be a better solution to merge among themselves, in order to gain the benefits, such as better access to new technology, financial innovations and bigger opportunity to credit approvals.

Table 2: Participation of the foreign capital in the total capital* (in %)

Group	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Big banks	37,1%	68,4%	74,2%	82,8%	80,7%	79,5%	79,7%	79,4%	78,1%	77,6%	76,3%
Middle-sized banks	25,3%	33,6%	41,9%	60,2%	69,0%	66,8%	68,6%	61,5%	69,0%	74,0%	76,3%
Small banks	48,8%	46,4%	46,2%	61,5%	72,5%	57,5%	70,0%	89,4%	87,0%	74,7%	75,7%
Banking sector	47,5%	52,5%	56,1%	69,1%	74,3%	68,6%	72,9%	74,7%	75,2%	75,2%	76,2%

*It is calculated as a ratio between the nominal value of the issued common and priority stock in foreign ownership and the total nominal value of all the issued common and priority stocks.

Source: National Bank of the Republic of Macedonia

¹²⁹ Nenovski T., Jolevska Delova E., Andovski I., (2012), "Banking services in terms of changing environment: the case of Macedonia", *Procedia-Social and Behavioral Sciences* 44, 2012, pp.348

In table 3, we have sublimated the number of banks in each group, so that it would be easier to notice the structural changes and the time frames of these changes. However, it should be emphasized that the criteria used for classifying the banks has been changing over time, as the financial and banking system has developed and grown. For example, the total assets used in classifying the small banks' group in 2004 has been less than 2 billion MKD. This criteria has risen since 2005 (and it has stayed so until 2010) onto total assets less than 4,5 billion MKD. In the years 2013 and 2014, the criteria has been- total assets of less than 7,1 billion MKD.

Table 3: The number of banks by groups in the period of 2004-2014

	Group of big banks	Group of middle-sized banks	Group of small banks
2004	3	8	10
2005	3	3	14
2006	3	7	9
2007	3	8	7
2008	3	8	7
2009	3	8	7
2010	3	9	6
2011	3	8	6
2012	4	8	4
2013	3	8	5
2014	4	8	3

Source: National Bank of the Republic of Macedonia

Table 4 gives us a very clear picture of the consolidations, M&As in the banking sector in the period of 1998-2014. In the period of the *first wave of mergers and acquisitions (1998-2001)*, the most crucial M&As have happened, leading from 24 banks in 1998 to 21 bank in 2001. In the period of 2001-2005 no changes in the structure have been made. However, *the second wave of mergers* in the banking sector has happened in the period of 2005/2006. The *third wave of M&As* in this sector have been in 2008, when Steiermärkische Sparkasse has acquired Invest banka AD Skopje and CKB AD Sofija has acquired CKB Banka AD Skopje. The *fourth wave* of M&As in the banking sector took place in the period from 2011-2014.

Table 4: Tabular overview of the structural changes in the Macedonian market 1998-2014

Number of banks in the Republic of Macedonia		
Year	Banks	Additional remarks
1998	22+2	The license of „Aka Banka,, AD Skopje has been withdrawn. Two new institutions appear in the banking markets: MBDP- Macedonian Bank for Development Promotion and an affiliation of "Ziraat Bankasi".
1999	22+1	22 banks + 1 affiliation of a foreign bank
2000	22	Issued license for the International Commercial Bank of the People's Republic of China-Taiwan. Tutunska banka AD Skopje has become a part of the Slovenian NLB Group. Greek NBG has acquired Stopanska banka AD Skopje, whereas Alpha bank AE Athens has acquired Alpha bank AD Skopje.
2001	21	In 2001, NBRM has issued license to Eurosviss banka AD Skopje. Furthermore, NBRM has issued 3 licenses for status changes: merging of Zemjodelska banka AD Skopje to Sileks banka AD Skopje, merging of Pelagoniska banka AD Prilep to Komercijalna banka a.d. Skopje, as well as merging of Teteks banka AD Skopje to Kreditna banka AD Bitola.
2002	21	No changes in the structure.
2003	21	No changes in the structure.
2004	21	No changes in the structure.
2005	20	The license of "Radobank" AD Skopje is withdrawn and the saving house „Maleshevska,, AD Berovo has been acquired by „Invest Banka,, AD Skopje.
2006	19	Merging of „Tetovska Banka,, AD Tetovo and „Teteks-Kreditna Banka,, AD Skopje, thus creating "TTK banka" AD Skopje. The saving house „Makedonska stedilnica,, AD Skopje has been acquired by "Invest Banka,, AD Skopje
2007	18	The license of „Makedonska Banka,, AD Skopje is withdrawn. This year, Ohridska banka AD Skopje has become a part of the Societe Generale Group. Bulgarian Alfa Finance Holding takes over Capital bank AD Skopje.
2008	18	(previously Invest banka AD Skopje), and CKB AD Sofija takes over CKB Banka AD Skopje.
2009	18	No changes in the structure.
2010	18	No changes in the structure.
2011	17	In January 2011, "Stater Bank" AD Kumanovo has merged into "Centralna Kooperativna Banka" AD Skopje. Halk Bank AD Skopje has bought the control package in IK Banka AD Skopje.
2012	16	Merging of „Ziraat Banka" AD Skopje and „Halk Bank,, AD Skopje.
2013	16	No changes in the structure.
2014	15	Postenska Banka AD Skopje has merged with Eurostandard Banka AD Skopje at 01.07.2014.

Source: NBRM annual publications (1998-2014)

THE GLOBAL FINANCIAL CRISIS AND ITS IMPACT ON MACEDONIAN BANKING SECTOR

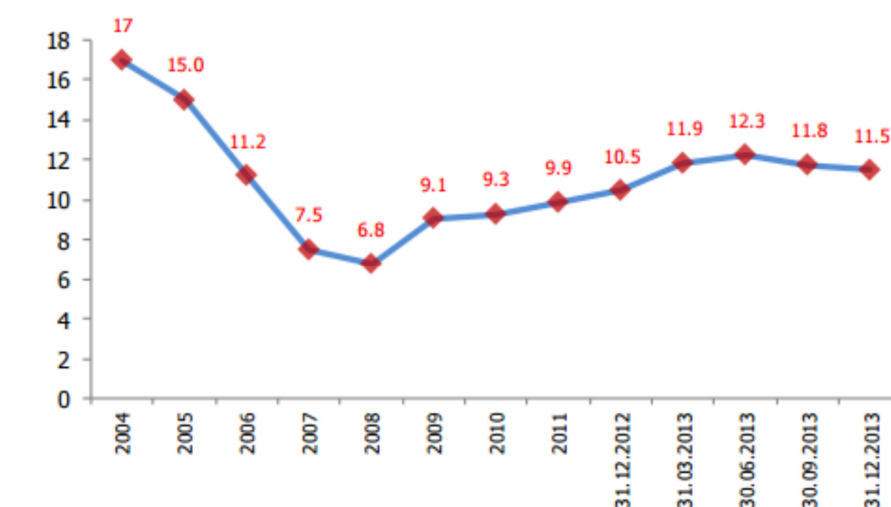
The Global financial crisis that occurred 2008 has inevitably left its mark on the Macedonian economy, thus the banking sector. Even though the effects of the crisis have occurred with a time lag, and were probably not as severe as the economies with developed financial markets, still, it has showed its impact. Even though the Macedonian financial markets are not well-developed, the crisis has had deep impact on the economy and the bank's performances. What was recognized was slower growth of the financial system of the country, slowing of the process of entry of new foreign capital

in the financial institutions as well as slower growth of the assets of the banking sector.¹³⁰

The banking system in Macedonia has remained stable, liquid and well capitalized. While NPLs continued to increase somewhat, they remained more than fully covered by provisions. The Macedonian banks (including subsidiaries of parent banks from the euro zone) are mostly financed by domestic resident deposits, do not depend on external wholesale funding, and have very limited credit exposure to countries or clients from the euro zone.¹³¹

The processes of M&A have been stopped in the period of the crisis, there were no changes in the banking system from 2008 until 2010, as showed in table 3, in this period, no changes in the structure have been made. We assume that the Global crisis has led investors into reconsideration of their future plans- this is why M&As in this period were left out.

Graph 1: NPLs (Non-Performing Loans) in the banking sector in the period of 2004-2013



Source: National Bank of Republic of Macedonia, Annual report for 2013

The impact of the crisis in the banking sector is best to be analyzed through the percentage of the non-performing loans in the total loans of Macedonian banks. A closer look at the NPL data from graph 1 indicates that 2008 has been the year with the lowest NPLs in the banking sector and ever since 2004 banks have decreased their NPLs. We believe it is important to emphasize the fact that there is a significant improvement before the M&As, before the internationalisation of the banking sector, before the domestic banks merged with foreign banks have started implementation of up-to-date methods for risk management, started assessing risk and managing it. However, due to the crisis and its impact on the economy and businesses (thus, on banks as well), it has showed an increase ever since 2008.

¹³⁰ Fotova K. (2014), "The Global financial crisis and its impact on the profitability of the banking sector in the Republic of Macedonia", Annual conference for Doctoral School, Skopje

¹³¹ Hafizi D., Bushi I. (2014), „Global Crisis Impact in Banking System for Western Balkan Countries“, Economic Questions, Issues and Problems, pp.117

BENEFITS AND EFFECTS OF THE CONSOLIDATION OF THE MACEDONIAN BANKING SECTOR

There are many different theories regarding the effects and benefits that banks get when merging and consolidating. Many of the conducted researches claim that the short term measures of success are not relevant (when the announcement of the merger is made, the value of the target company shares will increase, while the value of the acquiring company shares will remain static or fall¹³²). The long term measures of the success of the M&A and the benefits from it are what matters.

However, in the case of the banking sector of the Republic of Macedonia, the effects were relatively positive rather than negative. First of all, the consolidation of the banking sector has brought many foreign players in the banking market- about 71.8% coming from stockholders from the EU.¹³³ Thus, it was inevitable to modernize the market approach, the technology used and to offer diversified products and services to the Macedonian clients.

As shown in table 5, we have conducted a research on the technologies currently used in Macedonian commercial banks. What we found out is that there is a positive correlation between the advanced technologies used by the banks (i.e. the more options for clients, the more software options and channels used) and their affiliation in a foreign group of banks, who are interested in the market and therefore investing in it. This review would actually confirm the fact that the Macedonian banks have benefited the merging by implementing new and modern technologies. This table shows the channels and types of software/technologies used by the banks. For instance, it can be concluded that NLB Tutunska Banka AD Skopje, Stopanska banka AD Skopje, Sparkasse Banka AD Skopje, Komercijalna banka AD Skopje and Halk Bank AD Skopje have been investing heavily in new channels and adjusting their offers to the market's needs. This only led us to the ultimate conclusion: the banks belonging to the group of big and middle-sized banks in the Republic of Macedonia can afford to offer modern technologies, software and gadgets to their customers, following the trends in the industry and the region, but that is not the case with the banks belonging to the group of small banks.

Innovation has become an increasingly important source of value creation in many industries.¹³⁴ Innovation and technology are the most important factors when negotiating mergers and acquisitions. The importance of innovation has been heightened by rapid technological change and growing knowledge intensity in industries.

This way, the Macedonian banks have gained access to innovation in banking, new assortment of banking products and services, different distribution channels, therefore higher growth of profits and customer base, by being a part of a bigger group of banks and having access to bigger funds, know-how and already applied software solutions.

¹³² Roberts A., Wallace W., Moles P. (2010), „Mergers and acquisitions“, Edinburgh Business School, pp.1/14

¹³³ NBRM (2014), Report on the risks in the banking system of the Republic of Macedonia in 2013, Skopje, pp.60

¹³⁴ Hitt M., King D., Krishnan H., Makri M., Schijven M., (2009) „Mergers and acquisitions: Overcoming Pitfalls, Building Synergy, and Creating Value“, Business Horizons, Vol. 52, No. 6, November-December 2009, pp. 523-529

Table 5: Technology offered by the Macedonian banks

List of Banks	Technologies offered
Komercijalna Banka A.D. Skopje	Internet Bank, SMS Banking (for individuals and legal entities), m-Banka mobile application
Stopanska Banka A.D. Skopje	i-Bank (for individuals) with digital certificate, m-banking mobile application, e-banking (for legal entities), Phone banking
NLB Tutunska Banka A.D. Skopje	NLB klik using token, NLB Mobipay, NLB SMS Notification, NLB Proklik using token, NLB mKlik-mobile application
Halk Bank A.D. Skopje	PayPass contactless cards, SMS notification, mobile banking, E-Banking
Sparkasse Banka A.D. Skopje	IndividualNet, NidividualNet Plus, IndividualNet Plus- sToken
TTK Banka a.d. Skopje	e Banking; Web, e-mail & SMS notification
Ohridska Banka A.D.	<u>OBSGN@t- E-Banking</u>
Uni Banka A.D. Skopje	E- UNIBank (virtual bank)
Eurostandard Banka A.D. Skopje	E- Banking
Centralna Kooperativna Banka A.D. Skopje	E-Banking by using digital certificate for electronic signature
Alpha Banka A.D. Skopje	Alpha Web Banking
Stopanska Banka A.D. Bitola	E-Banking
Capital Bank A.D. Skopje	Microsoft CAPICOM- E- Banking
ProCredit Banka A.D. Skopje	E-Banking, Phone Banking and SMS Notifications

Source: Websites and official announcements of the commercial banks in the Republic of Macedonia, sublimated by the authors

The consolidation and the entry of foreign capital in the Macedonian banking sector have created a very competitive market, and thus they have further developed the financial markets.

It is worthwhile mentioning that even though being part of a greater financial group has its own perks, it can also cause some damage in the sense of reputation risks. Namely, this effect has occurred in the case of NLB Tutunska banka AD Skopje and Stopanska banka AD Skopje. In the case of NLB Tutunska banka AD Skopje (which is a part of the Slovenian NLB Group), the bank has experienced reputation and security issues on more occasions. The first impact was in September 2012, when the media had published that the NLB d.d. Ljubljana's management has been under investigation, and the fact that the mother company is facing major losses due to the NPLs.¹³⁵ The second impact the bank experienced was a larger-scale impact which had made deponents insecure and questioning the bank's ability to operate. This time, not only the NLB Tutunska banka's CEO made a statement, but also the Governor of the National Bank of the Republic of Macedonia and the minister of foreign affairs of Slovenia, all reassuring the public that the bank is very solid and does not depend on the NLB d.d. Ljubljana, who is facing troubles.¹³⁶¹³⁷ It had been a very challenging period of time

¹³⁵ <http://24vesti.mk/nlb-ljubljanska-pod-istraga-depozitite-na-makedonskite-gragjani-i-kompanii-sigurni> (12.01.2015)

¹³⁶ <http://republika.mk/?p=52777> (15.01.2015)

¹³⁷ <http://kurir.mk/makedonija/ekonomija/111808-Makedonskite-gragani-da-ne-stravuvaaat-depozitite-vo-Tutunska-banka-se-sigurni> (15.01.2015)

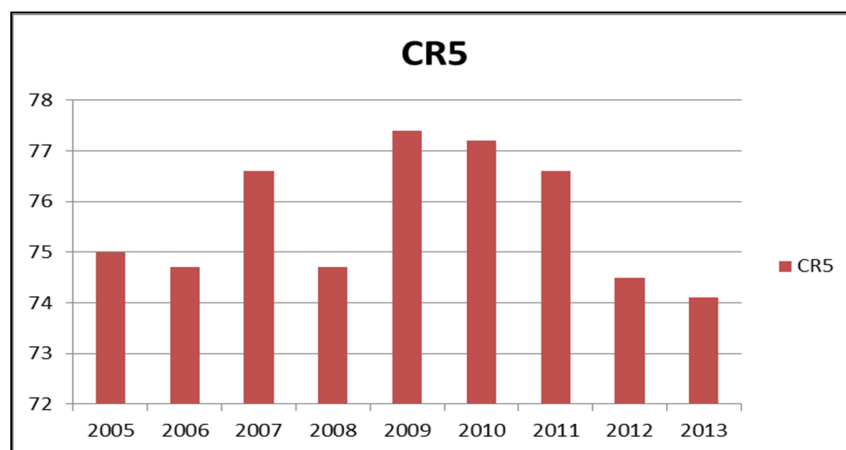
for NLB Tutunska banka AD Skopje, always being a target in the media. However, even though this could have destabilized the bank, this was not the case. Furthermore, the profitability of the bank in 2013 has improved since 2012 (ROA 1,06 as opposed to 2012- 0,85, and ROE 11,2 as opposed to 10,1 in 2012).¹³⁸

In June 2011, due to the crisis in the Greek economy, the Governor of the National Bank of the Republic of Macedonia had felt it was necessary to reassure the deponents in Stopanska banka AD Skopje (member of the Greek NBG Group) and Alpha bank AD Skopje (member of the Greek Alpha bank AE, Athens) that despite the crisis in Greece, the liquidity and capital adequacy of the two banks are high and there is no need to worry.¹³⁹ The Governor did highlight that both banks are independent of their Greek mother-banks. The second impact was also due to the situation in the Greek economy- in May 2012. This time, the CEO of Stopanska banka AD Skopje has stated that the deposits are absolutely secure and that there is a growth of deposits in the bank. According to the results (Stopanska banka has had ROA fall from 1,4% in 2010 to 0,94% in 2011, but only to rise again on to 1,1% and 1,3% in 2012 and 2013 respectively), it seems that this had only short-term impact on the stability and the efficiency of the Macedonian banks with Greek capital.

When considering the concentration of the banking sector, no analysis is complete without the use of CR5 and the Herfindahl index. The Concentration ratio index (CR_k, and in our case the CR5) is one of the most frequently used measures of concentration in literature. CR5 is actually the sum of the five largest banks' share in total assets. Graph 1 shows data that the banking sector has been very concentrated in 2007, and from 2009 till 2011. However, the assets of the five largest banks seem to be decreasing, which shows that the medium sized banks (who have been acquired in the period before 2012) have been increasing their banking activities and offers, thus increasing their assets.

The HI graph shows moderate concentration in the banking industry in the Republic of Macedonia. What is interesting is that HI index has been declining, same as in the most of the EU member countries.¹⁴⁰ This could be elaborated as a higher percentage of competition on the market, due to the entry of new foreign investors in the middle-sized banks.

Graph 2: CR5 indicator for the Macedonian banking sector



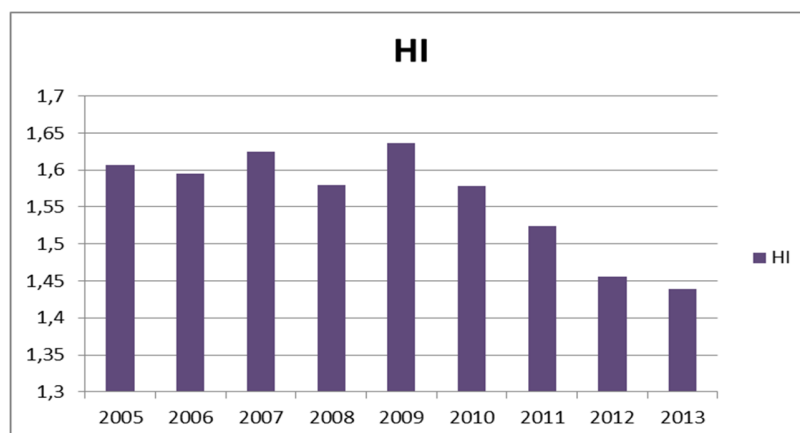
Source: NBRM

¹³⁸ Annual reports issued by NLB Tutunska Banka AD Skopje (www.nlbtd.com.mk)

¹³⁹ <http://vecer.mk/makedonija/grchkite-banki-vo-makedonija-se-sigurni> (15.01.2015)

¹⁴⁰ Lukić L., (2010), "Structural changes and consolidation management in Serbian banking", *International Scientific Conference MANAGEMENT*, Kruševac, pp.187

Graph 3: HI (Herfindahl index) for the Macedonian banking industry (total assets) in the period of 2005-2013



Source: NBRM

However, as seen in table 6, there is still place for improvement, especially in the small banks' group. Even though they have experienced significant decrease of losses ever since 2013, the losses are still present. Furthermore, when conducting the data in tables 7 and 8, it could be concluded that the participation of the small banks in the structure of the deposits and loans is unacceptably low in all categories (sectors, maturity and currency), when compared to the other groups of banks.

Table 6: The net profit/ net loss of the banking sector as a whole as well as the groups of banks separately (in millions of MKD)

Current net profit/net loss	Group of big banks	Group of middle-sized banks	Group of small banks	Total
2004	1032	306	-90	1247
2005	943	421	228	1592
2006	1907	819	74	2800
2007	2672	963	15	3650
2008	3389	104	-82	3410
2009	2.195	-355	-164	1.676
2010	2.688	-354	-27	2.307
2011	2.386	-998	-205	1.183
2012	1.985	211	-735	1.461
2013	1.694	665	-48	2.311
2014	2513	731	-94	3149

Source: NBRM's publications (2004-2014)

Table 7: Structure of the deposits in the groups of banks

Structure of the deposits		31.12.2011			31.12.2012			31.12.2013		
		Big banks' group	Middle-sized group	Small banks' group	Big banks' group	Middle-sized group	Small banks' group	Big banks' group	Middle-sized group	Small banks' group
Sectors	Business	57,5%	37,6%	5,0%	76,4%	20,6%	3,0%	58,5%	36,0%	5,5%
	Household	75,0%	20,3%	4,7%	76,9%	19,0%	4,1%	72,4%	21,5%	6,2%
	Other clients	70,0%	20,0%	10,1%	69,7%	23,7%	6,6%	63,2%	27,6%	9,2%
Maturity	On demand	71,9%	23,3%	4,8%	76,9%	20,4%	2,8%	67,6%	27,4%	4,9%
	Short-term	70,7%	25,6%	3,7%	80,3%	17,7%	2,0%	72,8%	22,9%	4,3%
	Long-term	66,2%	24,9%	8,9%	67,6%	22,4%	10,0%	63,6%	25,7%	10,7%
Currency	Denars	72,6%	20,5%	6,9%	74,8%	19,8%	5,4%	69,0%	23,3%	7,7%
	Denars with a clause	17,1%	80,5%	2,4%	78,2%	19,1%	2,7%	11,3%	75,5%	13,2%
	Foreign currency	70,1%	26,5%	3,3%	78,5%	19,2%	2,3%	69,3%	26,6%	4,1%

Source: National Bank of the Republic of Macedonia

Table 8: Structure of the loans in the groups of banks

Structure of the loans		31.12.2011			31.12.2012			31.12.2013		
		Big banks' group	Middle-sized group	Small banks' group	Big banks' group	Middle-sized group	Small banks' group	Big banks' group	Middle-sized group	Small banks' group
Sectors	Business	67,4%	28,8%	3,7%	73,9%	22,0%	4,1%	63,3%	30,1%	6,6%
	Household	67,7%	26,3%	5,9%	73,5%	22,3%	4,1%	66,2%	28,7%	5,1%
	Other clients	77,5%	20,9%	1,6%	75,2%	23,1%	1,7%	69,7%	28,6%	1,7%
Maturity	Short-term	65,6%	29,7%	4,6%	77,2%	17,8%	5,0%	62,2%	30,4%	7,4%
	Long-term	68,5%	27,7%	3,8%	72,9%	23,8%	3,2%	64,3%	30,5%	5,2%
	Past due	66,2%	31,7%	2,0%	78,4%	19,2%	2,4%	64,8%	27,8%	7,4%
	NPLs	65,5%	24,6%	9,9%	72,3%	19,8%	7,9%	69,9%	22,2%	7,8%
Currency	Denars	78,4%	15,8%	5,8%	79,5%	15,3%	5,2%	74,7%	19,4%	5,8%
	Denars with a clause	59,1%	38,1%	2,7%	75,5%	22,7%	1,9%	57,3%	35,8%	6,9%
	Foreign currency	61,3%	33,9%	4,7%	61,8%	33,6%	4,6%	53,1%	41,9%	5,0%

Source: National Bank of the Republic of Macedonia

CONCLUSION

The change of the banking industry as a result of the fast-growing technology is inevitable and banks all over the globe are embracing this change, implementing new IT solutions, market approaches, new strategies etc. The Macedonian banking system has been affected by the globalization and M&As were an integral part of the process.

At this moment, Macedonian banks are not facing competition from other (non-depository)

institutions, but that should not discourage them from large investments in IT software, training and education of their human capital and re-approaching the market. Our research has showed that the target banks of mergers and banks that are part of a bigger group are most active with implementing technology and inventing custom-made products, there is strong evidence that they are experiencing benefits from consolidating. These operations have given them a stronger position on the market, higher concentration on the Macedonian banking market and higher competitiveness. This has inevitably resulted in higher quality of the services for the clients.

What we are pointing at, is the assumption that the consolidation in the Macedonian banking sector has left many benefits for the target banks as well as the whole sector and the financial system. However, it is still impossible to clearly state whether M&As have led to improved financial efficiency or the sector itself is still undergoing reforms as a result of global economic meltdown¹⁴¹ and a transition into a new system in this case of the Republic of Macedonia.

More importantly, our research has showed that the group of small banks has been staying behind when new technology is considered. Furthermore, they have been still facing negative financial results. Even though the percentage of foreign capital in the small banks' group is relative high, the banks itself are not big enough to experience the benefits of the economies of scales. In their case, a reasonable solution would be a merger between them (as the least painful solution) or an acquisition in order to become bigger and keep track of where the industry goes. This would inevitably bring benefits to the banks themselves as well as the whole Macedonian economy.

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POST-CRISIS CREDIT RISK MANAGEMENT REGULATION IN THE MACEDONIAN BANKS

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ABSTRACT

The recent financial crisis on international level has posed new regulatory risk management standards. The National Bank of the Republic of Macedonia (NBRM) follows the trend, and in the period after 2008 adopted crucial acts related to the credit risk. Through empiric and theoretical knowledge, this study enables qualitative analysis of the significant impact of the NBRM regulatory framework on the credit risk management in the banking sector of the R. Macedonia. The benefit is early identification of the credit risk, strengthening and maintaining the capital base. The need for assessment of the possibility for advancing the risk systems is perceived through application of the proposed revision of the standardised credit risk approach.

The first part analyses the impact of the regulatory change which use is associated with score models, analytical techniques and maintaining stable performance. The second part explains the regulation related to determining the banks' internal capital and the challenges related to this comprehensive process. These acts adopted by NBRM are harmonised with Pillar 2 of Basel II and requires integration of organizational units, tools and measurement in terms of maintaining the capital base. The third part explains the main changes in the draft document of the Basel Committee on Banking Supervision concerning the revision of the standardized approach for calculating the capital adequacy (Revision to the standardized approach for credit risk, Consultative Document, 2014). This part describes the advantages and disadvantages of the proposals if they are applied in the Macedonian context. The fourth part concludes the paper and gives recommendations.

Keywords: credit risk management, regulation, capital adequacy

JEL classification codes: G21, G20, G4

INTRODUCTION

Until the 1970's, or to the new liberal financial order, supervision and regulation of financial systems were based on national level. Growing global integration of the financial markets increased the need for international financial supervision. Organizational carrier of the new banking prudential regulation is the Basel Committee on Banking Supervision (BCBS), Committee within the Bank for International Settlements, established in 1974.

After the liberation of the financial systems and emerge of crises in developed economies, the BCBS adopted the document Basel I (BCBS, 1988). That document governs some basic principles for management of banks and defines the coefficient of 8% for capital related to risk weighted assets. Empirical experience of the application of this standard shows that the average ratio of capital to risk weighted assets of the major banks in G-10 countries rose from 9,3% in 1988 to 11,2% in 1996. But, it is very difficult to measure the balance sheet performance of banks because of overlap with specific macroeconomic conditions of each country in that period (Jackson P.1999). (More for the effects for banks to maintain high capital level see in Jablecki J.2009). Failure of this standard which leads to Basel II is assessed by the occurrence of capital arbitrage, insensitivity of risks and no utilization of the internal systems of the bank's risk management (Bozovic, M.2013).

Basel II is a Treaty of 2004, amended in the period 2005-2007, based on Basel I, but with some key amendments: 1) minimum capital requirements; 2) supervisory process; and 3) market discipline, so called three pillars. Pillar 1 contained in Basel II provides guidelines for defining capital adequacy ratio for three types of risks: credit, operational and market risks. The ratio is calculated through applying two defined concepts: regulatory capital and risk weighted assets. Regulatory Capital is divided into: Tier 1 (Core) Capital consisting mainly of the shareholders' equity plus retained profits minus accumulated losses; and Tier 2 (Supplementary) Capital including undisclosed reserves, general provisions, hybrid instruments and subordinated term debt among others. Pillar 2 of Basel II is titled Supervisory Review Process and is regulatory response to the first and enables a framework for inclusion of other risks that will be assessed internally by the banks as important and material, for instance: legal, reputational, liquidity or concentration risks (BCBS, 2006a, paragraph 720-807). Pillar III refers to transparency and disclosures by the banks so that the market has entire picture of their condition. The assessed effects from application of these standards are capital buffers that range from about 2% of assets in recessions to about 5% in expansions. But, this procyclicality are insufficient to neutralise the effects of the arrival of a recession, which may cause a very significant reduction in the supply of credit – ranging from 2.5% to 12% (Repullo R. and Svarez J. 2007). Positive effects are summarized to the greater sensitivity of risks, introducing new types of risks and use of internal models. The latest financial crisis identifies these shortcomings: underestimation of capital requirements for market risks, derivatives, liquidity risk and maturity mismatch (Bozovic M. 2013).

Basel III (BCBS, 2011) document arises as a result of the lessons learned by the latest global financial crisis and focused on additional strengthening of the capital and liquidity of the banking sector. The purpose of the reforms provided for in the document is to increase the shock absorption capacity of the banking sector, arising from financial stresses and to decrease the risk of transmission effect (so-called "contagion effect"). Expected implications to the banks from the standard are to increase quality and quantity of capital, to increase liquidity coverage and reduce banks' leverage (KPMG 2011).

As the latest response from the effects of the consequences of the crisis, in December 2014 BCBS published a consultative document proposing revisions to the Standardized Approach (SA) (a part of Pillar 1) for credit risk. This is a significant part of the BCBS's broader effort to address inconsistencies in banks' risk-weighted assets (RWAs) regarding measuring of credit risk – which will lead to Basel 4 (BCBS, 2014).

Effects of the global crisis on Macedonian economy were mostly realized through a drop of export demand, decrease in industrial production, insolvency in the real sector and reduction of capital inflows. The banking sector remained sound with twofold higher capital basis at the level of banking sector than the regulatory. However, spillover of the global crisis in the Macedonian economy in terms of the regulatory aspect meant increase of the risks for macroeconomic and financial stability at higher level. Solvency remained major objective of the prudent supervision, and it is implemented through efficient risk management system in the banks.

According to the banking regulation in the field of risk management which began from post crisis period, Macedonian banks are operating in compliance with Basel Committee standards and core procedures and EU directives (with mandatory adaptation of International Accounting Standards in all banks). An important contribution to the positive turnaround in this area has the application of the Decision of the National Bank of Macedonia (NBRM) on credit risk management from 2008 (Official Gazette of RM No 17/2008).

At the level of R. Macedonia, following the adoption of the regulation satisfying the requirements provided for in Pillar 1 Basel II (NBRM, Decision on the Methodology for determining the capital adequacy, Official Gazette of RM No 47/2012, under which the standardized approach for determining capital adequacy ratio is applied), NBRM, during 2012, adopted an act on introducing the ICAAP of the banks as a part of Pillar 2, Decision Amending the Decision on Risk Management

(Official Gazette of RM No 165/12). The principles for establishing ICAAP and their application are derived from the basic guidelines contained in Guidelines on the Application of the Supervisory Review Process under Pillar 2 in compliance with Pillar 2 referred to in the Basel Accord prepared by the European Banking Authority (CEBS, 2006).

In the meanwhile more laws regulating credit risk management are enforced. One significant change is related to the requirement for performing a stress test and reporting of its results. Namely, NBRM commenced using stress testing for regulatory purposes in 2008. (Mandatory application of stress test is for the first time regulated in: NBRM, Decision on Risk Management, Official Gazette of RM No 31/2008, point 10 and 11). The objective is to evaluate the potential impact of one or more internal or external risk factors on the bank's asset value and obligations, or on the level of own assets and capital adequacy. It is an important regulatory and management tool, later incorporated in ICAAP.

CREDIT RISK MANAGEMENT REGULATION

As of 2014, Macedonian banking sector consists of 15 banks, in 11 of them major shareholders are the foreign owners, and 4 saving houses. The dominant foreign shareholders are from the European Union Member States with a share of 70% of total capital of the banks. (Societe Generale Group is dominant shareholder of Ohridskabanka, Nova Ljubljanskabankad.d of Tutunskabanka ad Skopje, NBG Group of Stopanskabanka ad Skopje and Steiermarkische Bank und Sparkassen AG in Sparkasse Bank AD Macedonia). Two thirds of the total assets of the banking sector are concentrated in the three banks, with a significant concentration in almost all major banking activities. Due to the prudence, banks maintain high liquidity position. At the end of 2014, profitability ratios remain positive, with ROAA (return on average assets) of 0,8% and ROAE (return on average equity) of 7,4%.¹⁴² The profitability and stability ratios are significantly affected by the quality of credit portfolio and impairment losses, which means that they depend on the level of credit risk.

Credit risk as the risk of loss to the bank because of the inability of its client to settle their liabilities in the agreed amount is the major material risk. Its importance, in particular, arises due to the fact that the portfolio of banking activities at the level of banking sector in the R. Macedonia is mainly composed of loans held to maturity, more complex financial instruments are lacking, and the portfolios for trading participate with very low percentage in the total bank operations.

Regulation set forth by the NBRM in 2008 was a crucial change in the banking system of the R. Macedonia. (NBRM, Decision on credit risk management, Official Gazette of RM, No 17/2008) from the aspect of defining risk category of the credit risk exposure, necessary elements for the client's creditworthiness assessment and criteria for determine impairment value for balance sheet items and special reserve for off-balance sheet items as accounting categories.

Major methodological changes in the new regulation are the following:

- Defining risk category on the credit exposure level instead on the client level;
- Regulatory and accounting exposure treatment instead of regulatory only (application of IAS 37 and 39 and IFRS 7);
- Classification of the credit risk exposure on individual basis and on group basis instead only on individual basis. By the group basis it was attempted to apply Basel II components, probability of default on and loss given default (BCBS, 2006a);
- Applying the concept of present value of expected future cash flows when measuring the expectations and calculation of the impairment and special reserve value.

According to our opinion, qualitative effects for banks by applying the regulation of credit risk management of 2008 are multiple and refer to the following:

¹⁴²<http://www.nbrm.mk/> (last visited at 04.04.2015)

- Strengthening management processes through the linking of staff and organizational units;
- Providing internal acts, written strategies, policies, procedures, methodologies and etc., prepared in compliance with BCBS recommendations and its best practices;
- Development of internal models in pace with the BSBS recommendations for classification of credit risk exposures on group basis, assessment of their quality and impairment on the group level;
- Development of higher level of risk culture through establishing better cooperation between organizational units in banks relating to information exchange, better cooperation between banks and NBRM supervisory teams;

Particularly important is the benefit of the development of the score models of the banks in R.Macedonia. Score model is a software tool incorporating a set of questions covering the factors that are relevant for the clients' creditworthiness. It leads to the creation of a system for ranking customers. The advantage is that a well-structured credit risk rating system allows a more accurate determination of the overall characteristics of the loan portfolio, probability of default and ultimately the adequacy of provisions for loan losses (BCBS, 2006b).

Based on the score models it is possible to upgrade and develop methods and procedures for risk management, in particular in the domain of predicting and internal models in terms of Basel II: probability of default and loss given default (OeNB and FMA 2004). Techniques vary depending on the score type whether for legal entities (corporate score) or natural persons (retail score). Practice and literature in that area indicate that the data obtained from the corporate clients' score mainly refer to financial statements and processing of indicators obtained thereof (liquidity coefficient, indebtedness, and etc.), as explained by Bessis (2006:445-449). For example: using the financial data of Czech companies is designed scoring model to predict the risk of bankruptcy and corporate sector in the period of one year. Coefficients indebtedness, interest coverage, gross profit margin, inventory turnover, turnover and cash return on capital are important for predicting bankruptcy (Jakubic, P.; Teply, P., 2011).

Imperative for shaping business strategy are the data arising from the retail score (as is stressed by Crouhy, Galai and Mark 2006 and Gestel T.V and Baesens B, 2009:91-113). Analytical methods can be used to anticipate consumer behavior or payment patterns, determine opportunities for cross selling, assess prepayment risk, prioritize the collection effort and other. (For e.g. the data for the education level of the borrower is embedded in the retail score with a determined weight. Through analytical models, the effect of the education level may be assessed on the client's ability to repay housing loans. Report is submitted by the risk management organizational unit to the strategic management accompanied by qualitative analysis of the impact of this indicator in the past five years).

Saunders and Cornett (2006:562) provide a good synthesis of the benefits of the score, through selection and combination of different economic and financial characteristics, the financial management of an institution may: 1) numerically determine important factors to explain the factor for nonpayment; 2) to value the relative participation and importance of those factors; 3) to improve determination of the price of nonpayment risk; 4) to perceive high-risk loan applicants; 5) to calculate the amount of the reserve needed. Those benefits are aimed at early detection of credit risk and maintain the quality of the loan portfolio.

Quantitative effects of the new prudent regulation could be mainly assessed through coefficients associated with non-performing loans (credit exposures which have not been collected long than 90 days from the date of maturity, usually classified as C, D and E risk category). So, compared to the last quarter of 2008 (the date prior to the application of the new regulation) Macedonian banking sector has shown deterioration in the risk profile expressed by the ratio of non performing loans to total gross loans in the last quarter of 2009 (a year after implementation of the new regulation) (table no.1).

Table 1 Asset quality of the banks in R.Macedonia

period	2008	2009	2010	2011	2012	2013	2014
Rate of nonperforming loans to total gross loans (in %)	6.7	8.9	9.1	9.5	10.1	10.9	10.8
Rate of growth of nonperforming loans (in %)	20.1	39.1	12.3	16.2	13.8	11.5	8.3
Total provisions to non performing loans (coverage ratio)	118.1	104.4	100.7	101.9	107.1	103.1	104.6

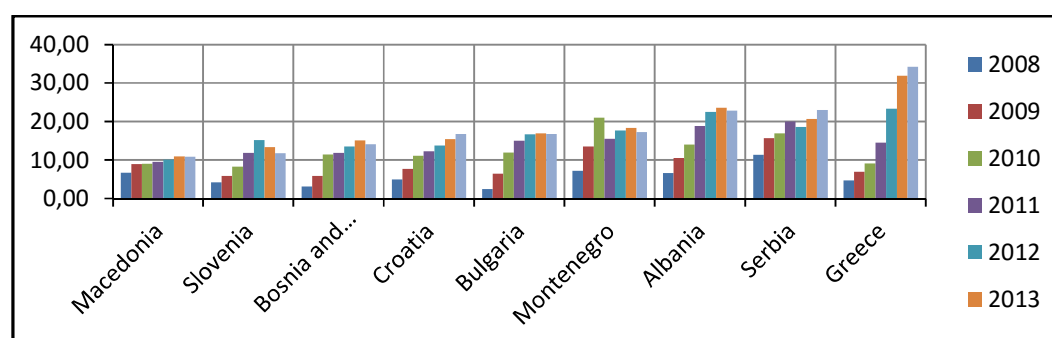
Source: NBRM¹⁴³

During 2009 nonperforming loans increased for 39.1% (for 20.1% in 2008), and the ratio of nonperforming loans to total loans increased from 6.7% to 8.9%. This increase of nonperforming loans overlaps with the methodological changes is logically to be partially due to the “maturity” process of the credit portfolio created during the credit expansion (more for credit boom in R.Macedonia in Mitreska A. 2005/2006:11-32). The increase also overlaps with the reflection of the Great financial crisis 2008/2009. Namely, during 2009 major macroeconomic indicators reveal decline (GDP -0.9% and CPI -0.8%). (Regarding the variables that have the highest importance on nonperforming loans in: (NBRM). 2012. Financial Stability Report for the R.Macedonia:161).

As shown in Table 1, since 2009, the growth rate of nonperforming loans in the banking sector shows improvement, with a slight upward trend in nonperforming loans to total gross loans. But, it must be considered that, in accordance with prudential regulations, banks in R. Macedonia are obliged to protect the quality of the portfolio by allocating the impairment for balance sheet items and special reserve for off balance sheet items (for impairment and special reserve the commonly used term is provisions). The ratio of coverage of nonperforming loans with total provision for the period after 2009 is high. It indicates the existence of the capacity of the banking system to absorb risk due to the conservative policy of banks to allocate provisions. Stability of the financial system in R Macedonia after the crisis period is maintained on a relatively high level. As indicated by the latest data (fourth quarter of 2014) nonperforming loans compared to gross loans is 10.8%, nonperforming loans coverage with provision for total loans is 104.6%.

Quality of the banks' portfolios measured by nonperforming loans to total loans is also confirmed by comparing this ratio within the neighbour countries and beyond in the recent period. Namely, according to the World's Bank data, R. Macedonia has the lowest ratio of nonperforming loans to total loans in the period from 2011 to 2014 (as shown in the Chart 1).

Chart 1 Non-performing loans to total gross loans (in %) per countries in the neighbourhood and beyond



Source: World Bank

¹⁴³Ibid

Non-performing loans for Macedonian banks are concentrated mainly in the corporate sector 15.3% and 5.9% in the sector individuals (data from 2014¹⁴⁴). The level of this indicator is due to the low inclination of the management of banks for taking credit risks in this area of working activities. In the same period, the highest non performing ratio has the banking system in Greece, which amounts to 34.25% in 2014, Serbia to 31.9% and Albania to 23.5%. Other countries are moving in the area from 11% to 18%.

REGULATION RELATED TO THE INTERNAL CAPITAL ADEQUACY ASSESSMENT PROCESS (ICAAP)

Under ICAAP, risk management is focused on establishing a process for provision of long-term sustainable capital level by the banks, taking into consideration the effect of all material risks as well as their business policy and strategy.

The application of the Pillar 2 must be done through two main documents, one under the banks' responsibility: the Internal Capital Adequacy Assessment Process (ICAAP), and the one under supervisory responsibility: the Supervisory Review Evaluation Process (SREP). The purpose of SREP is to ensure that institutions have adequate arrangements, strategies, processes and mechanisms as well as capital and liquidity to manage and cover the risks to which they are or might be exposed.

Under NBRM Regulation, regulatory capital is the capital necessary for covering risks (as determined by the Decision on the Methodology for determining the capital adequacy, NBRM; 2012a). Internal capital for covering individual risk is assessment of the amount of current and future capital needs for covering individual risk to which the bank is or might be exposed in its operation. The sum of all internal capital for covering individual risks to which the bank is or might be exposed indicates the total internal capital for covering risks. Banks are obliged to provide and maintain the level of their own funds, or the capital adequacy ratio, determined in accordance with the ICAAP.

NBRM Decision relating to the ICAAP - Decision for Amending the Decision on Risk Management, Official Gazette of RM No 165/2012 (NBRM, 2012b), through the defined provisions, incorporates the basic principles provided for in Basel II Pillar 2.

Principle 1: „Banks should have a process for assessing their overall capital adequacy in relation to their risk profile and a strategy for maintaining their capital levels. Principle 2: „Supervisors should review and evaluate banks' internal capital adequacy assessments and strategies, as well as their ability to monitor and ensure their compliance with regulatory capital ratios. Supervisors should take appropriate supervisory action if they are not satisfied with the result of this process.” Principle 3: „Supervisors should expect banks to operate above the minimum regulatory capital ratios and should have the ability to require banks to hold capital in excess of the minimum.” Principle 4: „Supervisors should seek to intervene at an early stage to prevent capital from falling below the minimum levels required to support the risk characteristics of a particular bank and should require rapid remedial action if capital is not maintained or restored.” (BCBS, 2006a paragraphs: 725, 745, 756, 758).

To fulfill the principles concerned, the Decision (NBRM, 2012b) defines basic process phases as follows:

- material risks identification;
 - risks covered by the Methodology for determining capital adequacy: credit risk, market risk, currency risk and operational risk;

¹⁴⁴Ibid

- risks which are not fully covered by the Methodology for determining capital adequacy: operational risk to which the bank may be exposed as a result of introducing new products and processes and etc.;
- risks which are not covered in any way by the Methodology for determining capital adequacy: liquidity risk, interest rate risk, concentration risk, country risk, strategic risk, reputational risk and etc.;
- external environment risks – derive from macroeconomic, business or regulatory environment in which the bank operates.
 - measurement or assessment of all individual material risks and determining adequate internal capital amount for their covering;
 - determining total internal capital for covering risks; and
 - comparing the bank own funds with the total internal capital for covering risks and taking activities for achieving and/or maintaining the necessary own funds amount.

The total internal capital for covering risks shall be at least equivalent to the regulatory capital for covering risks, and it better to be higher than the regulatory capital. In this way NBRM requires from the banks to maintain higher capital than the regulatory capital. This is connected with Principle 3.

Banks are obliged to implement ICAAP at least on annual level and in case of any significant change in the risk profile. NBRM may make changes in the process of determining internal capital if it finds out that this process and/or the total internal capital for covering risks is not adequate to the risk profile of the bank and/or its environment under Principles 2 and 4.

According to our opinion challenges facing Macedonian banking sector in the implementation of ICAAP are the following:

1) Development of internal models in measuring and assessment of individual risks referring to the risks covered by the Methodology for determining capital adequacy.

The manner of designing the process encourages the banks to develop and test, and in accordance with the results obtained to enhance their own models when measuring the credit, operational and market risks. Banks, however, in their initiation are more oriented to the regulatory approach.

2) Development of internal models in measuring and assessment of all identified material risks which are not covered by the Methodology for determining capital adequacy.

Banks shall develop their own quantitative and qualitative approaches and methodologies for measuring and assessment of the above risks. Thereto, it is possible to apply advanced techniques for risk measurement relating to economic models using mathematical or statistical methods. The model has to be adequate to the bank nature, size and risk profile.

In that context a problem may arise related to whether the supervisors agree, or accept the elaborated model by the banks. Disagreement may relate to technical and model option aspects.

This is a very important issue since the result for the necessary capital may vary depending on the model option. Assumptions basis for the internal approach, time series used, confidence interval, manner of connection between quantitative and qualitative factors leave room for subjectivity and assessment both by the banks and supervisors.

3) Embedding the stress test results when calculating ICAAP

Challenge for the banks includes selection of adequate scenario or combination of scenarios that could influence the performance in a time horizon of one year. The regulation encourages application of the macroeconomic stress tests. These approaches are very complex and take into account simultaneous changes in the macro economic variables and their interactions, as explained in the works of Van Den End, Hoebericht and Tabbac (2006) and Vazquez, Tabak and Souto (2010).

In this regulation, NBRM particularly emphasizes coverage of external environment risks in the calculation of ICAAP (external environment stress test is described in: NBRM2012b, item12). It is necessary to include particular scenarios for impact of negative movements on the macroeconomic factors (GDP, exchange rate and etc.), and their connection with the banks' risk measures (non performing loans ratio, liquidity ratio, and etc.).

4) Setting up adequate information system in banks for timely and accurate notification of the established ICAAP.

Banks should set up organizational structure and competences to make it possible adequate and timely notification of the established ICAAP to the bank bodies, National Bank and to the other Stakeholders. This means selection of staff and setting up adequate internal reporting procedures.

Moreover, it is important to emphasize the need for close involvement of senior management in risk governance and strategy. This was in response to the problems that were too visible in the crisis—at one big bank after another, boards and management failed to understand the nature or the size of the risks their banks were taking on. As a response, in some cases, risk reports slow down decision making or are simply not taken seriously. Besides to the size and culture of the given bank and the nature of its business model, senior management has to have a comprehensive picture of all material-risk types across the enterprise and a good understanding of the relevant underlying drivers at any time (more in: Pfetsch S.; Poppensieker T.; Schneider S.; Seova D. 2011: 5-12).

Expected effects to the banking system from the implementation of ICAAP are related to the challenges and are focused on:

1) Development of internal models which makes possible to the banks more subtle and sophisticated approach to risk measurement and assessment;

2) The results of the sub procedures constituting ICAAP are very important for the managing and decision-making processes by the strategic bodies;

3) By considering the impact of the business cycle, the development plan and business policy of the bank as well as the results of the stress test performed, comprehensive and holistic approach in risk management is achieved;

4) The process entails defining target level of banks' own funds intended for covering future performance in accordance with the strategy. It enables comprehensive picture of the relation between present and eventual risk connected to own funds. If internal capital is higher than the regulatory, capital plan is prepared as timely warning measure;

5) The process establishes a link between NBRM supervision and its continuous notification on the banks' risk profile with the level of own funds.

REVISION TO THE STANDARDIZED APPROACH OF CREDIT RISK

Revision to the Standardised Approach of credit risk – Consultative document (BCBS, 2014) in the calculation of capital adequacy ratio is the first significant change to the initial Basel II (BCBS, 2014).

The changes refer to the following aspects: 1) reducing regulatory reliance to external credit ratings; 2) increasing risk sensitivity; 3) reducing national discretion; 4) strengthening the link between the standardised approach and IRB approach; 5) enhancing comparability among banks.

If, when analysing the advantages and disadvantages of the proposal for regulatory change, another Basel Committee document is taken into consideration, Capital floor: The revision of a framework based on a standardised approach (BCBS, 2014b) published at the same time, and posing more rigorous requirements to the (Internal Rating Based) IRB Approach users, it is probable that the proposed framework becomes more appealing to the banks than the previous one, even than the IRB Approach, which makes it possible for the banks to use internal ratings instead of external.

Replacing External Ratings With Risk Drivers

The application of external ratings dates back long time ago; since early 1930s the insurance company regulators relied on ratings to assist when prescribe the capital as reserve on disposal of government securities. In 1951, the National Association of Insurance Companies (NAIC) established a system of internal quality categories, according to which the top-quality classification corresponded to ratings of BBB and above, effectively establishing uniformity in the definition “investment grade” across banks and insurance companies. BBB rating was frequently used for quality exemption threshold by regulators, but by the time and needs they extended to better ratings (Teslic LJ., 2001, p. 27-36). In the USA in 1975, the Securities and Exchange Commission (SEC) recognizes the Nationally Recognized Statistical Organizations (NRSRO) ratings for certain regulatory requirements. Main objective is to define “safe securities” – securities with such significantly high ratings that banks may invest their capital. The criteria of improved ratings within Basel II are mainly based on the criteria established by SEC (Gestel T.V.; Baesens B.-2009, p.157).

Despite the tradition of many years application of external ratings for different objectives, in the course of the latest financial crisis, credit rating institutions misgraded their evaluations. The consequence of such “failure” is directing the regulatory point on reassessment of their relevance. Credit agencies have been criticised for delayed reaction and adjustment of evaluations, which leads to initiating their regulation with a focus on the European legislation aimed at standardized function of the credit agencies (De Haan j. Amtenbrink F. 2011). On the other hand, there are differences in ranking across agencies and favoritism of certain businesses and thus certain companies by some agencies (Ghosh, 2013).

The initiative for change of the external rating approach dates back as of 2010 through the Financial Stability Board document (FSB, 2010). This document contains principles for reducing reliance on credit agency ratings in standards, laws and regulations. The principles are intended to catalyse as significant change in existing practises, in order to reduce mechanic reliance on the ratings by financial market participants. To implement the above it is necessary for the banks to establish a good internal credit practice and risk assessment.

Consequently, author's personal opinion is that the greatest achievement with the change of the standardized approach is attained by reducing the impact of the international institutions' external ratings (Fitch ratings, Moody's Investor services LTD, Standard and Poor's Rating Services) when weighing different banks' assets. Considering the failures, or rating agencies' favourizations in risk assessment before the financial crisis, this step is an inevitable reaction.

Namely, the consolidated (FCB 2010) document envisages replacement of external ratings for exposure to banka with simple metrics based on two risk drivers:(i) capital – measured as the Basel 3 CET1 ratio (Common Equity Tier 1 capital/Risk-weighted assets) – and (ii) asset quality – measured as a net non-performing asset (NNPA) ratio.

The Committee justifies the application of those two coefficients based on regression analysis of bank failure across various jurisdictions, capital adequacy and asset quality generally prove to be two good predictive risk drivers of bank insolvency. In addition to their increased predictive power, the Committee believes these risk drivers are already generally well understood across banks and jurisdictions. When calculating capital requirements, banks must use the data disclosed in their obligor's most recent Pillar 3 reports.

Risk weights would range from 30% (CET1>=12% and NNPA<=1%) to 140% (CET1 at 4.5%-5.5% and NNPA>3%), with a 300% risk weights for CET1<4.5% or with necessary data not being disclosed (table below No.2). Short-term interbank claims (less than three months) may receive a RW 20% lower than the normal equivalent – with a floor of 30% -- provided they are not in fact roll-over facilities. But, it must be emphasized that claims to sovereigns, central banks and public sector entities are not within the scope of these proposals and changes, ie they will still rely on external ratings.

Table 2 Proposed risk weight for long-term exposures to banks

	CET 1 ratio >= 12%	12% >CET 1 ratio >= 9.5%	9.5% >CET 1 ratio >= 7%	7% >CET 1 ratio >= 5.5%	5.5% >CET 1 ratio >= 4.5%	5.5% >CET 1 ratio <4.5%
Net NPA ratio <=1%	30%	40%	60%	80%	100%	300%
1% <Net NPA ratio <=3%	45%	60%	80%	100%	120%	300%
3% Net NPA ratio	60%	80%	100%	120%	140%	300%

Source: Basel Committee on banking supervision

The second significant change refers to the change of risk weights for exposures to corporates. They would similarly no longer be mechanically based on ratings, but on two risk drivers: revenue (vs. profitability which may create “misaligned incentives”) and leverage (assets/equity). The BCBS (BCBS, 2014a) believes that this drivers have a high level of explanatory power while preserving simplicity.

According to the metrics (table NO.3), risk weights would range from 60% (revenues>EUR 1bn and leverage at 1x-3x) to 130% (revenues<=EUR 5m and leverage>5x), with a 300% risk weights for corporates with negative equity. The current approach risk-weights all corporate exposures by reference to their external credit ratings only. For unrated exposures, a flat risk weight is applied. The Committee believes that, while ratings may be good predictors of corporate defaults, a large majority of corporate borrowers, especially SMEs, do not carry external ratings, so, the current standardized approach does not offer sufficient risk sensitivity.

Table 3 Proposed risk weights for senior debt corporate exposures

	Revenue<=EUR 5m	EUR 5m < Revenue<=EUR 50m	EUR 5m < Revenue<=EUR 1bn	Revenue > EUR 1bn
Leverage: 1x-3x	100%	90%	80%	60%
Leverage: 3x-5x	110%	100%	90%	70%
Leverage: >5x	130%	120%	110%	90%
Negative equity*	300%	300%	300%	300%

*Note: Negative equity means that a corporates liabilities exceed its assets

Source: Basel Committee on banking supervision

Another positive change of the Committee proposals is the proposal of the treatment of real estate exposures – residential and especially commercial. According to BCBS,(BCBS, 2014a):2):" Exposures secured by residential real estate would no longer receive a 35% risk weight. Instead, risk weights would be determined according to a look-up table where risk weights range from 25% to 100% on the basis of two risk drivers: loan-to-value and debt-service coverage ratios (the table below). Exposures secured by commercial real estate are subject to further consideration where two options currently envisaged are: (a) treating them as unsecured exposures to the counterparty, with a national discretion for a preferential risk weight under certain conditions; or (b) determining the risk weight according to a look-up table where risk weights range from 75% to 120% on the basis of the loan-to-value ratio. "The Loan-to-value ratio (LTV ratio) is defined as the total amount of the loan divided by the value of the property and Debt Service Ratio (DSR) is defined as debt service amount divided by total income.

Table 4 Proposed risk weights for exposures secured by real estate collateral

	LTV < 40%	40% <=LTV < 60%	60% <=LTV < 80%	80% <=LTV < 90%	90% <=LTV < 100%	LTV > 100%
Loans to individuals with DSC <=35%	25%	30%	40%	50%	60%	80%
Other loans	30%	40%	50%	70%	80%	100%

Source: Basel Committee on banking supervision

The approach is particularly tied to the consequence of the crises due to decrease of the loan-to-collateral value ratio as collateralized debt obligation. The advantage of such measure is the debt-service coverage ratio of the bank showing the real estate value. That is, according to the document (BCBS, 2014a): 36-37): "Value of the property: the valuation must be appraised independently using prudently conservative valuation criteria and supported by adequate appraisal documentation". Furthermore, DSR as a coefficient is rather conservative and directly reflects the client's capacity to repay the loan, derived from its tax netted income.

Eventual Application of Standardized Approach Proposal in the Macedonian Regulation

The capital adequacy rate of the banking system in R. Macedonia measured as total capital to risk weighted assets is twice higher than the regulatory prescribed 8%. This reflects a stable solvency, resilience and the quality of banks' capital. According to NBRM (NBRM 2014:48-53), Macedonian banking system has a higher capital adequacy compared with the banking systems of five developed economies: France, Italy, USA, Japan and Australia. However when analyzing this, the very conservative policy of allocation of the provisions in the Macedonian banking system must be taken into consideration, as evidenced by the percentage coverage of nonperforming loans with provisions (as shown in Table No1), which automatically increases the calculated ratio. Mentioned developed countries do not have such a conservative provision policy.

Table 5 Capital adequacy ratio per countries in the neighbourhood and beyond (in %)

Countries	2008	2009	2010	2011	2012	2013	2014
Montenegro	15,00	15,70	15,85	16,50	14,70	14,40	14,90
Greece	9,40	11,73	12,26	-1,70	9,57	13,50	15,20
Macedonia	16,16	16,38	16,14	16,78	17,12	16,80	15,70
Bosnia and Herzegovina	16,30	16,07	16,17	17,07	17,01	17,90	16,40
Albania	17,20	16,20	15,40	15,60	16,20	17,96	16,84
Slovenia	11,70	11,69	11,32	11,85	11,40	14,00	19,30
Serbia	21,90	21,40	19,90	19,10	19,90	20,90	20,00
Croatia	15,40	16,43	18,79	20,47	20,89	20,80	21,40
Bulgaria	14,90	17,04	17,39	17,55	16,64	16,90	21,95

Source: www.helgilibrary.com/ and from the websites of the national banks of countries

Table 5 shows a comparison of the capital adequacy ratio (measured in the same way) of certain countries in the neighbourhood and beyond in the period after the crisis. This ratio for the Macedonian banking system is slightly reduced, as a result of the reduction, under the regulation, of the amount of the subordinated instruments, as well as the slowing growth of other categories of capital positions. It is lower compared with the countries in the region, taking into account the absence of significant recapitalization of the banks in the recent period.

Calculation of the capital adequacy of banks in Macedonia is conducted according to the Decision on the methodology for determining the capital adequacy from 2012 (NBRM 2012 a) which describes and regulates the entire procedure for weighting of assets. According to undertaken activities of banks, the most significant impact has credit risk. In this regard the definition of the weights for the calculation of the risk weighted assets for credit risk is very important, especially the use of external ratings.

The use of external ratings for regulatory objectives for credit risk management in the banks by NBRM first appears in the Decision on determining the methodology for classification of active balance and off-balance sheet items of the banks and savings houses according to their risk degree of 2002 (NBRM 2002, point 14), where first-class bank is defined (first-class is classified as BBB rating bank by Standard & Poor's, Fitch IBCA and Thompson Bank Watch or Baa3 according to the Moody's rating). The further credit risk management regulation is frequently used for different purposes such as defining first-class collateral (Official Gazette of RM No 17/2008, points 18 and 20), establishing internal exposure limits (Official Gazette of RM No 91/2011, point 18) and determining the financial asset impairment loss/special reserve (Official Gazette of RM No 127/2012, point 12).

The application of external ratings for calculation of capital requirements is explicitly defined in the Decision on the methodology for establishing the capital adequacy (Official Gazette of RM No 47/2012). Recognized external credit rating institution means the following credit rating agencies (CRA): Fitch Ratings, Moody's Investors Services Ltd and Standard & Poor's Ratings Services. The determination of risk weights for credit risk exposure is based on the degree of creditworthiness, which depends on the rating assigned by a recognized CRA. This Decision by NBRM mainly satisfies the requirements according to the First Pillar of Basel II.

In 2012, a technical restructuring was made of the risk management systems across the banks aimed at mass use of external ratings due to implementation of Pillar 1 of Basel II (see: Celeska F., Capital Adequacy Reform, 2009). Restructuring of the risk management systems in the banks to risk-weighted assets through capital adequacy ratio and non-performing loans look up table would require additional resource and time engagement.

Another weakness of the application of CET 1 and Net NPA is that those indicators are obtained through Pillar 3 reports, which are published on annual base. The experience shows that for better assessment of the institution's risk profile or for investment in an instrument, more frequent data are necessary. CRAs lack this weakness, nevertheless ratings change with any new defined change in any of the valuation parameters.

However, if automated and frequently available, the proposed coefficients are adequate risk drivers. Taking into consideration the comprehensive, detailed and highly demanding regulation for calculation of risk-weighted assets (BCBS 2006a), and thus the capital adequacy, CET 1 is a suitable measurement of the banks' resilience. The ratio is comprehensive and prudent resilience measurement of a bank's assets and capital, taking into consideration that the calculation includes balance sheet items (net credit risk exposure) and profit and loss account (profit/loss have impact on the capital).

When analysing the impact of consolidated changes of the standardised approach it must be considered that CET 1 ratio calculations must comply with Basel III. The regulation of the Republic of Macedonia is extremely prudential and rather in compliance with Basel III requirements (see: NBRM, 2010).

Net NPA is an indicator of the loan portfolio quality and is closely tied with the economic cycle and financial crises. It is affected by the following macroeconomic indicators: GDP and unemployment (Nkusu M.2011), share prices, exchange rate and interest rates (Beck R.; Jakubik P and Piloiu A. 2013). As a result it is an extremely significant indicator for the risk sensibility and the banks capacity to absorb losses due to bad placements. After the financial crisis, non-performing loans in domestic bank portfolios have increased, mainly due to the lack of corporations' capacities to repay their debts and timely servicing of natural persons' obligations (more for NPA's in: Hadzi-Janeva B.2014).

With reference to the proposal on change of corporations' weights, the ratios tied to leverage and coverage with cash flows are considered relevant and have high weights when ranking the quality by the credit rating agencies S&P and Moody's (Srebrenova Trendova M.2014:1019-1024). The financial leverage and cash flows indicate the level of financial risk, or the financial-related risk with the company activity. If a corporation is financed through borrowings, then it is obliged to repay the debt and interest, thus increasing the financial pressure. The higher the debt participation in the asset sources, the higher the possibility for the company to face its payment capacity. Herefrom the advantage of applying the matrix composed of debt ratio and revenue weighting for exposure to companies arises. But, it is necessary to adapt limits with the circumstances in the economy.

The standardised approach applied entails 100% weight to the firms lacking external rating. Since the banks in R.Macedonia do not operate internationally, they are not exposed to companies with external ratings. The new regulation will mean greater diversification and sensitivity to each of the clients as well as possibility for lower capital adequacy due to application of weights up to 300%. Greater allocation of the capital for exposure to the economic clients would prompt a tendency of the banks to decrease landing to this segment. This could cause macroeconomic consequences, systemic risk and adverse effect to the real sector and reverse negative effect to the banks.

According to the Macedonian regulation, claims secured by real estate are risk-weighted at 35% if regular and 100% if non-performing, so that the adverse effect of the proposal will be again increase of the weighted amount from 35% to 100% for some clients.

The other criterion – debt service ratio – is usually taken into consideration when approving the exposure and its quarter monitoring as most realistic source of repayment would be the positive side. The consolidated document provides for continuity of the practice – calculation prior approval; however its more frequent monitor and measurement is much better approach. Negative side is that accessibility to real source of revenue is put into question if the client's wage is not deposited in the bank where the loan is approved.

CONCLUSION

By the above elaboration of the impact of nbrm regulation on risk management it is concluded that the banking sector in the republic of Macedonia gained significant benefits. the national regulation from 2008/2009 which covers the main Basel standards and European legislation imposes prudent credit risk management and has this implications:

- qualitative, namely regulation requires setting up a system for managing credit risk through inevitable need for developing methodologies and policies for rating the creditworthiness of clients. it is made possible through the tools and techniques as score models that contribute to early warning of credit risk, its identification, assessment, measurement, control and maintains good portfolio quality.

- quantitative, reflected by the relatively stable coefficients associated with non-performing loans, as indicated by the latest data (fourth quarter of 2014) capital adequacy ratio at the level of financial systems is 15.7%, non performing loans compared to gross loans is 10.8%, non performing loans coverage with provision for non performing loans is 81.9%.

Particularly significant challenge for the management is setting up icaap as an integral process which include the entire banking performance and enable risk profile balance with own funds. Major challenges facing Macedonian banking sector in the implementation of icaap are focused on: development of internal models in measuring and assessment of material and non material risks, embedding the stress test results and setting up adequate information system in banks. With this document banks approach to the second pillar of Basel 2 and need to integrate the organizational units, tools, techniques, forecastings and measurements in order to preserve the capital.

Expected effects to the banking system from the implementation of icaap are related to the challenges and are focused on: more sophisticated approach to risk measurement and assessment; the results of the sub procedures constituting icaap; comprehensive and holistic risk management; defining target level of banks' own funds and the relationship and cooperation between nbrm supervision and banks. expected quantitative result is maintaining the optimal internal capital needs.

If the nbrm's capital adequacy regulation is revised in the context of the new draft document (bcbs, 2014), it is best to apply the following course:

- maintaining the weights mapped to external exposure ratings to countries, central banks and public sector (as in the draft document);
- maintaining weights mapped to external exposure ratings to banks, initially, due to insufficient frequency of data disclosure for cei 1 and net npl through pillar 3. however, in any case monitoring of the proposed ratios when approving the exposure would be an example of good and prudential practice as long as greater net npl frequency and automatic availability is achieved;
- change of exposure weights to corporate sector, due to the need for their diversification and greater sensibility in macedonian conditions. the change may cover both proposed ratios leverage and revenue as established risk drivers; however, limits and valuations are to be adjusted to the coefficients and revenue of the macedonian economy.
- the change of exposure weights covered by real estate due to greater diversification;
- maximum proposed weight of 300% is too high in macedonian conditions, it will destimulate the banks' credit supply and as a result will destimulate the realeconomy; negative macroeconomic and systemic consequences may be expected.

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CONFERENCE TOPIC

III.

**ENTERPRISE RESTRUCTURING IN THE
POST-CRISIS ENVIRONMENT**

IMPACT OF INTELLECTUAL PROPERTY PROTECTION AND LEARNING ON INNOVATION PERFORMANCE

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ABSTRACT

The purpose of this paper is to test the relationship between IPR protection methods and learning strategies on several dimensions of innovation performance. A cross-section of randomly selected Australian firms was chosen for the study. Patents were found to have a positive and significant relationship with time of innovation adoption, time to market (TTM) and level of research and development expenditure. However, moving quickly down the learning curve had the largest explanatory power on revenue and the number of innovation adoptions. Controlling for company size showed a positive and significant effect on the timing of innovation adoption and TTM, indicating that large companies are likely to perform better within these dimensions. The implication of this study is that IPR protection methods should be used as complementary assets in order to sustain competitive advantage, and should be combined with rather than opposed to other methods to appropriate the profits of innovation, especially moving quickly down the learning curve.

Keywords: Innovation performance, Intellectual Property Rights (IPR), learning culture, innovation adoption

JEL classification codes: O31, O34

INTRODUCTION

In this section we provide a rationale for the research study and we define some of the terms used in the paper. Intellectual Property Rights (IPRs) protection methods traditionally refer to an approach taken by firms to protect their intellectual assets from imitation, infringement and theft (Narayanan, 2001).

The need for protection arises when a firm is trying to control its knowledge assets and thus maintain its competitive advantage in order to appropriate the benefits of the firm's innovation (Narayanan, 2001; Pitkethly, 2001; Grandstrand, 1999). Therefore, the more proprietary the innovation, the greater the competitive advantage provided to the firm. Narayanan (2001:130) defines appropriability as "*the degree to which the potential economic benefits from an innovation can be appropriated by the firms engaged in technology development.*"

Hence, methods of IPR protection (patents, secrecy agreements, brand names, copyrights, etc) can be considered as important resources (Hall, 1992) in the resource based view (RBV) of the

firm (Barney, 1991; Conner and Prahalad, 1996; Grant, 1996; Liebeskind, 1996). However, empirical studies are pessimistic concerning the efficacy of IPR protection methods as a means to keep competitors out of a market (Arundel, 2001; Brouwer and Kleinknecht, 1999).

For example, Mansfield et al. (1981) show that 60 per cent of the patented innovations in their sample had been imitated within four years. On the other hand, patents are recognised as effective tools for protection in industries such as pharmaceuticals (Lieberman and Montgomery, 1988; Gittelman, 2008). There are at least three reasons supporting this.

Firstly, it is possible to innovate around existing patents. For example, some firms in Japan have developed methods to use their competitors' patents to create new technologies (Grandstrand, 1999; Pitkethly, 2001). Secondly, patent-related litigation is often long and uncertain, and patents may also be cancelled, which could then attract new competitors into the market. Thirdly, some customers demand at least a second source to their suppliers so that they have to license their technology. As a result of these potential limitations of patents, firms tend to use other methods for capturing returns from their innovations.

In addition to patents as an IPR protection method, secrecy agreements, copyrights, and brand names are also used as protection methods. The general perception in the literature is that IPR protection methods are technical instruments aimed at protecting innovators from imitation, and are not part of a company's competitive strategy. Firms tend to rely on lead-time advantages to capture economic returns from innovation (Arundel, 2001; Cohen et al., 2002; Blind and Thumm, 2004), and use IPR protection methods as a 'safety net' (Hall and Ziedonis, 2001). Based on the above, the propensity to use IPR protection methods is high; however, there seems to be inadequate attention in the literature on the impact of IPR protection methods and the appropriation of innovation performance (Hurmelinna-Laukkanen et al. 2008). Considering the limitations discussed above, we address the following research question in this study:

Research Question: *What are the most effective Intellectual Property Rights (IPR) protection methods for appropriating innovation and how do these compare with learning strategies?*

This study's major contribution is the method used to identify the impact of IPR protection methods on the appropriation of innovation performance. It also contributes to our understanding of how IPR protection methods and learning strategies differ between industries, firm ownership and company size.

In order to address the research question, this paper is structured as follows. We first present a review of the literature and we use a case study to support the development of a set of hypotheses which establish a link between patents, secrecy agreements, brand names, and learning strategies, with innovation performance. Second, we present the methodology used to test the hypotheses. Third, we present the results of the multiple regression analyses, which include three control variables: company size, industry type, and foreign ownership. Finally, we discuss the results and draw conclusions and implications for managers and researchers.

LITERATURE REVIEW

The purpose of the literature review is to identify the independent, dependent and control variables that would be used in the formulation of hypotheses for this study. Most of the peer-reviewed publications on IPR protection methods have been published in specialised journals (Grandstrand, 1999). However, a growing part of the specialised literature shows that the potential roles of IPRs, especially patents, are much more diverse and that their management is complex (for a summary, see Hanel, 2006). Therefore, we devote some attention in the following section on patents, followed by secrecy agreements, brand names and learning strategies.

Patents

In the economic and managerial literature, patents are seen mostly as a way of preventing imitation of new or improved products. A patent is a legally enforceable right to stop others from imitating new technology (Reitzig, 2004a). A patent is seen as a way for innovators to raise barriers to entry into the market, hence preventing competitors from using the technology invented for a 20-year period.

As discussed briefly in the introduction, there appears to be contradictions in the literature on the efficacy of patents. Rivette and Kline (2000) argue that patents can be a source of direct revenue through royalties, for example IBM gains more than a billion dollars of revenue per year from its patent portfolio (Narayanan, 2001). However, patents can also have more subtle roles. They are also tools to negotiate access to the competitors' technologies through cross licensing (Hall and Ziedonis, 2001). This is especially true in industries with complex technologies such as electronics, where technology exchange agreements are common (Grindley and Teece, 1997). In these kinds of negotiations, the quantity of patents is at least as important as their quality because the two parties cannot examine each patent carefully.

Patents also facilitate cooperation in R&D. As a result, firms, which have R&D collaboration, have a higher propensity to patent (Brouwer and Kleinknecht, 1999). More generally, patents can help attract financing or industrial partners, which sends a signal that a firm has certain competencies (Mazzoleni and Nelson, 1998; Pénin, 2005). Patents are also a means to overcome the dilemma between keeping knowledge tacit so that it is difficult to imitate, and making it explicit and able to be replicated (Kogut and Zander, 1992).

Patents also provide defensive short-term protection mechanisms that allow organisations to obtain competitive advantage (Arundel, 2001; Cohen et al., 2002; Blind et al., 2006). For example, Wilson (2007) explains how Nokia took out patents on key features of a unique user interface that they built, which prevented competitors from including these features in their phones. Finally, an important patent portfolio is also a way to reduce the probability of being sued for patent infringement (Lanjouw and Schankerman, 2001).

Secrecy Agreements

The literature generally documents analysis on the management of patents after companies have obtained legal patents. Secrecy agreements are often used to prevent employees from revealing organisational secrets after they have left the organisation. Secrecy agreements are a precursor to the patent registration process as discussed by Chesbrough et al. (2008: 962) *"scholars often pay little attention to the process that most R&D organisations go through prior to obtaining an eventual patent. Yet this is where any useful approach to managing IP must start."* Therefore, once an organisation has discovered or invented something, intellectual property can be protected with secrecy agreements, prior to discussing details of an innovation as part of the patent registration process. However, secrecy agreements are difficult to implement because they rely on proving breaches under common law (Reitzig, 2004a).

Brand Names

There is an important literature on branding in marketing journals, but this is rarely linked directly to innovation performance. According to Beverland et al. (2010: 34) *"...the most comprehensive reviews of the innovation and new product development literature fail to address the role of brands on new product launch success."* These authors examine how brand-positioning

influences the way innovation is organised, especially as far as relationships between marketing and new product development departments are concerned.

Aaker (2007) tackles the question of the influence of branding on innovation success, but from an analytical rather than an empirical point of view. According to Aaker (2007), branding can improve innovation performance by making the offering more differentiated and more attractive, which has an effect on the perception of innovativeness. Lawson et al. (2012) add that a strong brand name reduces uncertainty for the customer and therefore search costs.

Learning Strategies

The ownership of complementary assets, such as learning strategies can help firms to establish who wins and who loses from innovation (Narayanan, 2002; Burgelman et al. 2004). The 'learning curve' concept initially developed in the aircraft industry, basically states that *"..for each doubling of quantity, production time is reduced by 20 per cent."* (Gaither and Frazier, 2002:726). Implementing team approaches to learning, leads to changes in organizational learning rates. Garvin (1993) defined a learning organisation as *"an organisation skilled at creating, acquiring and transferring knowledge, and modifying its behaviour to reflect new knowledge and insight."* This study has adopted Garvin's definition of a learning organisation as part of the 'moving down the learning curve' practice.

We can ascertain from the above discussion that different protection methods are used to support different business strategies and to raise barriers to entry in different settings. This increases the potential complexity of relations with innovation performance, which creates a need to study the link between protection strategy and innovation performance.

HYPOTHESES

Intel Case Study

Case studies are useful means for building hypotheses (Eisenhardt, 1989). Our approach is to develop hypotheses through the analysis of the literature and the Intel case study. The Intel case study was chosen because it corresponds to different situations with respect to IPR protection methods (Cohen et al., 2002; Reitzig, 2004b; Hanel, 2006; Blind et al., 2006), with activities concentrated in a single industry.

Intel's IPR protection strategy can be analysed through three phases. The first phase is from 1970 to 1985 during which time Intel had an open IPR strategy. This most likely favoured the emergence of its X86 microprocessors as an industry standard (Hill, 1997). The second phase was much more oriented toward protection. Although some signs of a more restrictive IPR management strategy had already appeared (Jackson, 1998), the turnaround can be dated to 1986 when Intel decided to sue NEC. It claimed that NEC had violated the copyright of the microcode for its 8088 and 8086 microprocessors (Afuah, 1999). In the next few years, Intel prosecuted any firm that violated its IPR (Afuah, 1999). Although the legal actions were not always successful, they contributed to raising a subtle barrier to entry, which was the fear of being sued by Intel.

Nevertheless, this strategy was not sufficient in itself to prevent new competitors such as AMD, Cyrix, NextGen, IBM or Chips and Technologies from entering or staying in the market. Intel had to take other complementary strategic actions. For example, in 1991, Intel launched the "Intel Inside" advertising campaign in order to enhance its brand name identity. Intel also accelerated the pace at which new generations of microprocessors were introduced (Afuah, 1999). Intel's IPR

management strategy therefore appears to be complementary to the overall strategy of the firm and its innovation performance.

Intel's communication strategy was also supported by the use of a registered trademark for its subsequent generations of microprocessors. The success of the "Intel Inside" campaign and the acceleration of the "technological race" led by Intel also made IPR protection a less crucial barrier to entry. Therefore, Intel turned to a more balanced strategy. In 1995 Intel signed a general agreement with AMD (its final remaining serious competitor) ending all litigations between the two firms. AMD was the only organisation that had been able to compete with Intel's technology development. However, its production capacities were far below those of Intel and AMD could not contest Intel's leadership in the market. Therefore, Intel adopted a middle-of-the road attitude toward AMD by licensing some of its technologies (such as MMX instructions), but also demanding royalties from AMD.

Capitalizing on the standard meant trying to maximize the value of the PC market as well as attempting to capture a larger share of its revenues. Intel contributed to the standardization of different parts of a PC and made it easier to use them. As a result, Intel diffused some of its technologies like the Accelerated Graphic Port (AGP) without claiming royalties (Shapiro and Varian, 1998).

Based on the case analysis above, it is reasonable to conclude that a range of protection tools, including secrecy agreements, patents, copyrights, registered trademarks, and standards were used to differentiate Intel products and to keep a lead-time advantage on the last remaining competitors.

Formulation of Hypotheses

Studies on the use of IPR protection strategies and their efficacy tend to be treated separately in the literature. Indeed, most of the surveys focus on patents alone. Nevertheless, global studies show that firms that use different IPR protection methods have common features such as they are large firms, they tend to be more innovative, and they come from the same industries (Baldwin and Hanel, 2003).

The Intel case study shows that IPRs can be combined together to obtain a better level of protection. For example, patents on technologies, secrets concerning the manufacturing process, copyrights covering the instruction set and the microcode, and registered trademarks protect an Intel microprocessor.

As Hanel (2008: 290) suggests "*Trade secret may supplement a patent or it may be used as a substitute for patent protection*". The possibility of analysing secrecy agreements and patents as complementary rather than mutually exclusive methods of appropriation is investigated in recent research work (Arundel and Kabla, 1998 or Arundel, 2001). However, their relative effectiveness is still mainly analysed on an individual basis.

Intel's strategy is characterized by a mix of protection decisions aimed to block access to some of its most advanced technologies. A firm can use different elements to obtain different levels of protection. When a patent protects the technology, other means of protection such as copyrights, trademarks, registered designs and secrecy can complement those protections. Intel uses all those "mixing tools" including, at a more general level, cross-licensing agreements or contributions to industry consortiums. Intel's strategy is congruent with Teece (1986)'s "Profiting for Innovation" (PFI) model which states that the ability of an innovator to gain the benefits of its innovations comes from a combination of its ability to enforce IPRs (favouring the use of patents), the tacit dimension of the knowledge used (favouring trade secrets) and complementary assets (which could be other IPRs).

Hurmelinna-Laukkanen et al. (2008) show that various appropriability mechanisms are linked with each other, with some being prerequisite, derivative or a support for others. Therefore,

we can anticipate a positive relationship between patents, secrecy agreements, brand names and innovation performance. This leads to our first hypothesis:

H1: Patents have a significant and positive relationship with innovation performance.

The Intel case study also suggests that other IPRs such as copyrights or registered designs could have a positive effect on innovation performance. However, we decided to exclude these IPRs from our statistical analysis, following further literature review. For example, Chesbrough in Millson and Wilemon (2008: 961) argued, "*Patents are the leading source of trade in IP, and many of the issues in managing patents will also apply to the management of types of IP.*"

As discussed in the literature review, in addition to patents, we are interested in exploring the effects of brand name, secrecy agreements, and a learning culture on innovation performance, leading to our second and third hypotheses:

H2. Secrecy agreements have a significant and positive relationship with innovation performance.

H3: The use of brand names has a significant and positive relationship with innovation performance.

Furthermore, the Intel case shows potentially strong relationships between IPR strategy and technological standards. Nevertheless, this is true only in industries where standards play a crucial role in shaping the competitive landscape, such as information technologies (Shapiro and Varian, 1998) or telecommunications (Bekkers et al., 2002; Bekkers and West, 2009). Blind and Thumm (2004) make an interesting comment on the importance of the standards based on a research study that they conducted which is "*getting a better position in standard setting is not an important motive to patent for most firms.*" As a consequence, we also excluded standards from the statistical analysis.

The complementary role of IPR protection methods with the marketing and technological policies of the firm is also worth noting. The IPR policy should be directly related to the firm's strategy and should be used as a complementary tool. The optimal mix varies in accordance with the situation of the firm (Shapiro and Varian, 1998). However, Shapiro and Varian (1998) fail to address an important question, which is when should strategies, be oriented more toward a learning culture. Garvin (1993) identified several factors that need to be implemented simultaneously in order to move quickly down the learning curve, which are:

- 1) Building shared knowledge and skills across individuals and groups.
- 2) Systems and structures for learning within and across organisations captured in "organisational memory" are maintained and developed over time.
- 3) Independent problem solving - responsibility and incentives to actively seek solutions.
- 4) Integrating internal knowledge through rapid and unimpeded information flow, multi-skilling, and continuous experimentation and learning from failures.
- 5) Integrating external knowledge with intensive networking and alliances.

The above discussion leads to our fourth hypothesis:

H4. Moving quickly down the learning curve has a significant and positive relationship with innovation performance.

The literature shows that size of the firm, industry type and foreign ownership have significant effects on the use of IPR protection methods. Therefore, we predict that large firms and industries have a high propensity to use IPR protection methods. Therefore, we have used three control variables (company size, industry type and foreign ownership).

METHODOLOGY

Survey Instrument

A survey instrument was designed as part of a national study funded by an Australian Research Council Discovery Grant. The questions in the survey instrument were designed using a 5-point modified Likert scale. The Survey Instrument was pilot tested in 25 organizations chosen at random. Based on the feedback from the pilot study, the final version of the survey instrument contained 130 independent variables and 8 dependent variables. For the purpose of this study, we focused on Question 1 'Basic Company Data' and Question 2 'New Product Development.'

Defining Target Population and Sample

A large sample of organisations ensures that adequate statistical validity can be achieved and the research results are generalisable to a wider population of organisations. Therefore, we chose to sample from a large cross section of organisations so our results would appeal to a wider range of organizations.

Industries Studied

This research required a sample that was representative of a cross-section of randomly selected companies across Australia, with representation from small, medium and large firms. Q4 in Section 1 of the survey instrument asked the following question: *"Please select the nature of your business and the categories that best describe the type of activity that your company is involved in."* Organisations were drawn from the manufacturing, services, software and construction sectors of the Australian economy. An analysis of the ownership of companies by size (using Australian sales) shows that the majority of private companies have under \$50 million in sales per year (91 per cent), the foreign owned companies are mainly large (71 per cent having sales over \$50 million). Public companies are both large and small, with 17 over \$50 million sales, and 15 under \$50 million sales. A random sample of 1200 companies was purchased from Dunn and Bradstreet based on the Australian Standards Industry Classification (ASIC) system. Each response that contained seven or more empty cells was deleted from the data set. This accounted for 1.5 percent of the total responses. Within this sample, the variable mean was substituted for the missing cells. This approach yielded 215 responses, which is equivalent to a response rate of 19 percent.

Respondent Profile

The respondent profile can be generally described as middle to senior managers, with 54 per cent of the respondents in senior management positions (Managing Director – twenty six per cent; Director - three per cent; Chief Executive Officers – sixteen per cent; General Manager - nine per cent). Forty six per cent of the respondents were in middle management positions, which included functional, marketing and business managers.

Analysis Techniques

The formulated hypotheses were tested using the triangulation method, which is broadly defined as a combination of quantitative and qualitative methodologies in studying the same

phenomenon (Jick, 1979: 602). The paper uses the triangulation method to gain a rich and deep understanding of the data, and to better explain the results of our quantitative output. Our research makes use of bivariate correlations and multiple regression analyses while controlling for company size, industry type, and foreign ownership.

Independent Variables

Independent variables were chosen from Question 2 of the survey instrument *"How effective are the following ways of protecting the competitive advantage of new or improved products that your organization has invented?"* under the major heading 'New Product Development.'

The control variables company size; industry type and firm ownership were included in the multiple regression analysis.

Innovation Performance Construct

Studies on different functions of patents show that they vary according to the technology patented, especially in regards to whether they are used in products or processes (Cohen et al., 2002, Baldwin and Hanel, 2003), whether they are discrete or complex (Reitzig, 2004b), according to the size of the firm (Hanel, 2008), and according to their nationality (Cohen et al., 2002, Blind et al., 2006). Moreover, the PFI model (Teece, 1986, 2006) suggests that the influence of the use of IPRs on the profitability of innovation varies according to appropriability regimes. Nevertheless, some studies show that there is also a significant relationship between the use of IPRs and profitability (Baldwin and Hanel, 2003).

An Innovation Performance construct was developed for this study based on several dimensions of innovation performance developed by Subramanian and Nilakanta (1996), such as revenue from new products, number of innovation adoptions, time of innovation adoption, time to market and research and development as a percentage of sales (see Table 1). The dependent variable items (listed below) were selected from Question 6 of the survey instrument. The questions were based on ordinal scales (Subramanian and Nilakanta, 1996): *"Please indicate (by writing a single number, ranging from 1 through to 5) your organisation's current performance level for each of the listed attributes."*

The listed attributed were as follows: *Revenue from new products developed in the last three years; Number of Innovation Adoptions; Time of Innovation Adoption; Time to Market (TTM); Research and Development as a percentage of sales.* An innovation performance construct was created using the above items as part of Confirmatory Factor Analysis as discussed below.

Confirmatory Factor Analysis

Confirmatory Factor Analysis (CFA) was used in preference to Exploratory Factor Analysis (EFA) to confirm that the variables selected for the Innovation Performance construct were selected on the basis of prior theory and that these variables loaded as predicted on the Innovation Performance construct (see Table 1). However, EFA is normally used to explore the underpinning structure of a large set of variables that are not selected on prior theory (Hair et al., 1992). A cut-off loading of 0.40 was used to screen out variables that were weak indicators of the construct. The composite reliability of the Innovation Performance construct met Nunnally's recommended standard (Cronbach Alpha ≥ 0.70) for early stage research (Nunnally, 1978).

Table 1 – Confirmatory Factor Analysis - Dependent Variable Construct

Variables	Factor Loadings	Chronbach Alpha
Revenue from new products	.642	
Number of Innovation Adoptions	.795	
Time of Innovation Adoption	.468	
Time to Market (TTM)	.414	
Employee Morale	.521	
R&D as a % of Sales	.665	
		$\alpha = 0.75$

DATA ANALYSIS

Correlation Analysis

Correlation analysis revealed that patents, secrecy agreements, learning curve and brand name all have a significant and positive correlation with innovation performance. Moving down the learning curve has the highest correlation coefficient with innovation performance. The multi-collinearity of the independent variables was checked through examination of the correlation matrix. The inter-correlation coefficients between the independent variables were found to be generally well below the recommended correlation coefficient value $r=0.9$, suggested by Hair et al. (1992). Hence, multi-collinearity does not appear to be a problem (Qian and Li, 2003).

Multiple Regression Analysis (MRA)

The strength of the relationship between the predictor variable constructs and the dependent variable construct, innovation performance, was assessed using multiple regression analysis. In order to provide further justification to the research question, further regression analysis was conducted with individual items of the dependent variable construct.

Table 2 – Multiple Regression Analysis

Dependant Variables	(1) Innovation Performance		(2) Revenue		(3) Number of Innovation Adoptions		(4) Time of Innovation Adoption		(5) Time to Market		(6) R&D as a % of Sales	
Predictor Variables	B	β	B	β	B	β	B	β	B	β	B	β
(1) Company Size	.019 t=.728	.049	.031 .74	.041	.014 .45	.029	.063 2.01	.133*	.069 2.38	.155*	-.056 1.39	-.093
(2) Industry Type	-.016 .358	-.024	-.071 -.99	.071	-.043 -.83	-.055	.013 .24	.016	.057 1.15	.076	-.011 -.160	-.011
(3) Ownership	.018 .196	.013	-.039 -.27	.142	-.085 -.81	-.053	.075 .69	.046	.141 1.42	.093	.105 .76	.051
(4) Patents	.084 1.55	.118	.013 .15	.012	.107 1.72	.125	.241 3.68	.278**	.132 2.20	.163*	.206 2.48	.189*
(5) Secrecy	.003 .054	.004	-.045 .45	-.037	-.096 -1.20	-.102	.064 .841	.067	.155 2.21	.172*	-.002 -.026	-.002
(6) Learning Curve	.171 2.101	.182*	.372 2.884	.129*	.273 2.928	.243**	.085 .861	.074	-.042 -.464	-.039	.147 1.175	.102
(7) Brand Name	.066 1.089	.081	.095 .988	.096	.072 1.045	.074	-.022 -.295	-.022	.072 1.052	.077	.091 .978	.073
N	214		214		214		214		214		214	
F	2.56		1.93		3.24		2.79		3.67		2.33	
Probability levels (p)	0.005		0.037		0.000		0.002		0.000		0.010	
Adj R Square.		.075		.046		.104		.085		.121		.064

Notes:

a) All tests are two-tailed

b) Significance Levels: * $p < .05$. ** $p < .01$. *** $p < .001$

c) Beta (β) = Regression coefficient (standardised regression coefficient)

d) B = Intercept

e) t = t -test-assesses whether the means of two groups are statistically significant from each other. The larger the t value the greater the difference.

Table 2 shows the MRA results of the innovation performance construct regressed on the explanatory variables (patents, secrecy, learning curve, and brand names). As hypothesised, *moving quickly down the learning curve* demonstrated a positive and significant relationship with innovation performance. This variable was significant in the regression analysis, supporting Hypothesis H3 (Adj R squared=0.075; $F=2.56$, $p=0.005$). However, the study found limited support for patents, secrecy and brand name, which had positive correlations with innovation performance, but were not

significant in the regression analysis, and therefore only partially supporting Hypotheses H1, H2, and H4.

The above results do not reveal the contribution that the independent variables make to the individual items of the innovation performance construct. In order to compare an independent variable's contribution, additional MRA was conducted on revenue, number of innovation adoptions, time of innovation adoption, time to market and R&D as a percentage of sales regressed on the explanatory variables (as shown in Table 2).

Our results show that patents are positively associated with time of innovation adoption and time to market, even after the effect of industry type, ownership and size were controlled for based on time of innovation adoption and time to market (and it shows that size has a positive effect in a statistically significant way).

Similarly, after we controlled for the effect of industry, ownership, and company size on the time to market, secrecy agreements are still positively associated with time to market in a significant way. The strength of the relationship between the independent and the dependent variables did not change when we controlled for the type of industry and foreign ownership.

Our results support the general view in the literature that large firms perform better on these dimensions than smaller firms (Grandstrand, 1999, Pitkethly, 2001; Cohen and Levinthal, 1990). Large companies are more likely to use patents and secrecy agreements to enhance their technological capabilities (Grindley and Teece, 1997, Hall and Ziedonis, 2001). Mets et al. (2007: 29) sums up very well by stating, *"If the owner of the patent does not have a clear vision of how to use it, then even the strongest patent could become merely a financial encumbrance."*

DISCUSSION OF RESULTS AND CONCLUSION

We conclude with respect to the research question and hypotheses that the most effective method for appropriating innovation performance, is *managing quickly down the learning curve* as part of a learning organisation. This practice is associated positively in a statistically significant way with the number of innovation adoptions, as well as revenue from new products. This finding is aligned with Narayanan (2001: 447) who states that *'another alternative to prevent the loss of intellectual capital is to seek to upgrade or replenish it through continuous innovation'* (Hurmelinna et al., 2005). We further conclude that large companies are more likely to use patents and secrecy agreements mainly due to their greater resource capabilities (Author, 2010).

If we think in terms of "either/or", we find a paradox emerges concerning IPR protection methods. On one hand, considering IPR methods in terms of protection of knowledge (Liebeskind, 1996), we are led to conclude that IPR protection methods are a means to raise barriers against imitation. On the other hand, if we consider the organization as being more efficient in producing new knowledge, this would lead us to conclude that the key role of IPR protection methods is to help organisations to gain access to competitors' technologies (Hall and Ziedonis, 2001).

However, if we think in terms of "both/and" we may overcome this apparent paradox. Researchers generally agree on the fact that knowledge is central in gaining competitive advantage, however, authors in the field insist on different sources of value creation through knowledge (production, exploitation, protection), different features of knowledge (tacit versus explicit, "stick" versus "leaky", etc), and different levels of analysis (Authors, 2008; Hall, 1992). This study encourages to think in terms of combination of various factors rather than simply ranking them according to their impact. This is congruent with Lawson et al. (2012) conclusions about the qualitative part of their survey: "Qualitative evidence identified a number of potential interdependencies which could also be investigated, such as the processes by which technological capabilities and market-based assets interact to maintain inimitability of the innovation." (Lawson et al., 2012: 431).

Consequent to the above, our overall conclusion is that competitive advantage relies on several complementary methods of IPR protection and learning strategies rather than a single approach. This is confirmed by our empirical results that patents, secrecy agreements and moving down the learning curve act as complementary assets. Our findings concur with Mets et al. (2007), who argue that organisations need to protect their competitive advantage through multiple strategies.

Implications for Managers and Researchers

One of the main implications for managers is that patents, secrecy agreements and brand names can be considered as complementary tools to be used together rather than being competing tools of which the best one needs to be selected in terms of “both/and” rather than only “either/or” (Brown and Duguid, 1998: 108). It also confirms Al-Aali and Teece’s statement that: *“It’s also important to understand how various types of IP – and trade secrets and patents in particular – interact to shape outcomes.”* (Al-Aali and Teece, 2013: 25).

Similarly, the results show that moving quickly down the learning curve is the most effective way to gain competitive advantage from product innovation. This advantage is further enhanced if process improvements are kept secret or patented so that competitors cannot profit from the learning effect. The Intel case study shows that this is also true for other IPR protection methods such as copyrights or trademarks.

An additional implication for managers is that IPR protection tools give better results when they are used simultaneously with learning strategies to gain better innovation performance directly, and also to “slow down” the competitors’ rate of innovation (Hall, 1992). For example, patent “blanketing” or “fencing” (Grandstrand, 1999: 218) can increase development delays for competitors who then have to invent around those patents. The use of multiple tools also helps to achieve a balance between contradictory goals such as gaining access to competitors’ technologies while at the same time differentiating their own products.

Limitations and Future Research

The main limitation is the study’s cross-sectional research design and the depth of analysis of the results. Our empirical data do not allow us to show precisely how strategies based on the complementary nature of IPR tools should be implemented. This would be an interesting direction for future research, which could investigate how to manage IPR portfolios in synergy with organisation capabilities, such as lead-time in the development of new products and ability to improve production processes.

In one of the first contributions to RBV, Hall (1992) showed that managers did not consider IPR protection methods as important strategic resources. Our findings can provide the foundation for future qualitative and quantitative research to examine how firms build, integrate and reconfigure their IPR portfolio and the competencies associated with their management. Future research could also clarify the imitability/replicability dilemma (Kogut and Zander, 1992), and the relationships between resources classified as assets and those that are classified as skills (Hall, 1992).

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PUBLIC PERCEPTIONS DETECTED IN SOCIAL MEDIA AND COMPANIES' FINANCIAL PERFORMANCE

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ABSTRACT

The emergence of social media has revolutionized the way consumers communicate with each other as it has enabled information diffusion by electronic word-of-mouth (eWOM). In the new digital era consumers are able to effortlessly distribute their knowledge and opinions to large audiences through blogs, micro-blogs, online-discussion forums and other social media tools. Recently, there has been a great deal of interest in investigating the impact of substantial amount of data that has been generated through social media. Research (DiGrazia, McKelvey, Bollen & Rojas, 2013) suggests that online communication can be a valid indicator of offline behaviour and can be used as an important auxiliary prediction tool. In particular, existing empirical research focuses on the prediction accuracy of data extracted from social media, ranging from reputation management, to marketing, politics, healthcare, tourism, as well as to financial performance. However, despite the fact that interest in social media in relation to companies' performance is increasing, the field retains little understanding about how social media interaction impacts companies' financial performance. Therefore, this paper aims to provide theoretical framework to explain the relationship between public perceptions detected in social media and companies' financial performance dynamics and offer guidelines on how companies can benefit from this "wisdom of crowds" phenomenon as well as identify some challenges that need to be addressed in the future before making credible claims on social media prediction power.

Keywords - Social media, financial performance, reputation management.

JEL classification codes: M15, M31, M39, G39

INTRODUCTION

In recent years, we have witnessed the rapid rise in the popularity of social media. As a new communication paradigm, social media connect like-minded consumers and enable them to engage in discursive dialogues (Fieseler & Fleck, 2013; Stieglitz & Dang-Xuan, 2013). In fact, social media allow consumers to foster mutual enrichment through the creation, modification and exchange of user-generated content (Zhang, Johnson, Seltzer & Bichard, 2009). In this context, social media encourage consumers to informally discuss products and services, create structured reviews and promote or demote brands. As such, creative consumers are challenging the traditional notion of customer relationship management (CRM), in which companies were the main actors, addressing passive customers. In the era of social media, companies no longer have full control over the messages to which their consumers are exposed (Malthouse, Haenlein, Skiera, Wege & Zhang, 2013). Accepting the lack of control associated with social media and not knowing what people may say or

do (DiStaso, McCorkindale & Wright, 2011) entails many pitfalls and has created unprecedented challenges for the companies as consumers nowadays have the power to seriously affect their reputations. As Tim Weber (2010), BBC business editor, said: "These days one witty Tweet, one clever blog post, one devastating video - forwarded to hundreds of friends at the click of a mouse - can snowball and kill a product or damage a company's share price." Indeed, research shows (Chevalier & Mayzlin, 2006) that by advocating or speaking against a certain product or brand, consumers impact the attitudes of prospective customers, affect brand awareness, consumer buying decisions (Luo & Zhang, 2013) and consequently also companies' overall business performance.

This paper is essentially a review of literature about the link between public perceptions detected in social media and companies' financial performance dynamics. In the following section we first define the concept of social media and investigate their role and importance in business. Next, we explore theoretical background for understanding the impact of social media. We then review the extant literature on the intersection of social media content and companies' financial performance and examine whether social media content may represent an auxiliary prediction tool of product purchases and consequently also of companies' financial performance. Finally, we conclude the paper by discussing the practical implications of the theoretical link established in the previous section and we outline future research opportunities.

CONCEPTUAL BACKGROUND ON SOCIAL MEDIA

Social media can be defined as a "group of Internet-based applications that build on the ideological foundations of Web 2.0, and that allow the creation and exchange of user-generated content" (Kaplan & Haenlein, 2010), whereas Web 2.0 can be defined as "technical infrastructure that enables the creation and distribution of the content that is social media" (Berthon et al., 2012). Web 2.0 comprises computer network-based platforms upon which social media function (Weinberg & Pehlivan, 2011). The best known social media sites include Twitter, Facebook, LinkedIn, MySpace, YouTube and Blogger. Even though these sites differ in terms of their scope and functionality (the listed examples can be classified as professional sites, media sharing sites, weblogs etc.), their common characteristic is that they connect people from all over the world and enable a very quick dissemination of information among different stakeholders (Billington & Billington, 2012).

One of the major technological innovations of Web 2.0 is that it allows consumers and other stakeholders not only to retrieve information, but also to create information. By facilitating the flow of user-generated content (UGC) and enabling generation of informational content as well as dissemination and editing (Constantinides & Fountain, 2008), the advent of Web 2.0 and social media have fuelled a fast-growing market in personal opinions (Yu, Duan & Cao, 2013) and provided an opportunity for individuals to distribute unfiltered information to large audiences (Pavitt, 2012). According to Davis and Moy (2007), Web 2.0 has introduced "professional consumers" or "prosumers", who act as consumer watchdogs and opinion influencers. This has created numerous opportunities as well as many challenges and threats to companies, who are no longer in control of the messages they want to communicate to their audiences. Due to the interactive nature of social media companies are able to control the initial placement of information, but they are not able to control how this information is disseminated and how it affects the perceptions of companies' stakeholders.

On the one hand, social media offer an inexpensive way to quickly and efficiently increase the flow of information to different stakeholders (Schniederjans, Cao & Schniederjans, 2013). Consumers are able to express their feelings regarding a product or service, which enables companies to improve their CRM and create more informed products or services, thus increasing customer loyalty (Rodriguez, Peterson & Krishnan, 2012). Accordingly, they may address any areas of misunderstanding more efficiently, improve the process of product development and increase the

effectiveness of advertising campaigns as well as marketing research (Bruhn, Schoenmueller&Schäfer, 2012; McAfee, Howe & Surowiecki, 2011; Schmidt & Ralph, 2011). Moreover, information captured in social media enables companies to conduct sentiment or predictive analyses of the data (Sinha, Subramanian, Bhattacharya&Chaudhuri, 2012). Social media also allow companies to collect data about consumers' social influence and social interaction (Li & Shiu, 2012). They can identify emerging market trends, instead of just reacting to feedback, and let customers participate by voting on their favourite innovations or ideas, which may significantly increase brand affinity and advocacy (Heller Baird & Parasnis, 2011).

On the other hand, consumers have extraordinary power to deleteriously affect companies' reputations or branding processes by directly impacting marketing communication. Negative word-of-mouth information proliferation about companies, for example, can severely damage companies' image and reputation (Del Vecchio, Laubacher, Ndou&Passiante, 2011; Schniederjans et al., 2013; Siano, Vollero& Palazzo, 2011). Research shows that the effects of positive and negative electronic word-of-mouth may not have the same intensifying effect on corporate reputation. In their study, Park and Lee (2007) confirmed that a linear relationship exists between positive comments about a company and people's positive perception of company's corporate reputation. On the contrary, their study did not confirm a linear relationship in the case of negative comments. Even only a single negative comment had important negative impacts on corporate reputation. These results suggest that the emergence of social media may have important implications for reputation management and that protecting favourable corporate reputation has become increasingly difficult. Moreover, reputation risk may result from a company's own communication activities, including their reaction to claims presented in the social media (Aula, 2010). According to Aula (2010), in social media a company cannot just look good. It has to be good to look good, because in the era of social media, everything a company does is profoundly public. The subjective truth of social media users quickly turns into a collective truth about what a company is and what it should be and this may significantly impact company's reputation as well as its business performance. Therefore, in the world of social media, companies should rethink their communication strategies and branding management practices (Jones, Temperley& Lima, 2009). It is essential that companies understand the dynamics of not only how social media can be used as a platform to sustain corporate image or reputation, but also how they may impact financial performance (Schniederjans et al., 2013).

Taking into consideration the abovementioned theoretical convergences, there is no doubt that social media are fundamentally altering communication patterns and significantly affecting the relationships between companies and their stakeholders (Pookulangara&Koesler, 2011; Tang&Liu, 2011). In the following section I am therefore going to focus on discussing the theoretical background for understanding the importance of public perceptions detected in social media.

Social Capital Theory

The theoretical foundation for understanding the impact of social media is represented by social capital theory. The notion of social capital has been thoroughly discussed from 1980s, however, there is still some controversy as to what the term really means (Yu & Junshu, 2013). In general, it can be defined as the sum of the actual and potential resources embedded within, available through and derived from the network of relationships (Nahapiet&Ghoshal, 1998). It contains structural, relational and cognitive component. Structural component refers to network linkages between individuals and the configuration of networks, relational component is represented by the relations individuals have with one another, while cognitive component is derived from mental processes and resulting ideas, reinforced by culture and ideology, specifically norms, values, and beliefs which influence cooperative behaviour (Uphoff, 2000). If the relationship is not complemented by trust, similar values or norms, social capital cannot emerge (Coleman, 1990).

Another definition is provided by McElroy, Jorna and van Engelen (2006), who argue, that social capital can be described as knowledge and organizational resources (such as trust, rules, norms, etc.) that enhance the potential for individual and collective action in human social systems. Bourdieu (1986), on the other hand, treats social capital as the aggregate of the actual or potential resources, which are linked to possession of a durable network of more or less institutionalized relationships of mutual acquaintance or recognition, while Fukuyama (1995) defines social capital as trust, together with the capacity for cooperation.

Diverse explanations of social capital highlight the fact, that there is a lack of consensus regarding what the term really means and what concepts it embraces. However, it can always be characterized by two main features: (1) it is based upon some form of social structure, and (2) it facilitates different actions of individuals within social structures (Fieseler& Fleck, 2013). According to Rodriguez et al. (2012) social capital facilitates information sharing, fosters the flow of useful information, mutual trust, and joint problem solving, thus creating the goodwill available to individuals. Since sharing, creating, collaborating and controlling information are important elements of social media (Malita, 2011), analyses of social media are often framed within a context of social capital as they provide an impeccable basis for investigation of the creation and value of social capital (Fieseler& Fleck, 2013). Namely, the mere structure of social media enables individuals to acquire information on which they base their decisions. They may share their own ideas, experiences, and knowledge, bond with peers sharing similar views, or contact other users of social media in order to get more objective information about their foci of interest (Kozinets, 2002; Steinfield, Ellison & Lampe, 2008). Activities that take place in social media, range from economic, political and marketing to social and educational (Pookulangara&Koesler, 2011), and have a significant impact on the current commercial environment (O'Brien, 2011).

However, to successfully exploit the potential of social media and eliminate the majority of disruptive forces that businesses nowadays face, companies need to make a shift in their marketing strategies and acknowledge the depth of the relationships formed in social media. Namely, the social media revolution has brought a new aspect to electronic word-of-mouth marketing as consumers were found to be very trusting of their online networks in terms of intent of purchase (O'Brien, 2011). The most trusted form of advertising today is an endorsement from another consumer (Deepa&Deshmukh, 2013). Hence, companies need to adapt to the reality that customers are nowadays in control. In order to increase revenue, improve efficiency, or make changes to suit the needs of the individual, companies need to reinvent their CRM strategies by getting closer to customers and facilitate collaborative experiences and dialogue that customers nowadays value (Heller Baird &Parasnis, 2011). This new generation of business engagement that companies need to adopt to accommodate the interactive era is known as social CRM.

According to Trainor (2012), social CRM can be defined as the integration of traditional customer-facing activities including processes, systems, and technologies with emergent social media applications to engage customers in collaborative conversations and enhance customer relationships. The theoretical foundation of social CRM is represented by capabilities-based framework, which suggests that company's performance largely depends on company's resource endowment and its effectiveness at transforming these resources into distinctive capabilities. The latter evolve uniquely for each company and assist companies in gaining their positional advantages and improving their overall business performance. By integrating data from social networks with customer relationship efforts, companies can reduce coordination and transaction costs and foster mutual enrichment that would not otherwise be possible or would incur additional costs (Fieseler& Fleck, 2013). According to DiGrazia, McKelvey, Bollen and Rojas (2013), online communication is also a reliable indicator of offline behaviour and is less likely to be affected by social desirability bias than polling data. Therefore it can be clearly stated that public perceptions detected in social media may provide valuable customers' insights and help companies improve their performance outcomes. The

extant literature on the intersection between public perceptions detected in social media and companies' financial performance is reviewed in the following section.

Social Media and Financial Performance

Social media impact many aspects of communication, thereby impacting business (Edosomwan, Prakasan, Kouame, Watson & Seymour, 2011). Prior research (Urban, 2005) showed that social media content often directly impacts electronic word-of-mouth communication, which significantly influences customer purchases of products and services, brand images and perceptions. According to Luo and Zhang (2013), on-line word-of-mouth can explain a significant portion of the total variance of company value as it is closely connected to consumer attitudes and advocacy and can raise customer attachment, and expand customer base, all of which are precursors of customer value (Luo & Zhang, 2013). Additionally, evidence (Edosomwan et al., 2011) reveals that on-line communication may help bolster corporate reputation and allows companies to charge premium prices, reduce their costs, attract good job applicants and employees, and achieve better access to capital markets (Iwu-Egwuonwu, 2011; Rindova, Williamson, Petkova & Sever, 2005). It also allows companies to sell their products or services faster than less reputable companies (Lei, 2011) as positive corporate reputation reduces information asymmetry and the perceived risks associated with customer buying decisions (Chun, 2005; Raithel, Wilczynski, Schloderer & Schwaiger, 2010; Fombrun & Shanley, 1990; Hall, 1992; Sanchez & Sotorrio, 2007). Therefore, on-line content such as the notes on review sites, comments published on personal blogs, or messages on social networks, is actively used for obtaining product-related information before making purchases (Mangold & Faulds, 2009). Also, consumers often regard social media as a more trustworthy source of information than the traditional instruments of marketing communication used by companies (Baird & Parasnis, 2011; Foux, 2006; Heinonen, 2011; Siano et al., 2011), which is why it can be argued that contemporary buying process is driven in large measure by social media (Marshall, Moncrief, Rudd & Lee, 2012), and that user-generated word-of-mouth messages impact consumer's purchasing decisions as well as company's overall financial performance (Fombrun & Shanley, 1990; Hall, 1992; Lee & Roh, 2012; Raithel et al., 2010; Sanchez & Sotorrio, 2007).

However, according to Luo and Zhang (2013), the relationship of public perceptions detected in social media and company's performance is complicated, involving direct and mediated relationships, and time-series relationships of itself and competitor spill-over relationships. Since most of the prior research on public perceptions detected in social media has focused on their impact on product sales and not on financial performance per se, considerable further research is required to delineate the impact of social media content on overall financial performance and provide more precise implications for theory development and practice.

Nevertheless, some research to date has explored the impact of social media content on sales and other performance measures. Urban (2005), for example, showed that social media content often directly impacts electronic word-of-mouth communication, which significantly influences customer purchases of products and services. Also Trusov, Bucklin and Pauwels (2009) suggested that on-line word-of-mouth importantly impacts new customer acquisition and may have larger and longer-lasting effects than traditional marketing activity. Moreover, Stephen and Galak (2012) found evidence that on-line word-of-mouth has long-term positive effects on new and repeat sales, while Rodriguez et al. (2012) supported their hypothesis, that social media has a positive relationship with sales processes and business-to-business sales performance, which reflect in overall revenue gain. Thus, it can be clearly stated that social media content has powerful impact on consumers' opinions as well as their purchasing behaviour.

Another stream of research investigated, if social media content may be used as an auxiliary prediction tool of product purchases. Asur and Huberman (2010), for example, found evidence that

on-line word-of-mouth may be used to predict box-office revenues of movies in advance of their release, while Chevalier and Mayzlin (2006) asserted that an improvement in a book's reviews leads to an increase in relative sales. Also Onishi and Manchanda (2011) showed how online activity can lead to better sales forecasts for a set of Japanese brands, whereas Lică and Tuță (2011a; 2011b) managed to predict the winner of the Oscar for best picture. LikeBothos, Apostolou and Mentzas (2010), Lică and Tuță (2011a; 2011b) also proved that on-line conversations are a good indicator of product's future success. Additionally, some studies examined the power of on-line content in terms of its impact on stock value. Yu et al. (2013), for example, found evidence that social media have a strong relationship with company stock performance. Zhang, Fuehres and Gloor (2011) demonstrated that on-line content significantly negatively correlates with Dow Jones, NASDAQ and S&P 500, but displays significant positive correlation to VIX. Similarly Bollen, Mao and Zeng (2011) suggested that public perceptions detected in social media are correlated with Dow Jones Industrial Average (DJIA) and may be used to forecast the direction of DJIA changes. On the other hand, Tumasjan, Sprenger, Sandner and Welp (2010) managed to predict the outcome of German elections, while Ciulla et al. (2012) demonstrated that extremely simple measures quantifying the popularity on the American Idol participants in social media strongly correlate with their performances in terms of votes.

Indeed, social media offer an incredibly rich vein for gaining an insight into a vast collection of public opinions. However, the utilization of the overwhelmingly large amount of unstructured data about every aspect of life remains in an early stage. Extant empirical research on the impacts of uncensored on-line opinions is relatively scarce and highlights the need to delve deeper and gain a better understanding of social media power (Yu et al., 2013).

DISCUSSION AND CONCLUSION

Without question, social media applications are dramatically transforming contemporary business environment, however, they are still a new technology that needs to be better understood in terms of its strategic use (Picazo-Vela, Gutierrez-Martinez, Luna-Reyes, 2012). As managers continue to navigate complex business environments, they should understand the consequences of benefits and risks emerging from social media as well as their influences on overall business performance. Namely, very few, if any at all, Internet-based applications have left such an immense impact on society as social media have. Over the past decade it has become clear that social media are not a fad and are here to stay. User-generated content provides a real-time insight into what society thinks about diverse subjects, ranging from economic, political and marketing to social and educational. Moreover, research (Lică&Tuță, 2011a) reveals that on-line communication is an accurate indicator of society's thoughts and intent, which is why it may provide important practical implications for companies. Even though it is independent of the companies' control, it enables companies to access valuable information from a wide range of places about their products, services, brands as well as their competitors. Companies may, for example, monitor company-related conversations that are happening in the social media arena and address any areas of misunderstanding, improve their products or services, advertising campaigns as well as marketing research, which may importantly influence their overall performance or help them predict the success of the products or services they offer (Bruhn et al., 2012; Godes&Mayzlin, 2004; Kumar &Mirchandani, 2012; McAfee et al., 2011; Schmidt & Ralph, 2011).

However, despite the fact that a growing number of recent studies have established links between social media and diverse performance metrics, a body of supporting empirical literature on the topic has yet to amass (Trainor, 2012). The dynamic nature of social media challenges researches to begin exploring how these technologies may impact financial performance of companies. A superficial glimpse on the extant literature suggests that social media have extremely versatile

prediction power of certain events and social dynamics as they aggregate different viewpoints. Nevertheless, one must bear in mind that current research faces a list of open challenges that need to be addressed in the future before making credible claims on social media prediction power. Currently, the two most challenging issues are the accuracy of the automatic semantic analysis of immense social media content and the quality of the quantitative prediction techniques. In order to improve the reliability of social media research and aid in pioneering an understanding of how social media may influence companies' performance and/or help predict the success of their products or services, these two issues have to be addressed and further investigated. Otherwise, research results may not provide accurate information on what the power of social media really is. Also, since many specific conversations take place in social media, there are numerous avenues to proceed with future research. Possible research streams include not only management and marketing, but also social psychology, tourism, informatics, economics, education, politics, healthcare and other research areas that are beyond the scope of this paper.

This paper aimed at identifying the theoretical link among public perceptions detected in social media and overall business performance. However, additional empirical research is needed to reaffirm this link and provide a contribution to current understanding of social media power as well as offer guidelines on how companies can benefit from this "wisdom of crowds" phenomenon. Therefore, we plan to upgrade this paper by empirically investigating if public opinion about companies and these companies' CEOs detected in social media can explain and predict quarterly changes in industry-adjusted financial performance and how this may benefit companies.

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A BUSINESS SIMULATION GAME AS AN APPROACH TO MODEL AN INNOVATION ECOSYSTEM

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ABSTRACT

This paper presents a new business simulation game designed with a goal to simulate the interaction of the main innovation ecosystem stakeholders (like government, universities, industries, investors, civil society, etc.). The game represents and simulates the interaction on a R&D (a venture project development) phase, a new project implementation phase, and a new product commercialization phase. Each of these phases is connected with risks and uncertainty modeled by this game as well. The paper describes theoretical, methodological and instrumental fundamentals of the game, its structure, rules, and scenario, as well as game players' objectives, actions, payoffs, and outcomes.

Keywords: Innovation, Innovation ecosystem, Triple Helix, Game Theory, Business simulation game, Optimal Allocation of Resources / Transportation Theory

JEL classification codes: C7, O31

INTRODUCTION

Recently, “innovation” is one of the most popular words in the modern world, both in developed economies and emerging economies. However, in many cases, especially in economies in transition, it remains to be used just as a word, not an action. One of a reason of this situation is a problem of weakly functioning innovation ecosystems which consist of such key stakeholders like government, universities and research centers, industries, investors, innovation consumers, and others.

So, the key question in this context is as follows: How can and should innovation ecosystem stakeholders effectively interact in order to produce new and right ideas and successfully commercialize them under risks and uncertainty of social and natural environment?

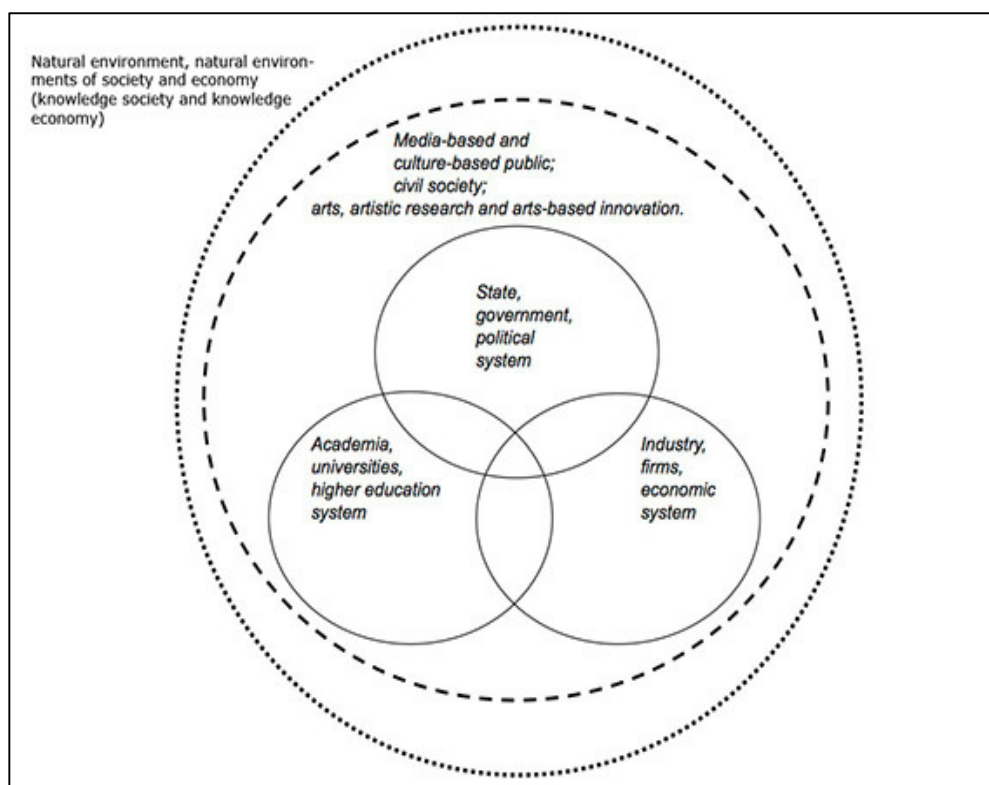
Looking for a way to analyze the interactions of innovation ecosystem stakeholders, we apply for some formal methods. This paper introduces a new business management game designed with a goal to educate, elucidate and analyze how the main innovation stakeholders multilaterally interact through a non-linear, multistage, efficient and transformative dialogue in order to reach a systemic compromise of their interests, objectives and behaviors in the innovation and entrepreneurship ecosystem and social, political, economic and natural environment fraught with risk and uncertainty.

The basic conceptual and contextual framework for this work and formalization is the concept of the Triple Helix of university-industry-government relationships (Etzkowitz and Leydesdorff, 1995). This concept reflects the shift from a dominating industry-government dyad in the Industrial Society to a growing triadic relationship between university-industry-government in the Knowledge Society. Therefore, the Triple Helix accents a more prominent role for the university

in the production, transfer and application of knowledge. This way, a classical understanding of a university as a knowledge creator and transmitter is added with a concept of Entrepreneurial University that also actively promotes knowledge in a society and puts knowledge to use in the interaction with other innovation actors and stakeholders. Entrepreneurial universities also have an enhanced capacity to generate technology that has changed their position, from a traditional source of human resources and knowledge to a new source of technology generation and transfer. In the Triple Helix, Government also acts as a public entrepreneur and venture capitalist, in addition to its traditional regulatory role in setting the rules of the game (Ranga and Etzkowitz, 2013).

We consider this game as a prototype of an innovation ecosystem which could be extended to more complex systems with more categories of participants: investors, community, etc. As an example, the concept of the Triple Helix has been further developed toward the Quadruple Helix (Carayannis and Campbell, 2009) by adding “civil society” (citizens) as a fourth helix and the Quintuple Helix (Figure 1) that adds an Environment as a challenge and driver for innovation (Carayannis, Barth and Campbell, 2012). Such development of the initial conception of the Triple Helix leads toward to the N-tuple Innovation Helix (Park, 2014).

Figure 1. The concept of the Quintuple Innovation Helix



Source: Carayannis, Barth and Campbell, 2012

In different economies, the roles of different “innovation helix” actors also differ, as well as general strategies for innovative development. For example, in Russia, China, some Central Asian, Latin American and Eastern Europe countries, government plays a leading role, driving academia and industry (Ranga and Etzkowitz, 2013). Such an interaction configuration defines a dominated “top to bottom” innovation strategy. In the US and many Western Europe countries, there is a *laissez-faire* configuration, characterized by a limited state intervention in the economy and a limited control over

universities which are more active in initiating social, political, economic and technological innovation, with industry as the driving force for innovation (a “bottom-top” innovation strategy). Such a difference in economic and innovation models requires making specifications in the developed game respectively to what kind of economy the players are.

In any case, an innovation ecosystem’s main stakeholders have to interact on different stages and phases, like a venture project development (R&D) phase, a new project implementation phase, and a new product commercialization phase. Each of these phases is connected with risks and uncertainty. So, the developed game represents and simulates the interaction on all of these phases under risk, uncertainty and unpredictability.

This paper describes theoretical, methodological and instrumental fundamentals of the game, its structure, rules, and scenario, as well as game players’ objectives, actions, payoffs, and outcomes.

Goals and Objectives of the Game

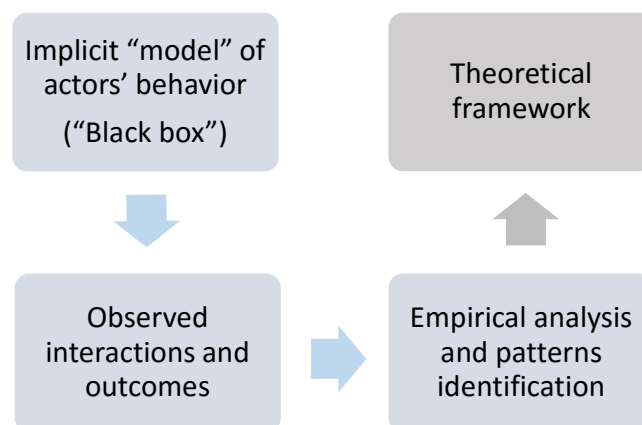
This game has been designed with pursuing several goals and objectives, depending on the game “maturity”.

First of all, it is an educational goal that is very canonical for business management games. This game has been created like a game type educational platform for teaching and training the following issues via the “learning by playing” principles:

- a conceptual model of the N-tuple Innovation Helix;
- possible strategies and ways of the interaction of the main innovation stakeholders (government, universities, industries, and civil society);
- game-theoretic principles of optimal strategic and tactical decision-making;
- the influence of uncertainty and risk on decision-making of the stakeholders;
- “best practices” of the interaction of the main innovation stakeholders.

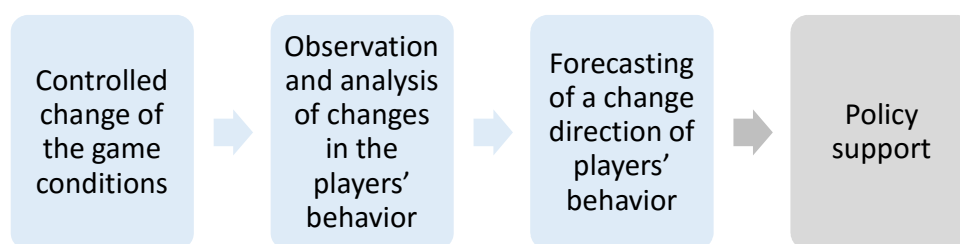
The second goal relates to a next stage of its development and it has an analytical character (Figure 2). This stage assumes creating a game type simulation platform for empirical analysis based on observed interactions and outcomes. After testing internal validity, this game will be used to observe, systematization, analysis and identification stable patterns in the observed interactions and outcomes of the game players who make their decisions on some rational, irrational and meta-rational “implicit (latent) models” of behavior. Such an inductive method can contribute to a forming theoretical framework of N-tuple helix of innovation.

Figure 2. Empirical analysis of the player’s behavior



The third main goal of designing this game relates to conditional forecasting and policy support (Figure 3). Playing the game with representative samples can help to define and predict a change direction in the players' behavior. Based on a controlled experiment with a change of some game conditions and further observations and empirical analysis of changes in the players' behavior and strategies, it could be possible to predict a change direction of their behavior after certain interventions. Such an approach could contribute to policy support.

Figure 3. Functions of forecasting and policy support



An additional objective for designing this game is creating a platform for networking of real innovation stakeholders and making real tactical and strategic decisions.

THEORETICAL, METHODOLOGICAL AND INSTRUMENTAL FUNDAMENTALS OF THE GAME

The game is based on the conceptual principles and methodological approaches of Game Theory, including but not limited:

- The principle of allocentrism (the term “allocentrism” relates to a personal attribute whereby people center their interest, attention, and actions on other people rather than themselves, and thus exhibit a capacity for empathy (Carayannis and Dubina, 2014));
- Systemic compromise (Algazin, 2009) of interest, incentives and actions;
- Equilibrium¹⁴⁵ (in term of Von Neumann, Nash, Stackelberg, Bayes-Nash, etc.) (s details, e.g., in (Dubina, 2010));
- Optimality and Efficiency principles (Von Neumann, Nash, Pareto, Kaldor-Hicks) (see details, e.g., in (Musschoff and Hirschauer, 2011; Dubina, 2010)).

The following conceptual approaches have been also applied to designing this game:

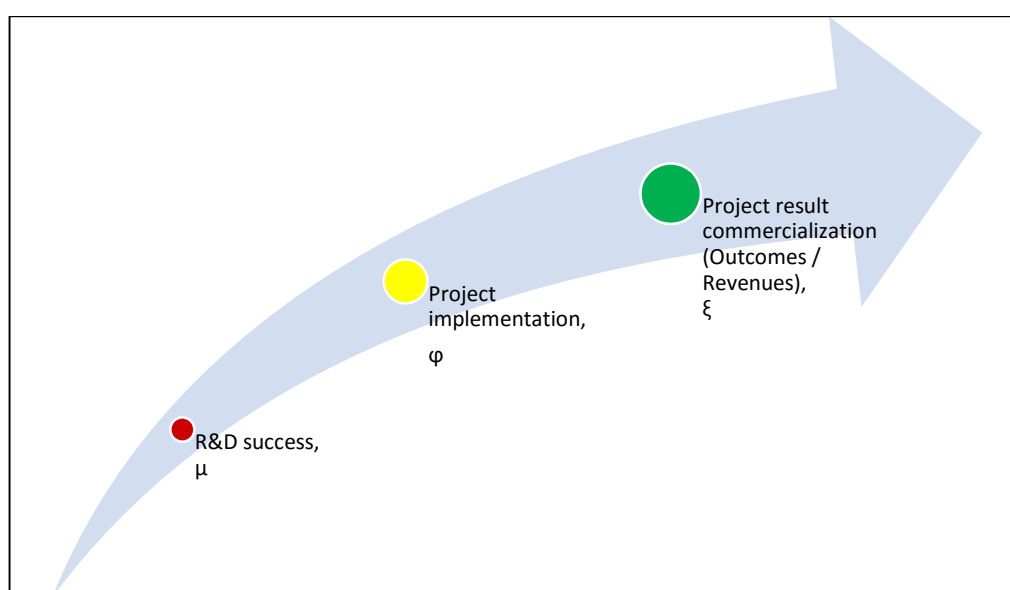
- The conceptual framework of institutional interactions and structure of action situation (Ostrom, 2005);
- The concept of innovation game levels (Baniak and Dubina, 2012);
- The conceptual approach to structuring, formalizing and simulating innovative activities and interactions (Dubina, 2013);

¹⁴⁵A Nash equilibrium is a game-theoretic configuration (a set of players' strategies) in which no player has anything to gain by changing only his own strategy, that is, no player has an incentive to change his chosen strategy (Dubina 2010). John Nash, a Nobel Prize winner in economics, proved the theorem that every game with a finite number of players and finite numbers of strategies has a Nash equilibrium. From a practical point of view, this means that when we have a good sense of the incentives and other behavioral determinants of innovation agents and policymakers, we can deduce their best strategies in terms of a Nash equilibrium configuration.

- Theoretical and methodological approaches to designing and developing economic experiments and business management games (Musshoff, Hirschauer and Hengel, 2011; Hohmann, 2013);
- Linear and Non-Linear Optimization Theories and Methods (Optimal Allocation of Resources / Transportation Theory; Simplex Method and Nonlinear conjugate gradient method).

This game simulates interactions of the main innovation stakeholders on a R&D (a venture project development) phase, a new project implementation phase, and a new product (product results) commercialization stage. Each of these innovation phases is connected with risks and uncertainty. This game simulates risks and uncertainty at all the considered phases (Figure 4) with use of random variables (μ , ϕ , ξ).

Figure 4. Innovation project phases reflected by the game and uncertainty simulation



GAME STRUCTURE

According to a general Game-Theoretic approach (see (Dubina, 2010)) and institutional approach to structuring interactions and situation (Ostrom, 2005), the main structural elements of this game are

- players,
- players' objectives,
- players' actions, and
- player's payoff.

There are five categories of participants (players) with different positions and functions:

- Government (a policy-maker; project initiator; investor);
- Universities (project initiators; ideas, knowledge and technology generators; investors);
- Industries (project initiators; technology generators; idea implementers);
- Investors (who may invest or co-invest R&D and project implementation phases);
- Civil Society (innovation consumers; project initiator and promoter; investor).

Each player category consists of 1 to 3 groups of players and a group in each category may include from 2 to 5 persons.

Agame is couched, facilitated and moderated by a Game Moderator and one ortwo Facilitators and a technical Assistant.

Players' objectives are defined as follows.

- Governmentis maximizing the total possible revenue (social welfare) from all the implemented projects;
- Universities are maximizing R&D funds got from other stakeholders;
- Industries are maximizing profit from the implemented projects;
- Inventors are maximizing their profit from investments into R&D and project implementation); and
- Civil Society is maximizing a number of innovation projects successfully implemented according to the budget of all stakeholders.

Players' actions are defined as follows.

- Governmentset priorities for R&D support, allocate possible grants, subsidies and taxation benefits for R&D investors and implementers, and make a decision about a choice of venture projects and amount to invest in;
- Universitiesmake a choice of a venture project(s) and allocate resourcesto invest in their research and development;
- Industries may invest in development and implementation of certain venture project(s) and (or) invest in a standard (no-risk) project;
- Civil Society may support some venture project(s) and (or) invest in a standard (no-risk) project.

Besides these “formal actions”, each player (a group) can apply some “informal actions”(non-regulated by the game rules) through their interactions. Each player tries to achieve an own goal taking into account others' interests and incentives. Each group may interact with all other groups and consequently influence their decision-making. Therefore, the designed game is a collaborative and competitive (cooptative) game, since all categories of players cooperate with each other, and groups in categories 2 (Universities), 3 (Industries) and 4 (Investors) may both cooperate and compete against each other.

In order to identify and calculate players' payoffs, we need to formalize some game outcomes:

- Total revenue from the implemented projects (GDP);
- Total revenue from the implemented venture projects (I(innovation)DP);
- Total cost of innovation (TCI), that is cost of the developed and implemented project, total investment into venture project;
- Total investment into venture and non-risk projects (TIP);
- Added value ($ADV = GDP - TIP$);
- Added value from innovation ($ADI = IDP - TCI$);
- Total profit of the Industries (IPR);
- Total profit of the Investors (INP)
- Taxes as certain percentage of IPR (TAX);
- Amount of funds collected for venture project development by Universities (FUN);
- A number of venture projects successfully implemented (NUM).

Using this formalization, players' payoffs relate to the following outcomes:

- Government — GDP, IDP, ADV, ADI, TAX;
- Universities: — FUN;
- Industries — IPR;

- Investors — INP;
- Civil Society — NUM, GDP, IDP, ADV, ADI, TAX.

Therefore, all the players have more or less different interests that may produce some sort of a conflict, so the general goal of all players is to define and come to some sort of a systemic compromise and equilibrium during this game. The interests of the Government and Civil Society are most correlated in this game.

Generally, this game rules assume that

- all players have different resources to invest in R&D and innovation;
- there are several R&D projects to develop and implement which are characterized with different costs and expected outcomes;
- Government and Civil Society may set priorities for supporting R&D and innovation projects;
- Universities and Industries choose projects for development and implementation;
- other players can support innovation by investing in these or those projects.

There is no only winner in this game, since the goal of the game is to find a systemic compromise through interaction and defining the best (optimal or sub-optimal) strategies which can bring all the players to a strategic situation that satisfy all players enough. However, “local winners” can be identified in categories 2 (Universities), 3 (Industries) and 4 (Investors). Groups 1 (Government) and 5 (Civil Society) can also express their actual and potential “satisfaction” taking into account the scale, novelty, quality and other characteristics of the implemented projects.

Advanced details of the game formalization are provided in the next sessions.

Business Simulation Game

Based on the presented formalization as well as on the experience of designing business management games, or “innovation games” (Musschoff et al., 2011; Hohmann, 2013), we developed and tested a series of business simulation games. Those games included the three categories of players as indicated in the Triple Helix conception (Government-Universities-Industries) and additional actors (Investors and Civil Societies (or Innovation Consumers)).

This game includes four main stages. The first one is an *introductory and preparatory stage*, when the Facilitator explains the game rules to the participants, forms the groups of players, briefly presents available projects and separately informs the groups on the amount of resources they have.

At the second stage (*a making-an-initial-choice stage*) Government prepares and announces the R&D and innovation policy (a set of priorities for R&D support, possible grants, subsidies and taxation benefits for R&D investors and implementers). The level of information available for the players is regulated by Government. During playing the game and interaction with other groups on the next stage, Government may change its priorities. If priorities are changed, a penalty fee is imposed. At the same time, Civil Society prepares and announces the preferences in new technologies and projects. During playing the game and interaction with other groups on the third stage, Civil Society may change its priorities. If priorities are changed, a penalty fee is imposed. Universities separately initiate (choose) a venture project(s). Industries may also initiate (choose) a venture or a standard (non-risk) project(s). During playing the game and interaction with other groups on the third stage, Universities and Industries may change their choices. If choices are changed, a penalty fee is imposed.

The third stage is an *interactive stage* and it consists of two sub-stages, namely project development and project implementation stages. At the *project development sub-stage*, all groups interact with each other according to a schedule provided by the Facilitator (depends on a number of groups). The main subject of the interaction and discussion is a set of projects for investment,

developed and implementation. Each group may use a corresponding set of “informal actions” and subjects for discussion, specifies them, as well as generates and suggests new tactical and strategic actions in order to sure support, development and implementation of the projects which they are interested in. They suggest and discuss actions and direct and indirect benefits resulted from the project, and reach an agreement regarding supporting (investing) these or those projects. This way, all groups make their decision regarding venture projects development. A status of each project chosen for development is defined and indicated based on investment amount and a “state of the nature” simulated with a random variable μ .

Similarly, at the *project implementation sub-stage*, all groups interact with each other according to a schedule provided by the Facilitator and discuss a set of projects successfully realized at the project development sub-stage for their further investment and implementation. When all groups make their decision regarding the projects investment and implementation, a status of each project is indicated (based on the investment amount and a “state of the nature” simulated with a random variable ϕ).

At the fourth and final stage (*a concluding stage*), game outcomes and the players’ payoffs are calculated and the participants moderately discuss the players actions, strategies, payoffs, and game outcomes; and the Facilitator(s) and Moderator wrap the game up.

In order to record input data and players’ actions (choices), calculate the players’ payoffs and present the game outcomes, a Microsoft Excel template has been developed.

We tested such a business simulation game in several student groups in Altai State University (Russia). And we have also piloted a business management game (called “Lab to Industry”) that simulates the interaction of several groups really representing such categories of innovation stakeholders like Government, Universities, Industries, and Investors in Bauman State Technological University and Skolkovo School of Management (Moscow, May 18-20, 2015).

As a particular result, this game has clearly demonstrated a huge intercommunication and inter-understanding gap between the main innovation stakeholders (government, universities, industries and investors) because of their unwillingness and inability of searching for a compromise. And that seems to be a systemic problem not just for Russia, but also for many other economies in transition. Such a game really helps to better understand motives, interests, possible strategies and ways of the interaction of the main innovation stakeholders and may serve as an instrument of developing mutual understanding and compromises. Recently, we have started replicating this game in Russian universities, local government and businesses, “innovation fairs”, “innovation saloons”, etc.

SUMMARY AND FUTURE TRENDS

This paper describes a conceptual, theoretical, methodological and instrumental aspects of a new business simulation game that is concurrently rather complex by its structure (taking into account the recent experience of designing and conducting business management games (see, for example, (Musshoff, Hirschauer and Hengel, 2011; Hohmann, 2013)) and very prospective and promising in terms of variety of its applications.

Due to a very sophisticated character of an innovation ecosystem, the interaction of its active elements, namely the main innovation stakeholders (government, universities, industries, investors, and civil society in our case) are very complicated. So, as we emphasized in our earlier papers (Dubina and Carayannis, 2014; Carayannis and Dubina, 2014; Carayannis, Dubina and Ilinova, 2015), in this complex, dynamic and non-linear landscape of public-private collaboration and competition, game-theoretic and game-experimental perspectives can be powerful tools for theory, policy, and practice, allowing to deal with as well as leverage related challenges and opportunities.

The presented business simulation game may serve as an empirical platform for analysis and support of decision-making for innovation policymakers and practitioners. At the same time, a formal

mathematical model of the interaction of the key innovation stakeholders may contribute to a general theoretical framework for Innovation Economics and Management. In particular, the game-theoretic solutions regarding the optimal strategies of the key stakeholders of an innovation ecosystem may serve as a benchmark for their real interactions.

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REGIONAL DEVELOPMENT AND INTRA-FIRM NETWORKS IN THE ENLARGED EUROPEAN UNION: THE ROLE OF FOREIGN DIRECT INVESTMENT¹⁴⁶

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ABSTRACT

In this contribution, we wonder about the role of FDI in the economies which have undergone an integration process to recently become (and were allowed to become) members of the European Union. The transformation of CEE that joined the EU in 2004 and 2007 is the result of deep reforms of their productive systems and institutions in order to benefit from their inclusion in the new competitive environment. Much of the success of this integration is explained by the role that was played by the "surprise guest" – the foreign direct investment (FDI), mostly by West European origin. New industries have emerged (automobile industry in Slovakia) and many clusters (in western Hungary, southern Poland) have developed around the large investments made by firms from the EU-15 (or European subsidiaries of US firms). The Logan project was developed in Romania and has made a major hub in this sector.

The presence of these firms has helped revitalize the industrial base and to develop new specializations. These firms have taken advantage of many local factors related to the legacy of socialist industrialization: qualifications (and low cost) of the workforce, national innovation systems, but also to the proximity effects - the access to markets both in the region and on the wider scale. The FDI flows originating from EU were initially directed towards the most developed transition countries (Poland, Czech Republic, Hungary) and the attractiveness of these areas has not dried up even after their joining the EU. It is noted that the Balkan countries are now as attractive despite their later transitions. Bulgaria and Romania have felt the institutional impact of accession, and Croatia, despite the decline in some of sectors of its specialization (shipbuilding), hosts a high level of FDI. Finally, Serbia, in the negotiation phase, received investments in high-potential sectors such as automobile industry and telecommunications. What are the fundamental factors for the attractiveness of the CEE region's economies to FDI, how to integrate existing industries in regional production networks, how do they benefit from the contribution of these investments to upgrade and better position their industries on the domestic and regional markets? These are some points which this paper aims to answer to.

Keywords: FDI, regional development, integration process, intra-firm networks

JEL classification codes: D85, F21, R58

INTRODUCTION

The growth of the internal market due to the addition of New Member States (NMSs) to the European Union (EU) has increased many companies' activities in an expanding marketplace. The rules of competition, the mobility of capital flows, and market growth following various waves of EU expansion have allowed companies, especially those based in the EU, to increase market share due to economies of scale, rationalized production, and increased participation in networks. These companies have made advances in the use of outsourcing, mergers and acquisitions, virgin investments, and cooperation agreements. Naturally, European multinational firms (MNFs), as the

¹⁴⁶ This essay is based on research conducted within the framework of the Balkint research project, *Western Balkans and the European Union. Lessons from the Past Enlargements, Challenges to Further Integrations*, www.balkint.eu

primary agents--and beneficiaries--of these newly expanded markets, have not limited their activities to an expanded European market. As global firms, they operate in other markets, particularly in Asia, creating and implementing both global and regional strategies.

Immediately after the fall of the Berlin wall and the opening up of former Soviet-bloc economies, these companies applied new outsourcing and investment strategies inside the future EU NMSs¹⁴⁷. Expansion to the East made it possible for many companies to acquire businesses (see Figure 1), make virgin investments, develop markets, and invest in production segments (vertical integration), while also producing directly for these new markets as well as for EU-15 markets. These investments have sometimes raised issues of arbitrage and necessitated other difficult decisions, particularly in cases of multiple installations in different localities (such as VW in Spain versus Slovakia) and between the country of origin and the host country (such as Renault in Normandy as opposed to in Slovenia).

This article will show that FDI, predominantly by European multinationals, has played a highly significant role in this process. Companies have benefited from institutional changes, adjustment and opening policies, and the impact of joining the EU. The region has experienced rapid increases in FDI levels that have generated a major reorganization of the European industrial landscape and triggered the development of entirely new activities. Eastern Europe, and at present the economies of the Balkan nations, have seen significant shifts in industrial activity that bind them closely to EU industry. These changes raise questions about the degree of dependency of these economies and their subordination to large industrial and financial groups. Section 1 reminds us of the role of FDI in the region, while the second section demonstrates the importance of FDI as a factor in restructuring, and the final section sheds light on the dependency of the region's economies relative to FDI.

FDI IN THE CEEC: A NEW SPACE FOR MULTINATIONAL COMPANIES

Multinational companies invest for two major reasons: Market and factors access (cf. the OLI model). In the first case, which involves horizontal investments, a company invests locally and is on the same competitive level as domestic firms (i.e., without customs duties and enjoying a range of preferential treatments such as tax reductions and advantageous tax rates). They also benefit from numerous competitive advantages, penetrating markets with prior knowledge unavailable to local firms and rapidly attaining a dominant position. Large retail distributors, which under socialism were completely absent from the CEEC are currently dominated by major European groups such as Carrefour, Metro, and Tesco. Their presence results in a range of positive externalities both upstream and downstream (suppliers, local outsourcing, services linked to the presence of these companies). Foreign banks have helped modernize and develop financial services by opening local branches, thus helping local companies' restructuring efforts. This is also true of utilities like water, gas, and electricity. The presence of foreign firms implicates nearly every sector, while focusing primarily on manufacturing (Deloitte, 2014, see Table 2).

A company can outsource the manufacturing of the parts that are assembled to make the final product, which take place in the country of origin. This is one example of vertical integration in which the company uses the competitive advantages of an outsourced manufacturing site, in particular reduced costs. The Hungarian factories operated by the German company AUDI manufacture engines that are sent to Germany. Volkswagen completely assembles limited series of four-wheel drive vehicles in its Bratislava factory that are sent to Germany and other markets with high purchasing power. Renault produces a low-cost vehicle, the Logan, for markets in the region

¹⁴⁷ Following successive waves of expansion: Estonia, Hungary, Latvia, Lithuania, Poland, the Czech Republic, Slovakia, and Slovenia in 2004, Bulgaria, Romania in 2007, Croatia in 2013

and is currently penetrating EU-15 markets in response to consumer demand in areas with low purchasing power. The Romanian Renault site presently serves as the hub of the international manufacturing and sales strategy for the Logan in Central Europe, Russia, and Morocco.

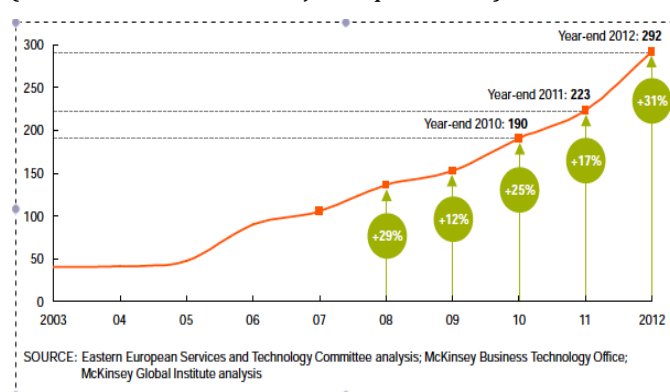
Expansion to the East: Adjustments and Institutional Changes

Economic reforms and institutional changes after the fall of socialism led to the transformation of the CEECs into market economies before they joined the EU, which occurred in three successive waves in 2004, 2007, and 2013. Economies such as Serbia that were in the pre-integration phase also underwent similar adjustments.

These economies underwent three successive shocks:

- A systemic shock with the collapse and disappearance of socialism, whose mode or organization and management of economic activity had shaped the industrial system of the region for five decades.
- An economic shock, (“the Washington consensus”) by opening themselves and applying strict stabilization policies (involving the privatization of state companies and the creation of new private companies) and by reorienting exchanges and seeking new specializations.
- An institutional shock, by conforming to the strict conditions required for membership imposed by the executive branch of the EU (institutions, democracy, and sustainable competitiveness, as well as implementation of the EU acquis.

Figure 1: The Impact of FDI in the CEEC: Growth and Impact on Employment
(In 1,000s of cumulated job-equivalents)



Finally, in only two decades, these economies have profoundly altered their productive structures, specializations, and modes of operation to become true market-based economies able to handle competition in an expanded European marketplace. The ways in which integration functions are nevertheless starkly different in terms of the living standards of the two sides of an expanded Europe, whether in terms of wages or per capita GDP, and despite real political convergence and significant flows of FDI (see Table 1).

Foreign Direct Investment: A Factor in Restructuring and Specialization

FDI has been the “surprise guest” that has massively transformed the economies of the region. By facilitating development and opening up and liberalizing capital flows, and by bringing in significant financial resources and management skills and opening new markets, FDI has accelerated processes such as adjustment, restructuring, and specialization.

Table 1: Wages, GDP, and FDI in Eastern and Southeastern Europe, 2013

Countries	Average nominal gross monthly wages (in €)	GDP per capita, PPP/EU-28 (EU-28=100, in %)	Stock of FDI (% of GDP)
Albania	291	28.1	29.2
Bosnia et Herzegovina	660	27.0	42.0
Bulgaria	413	45.6	93.3
Croatia	1,048	58.5	54.0
Czech Republic	965	80.0	62.7
Estonia	949	71.1	81.2
Hungary	777	65.2	77.8
Latvia	717	63.7	49.7
Lithuania	646	71.5	35.5
Macedonia	504	35.2	49.1
Montenegro	726	39.6	112.3
Poland	870	65.9	45.6
Romania	490	52.6	42.4
Serbia	537	36.7	61.9
Slovakia	824	74.1	58.0
Slovenia	1,523	80.7	29.7
New Member States (11 countries)	770	64.1	53.6
Euro-zone (18 countries)	1,845	106.7	
EU (28 countries)	1,742	100	

Source: Adapted from WIIW (2014)

A wide range of factors facilitated the systematic and gradual influx of FDI into the region (see Figure 1 and Table 1):

- A proximity effect. FDI inflows come primarily from EU-15 companies, including European branches of North American companies. Conversely, very little investment has flowed from Asia or other regions. Early investments by South Korean and Japanese firms represented efforts to benefit from proximity to EU markets to take advantage of the expected positive effects of future EU membership. Since accession, Asian firms (primarily Indian) have invested in the region (particularly in the Czech Republic) in order to develop services closer to the final market (*Infosys*). Chinese companies have also created markets by gaining contracts for large construction projects such as the Polish highway system, investing in the automotive manufacturing sector (in Bulgaria), and other infrastructure construction projects (in Serbia and Hungary). These companies are attempting to develop commercial flows that faceplate access to European markets, which could be interpreted as a Chinese effort to construct a “new Silk Road.” (Richet 2014)

- An industrial heritage that includes highly qualified labor, specialized base and secondary process industries involved in mechanical and electronic manufacturing. Low labor costs associated with these industries have further enhanced the region’s appeal to investors (see Table 1) and explain the high concentration of FDI in the manufacturing sector (see Table 2) in most countries that have welcomed such investments.

- The weakness or even total absence of sectors essential to the functioning of developed market economies, including banking, finance, services, and commercial real estate or supplying the population with finished goods via large retail distribution networks have attracted high levels of direct investment (see Table 2).

The privatization of stocks via sales, often at attractive prices, has also attracted large numbers of foreign investors. Very large companies like VW in the Czech Republic have employed a “first mover,” acquiring shares and taking advantage of their dominant position to block or delay the entry of competitors, thus taking maximum advantage of attractiveness measures implemented by regional governments.

Table 2: FDI and Target Sectors in CEECs

Albania	1. Transportation, warehousing, and communications (27.5), 2. Financial intermediation (27.3), 3. Mining and quarries (25.7), 3. Real estate, rentals, commercial activities (10.8), 5. Wholesale and retail commerce (4.8)
Bosnia-Herzegovina	1. Manufacturing (28.4), 2. Finance and insurance (24.0), 3. Information and communications (15.0), 4. Wholesale and retail commerce (11.0), 5. Real estate
Bulgaria	1. Real estate, rentals, commercial activities (20.0), 2. Manufacturing, 3. Financial intermediation (16.6), 4. Wholesale and retail commerce (14.5), 5. Transportation, warehousing, and communications
Croatia	1. Financial intermediation (33.5), 2. Manufacturing (26.3), 3. Real estate, rentals, commercial activities (16.2), 4. Wholesale and retail commerce (9.1), 5. Transportation, warehousing, and communications (6.9)
Czech Republic	1. Manufacturing (33.1), 2. Finance and insurance (21.7), 3. Wholesale and retail commerce (10.7), 4. Real estate, 5. Specialized, scientific, and technical activities (4.2)
Estonia	1. Finance and insurance (25.4), 2. Real estate, 3. Manufacturing (13.7), 4. Wholesale and retail commerce (13.2), 5. Specialized, scientific, and technical activities (9.1)
Hungary	1. Specialized, scientific, and technical activities (25.7), 2. Manufacturing (21.1), 3. Finance and insurance (16.6), 4. Wholesale and retail commerce (10.9), 5. Information and communications (6.6)
Latvia	1. Finance and insurance (25.3), 2. Real estate (12.3), 3. Manufacturing (12.1), 4. Wholesale and retail commerce (12.0), 5. Construction (4.8)
Lithuania	1. Manufacturing (24.7), 2. Finance and insurance (24.3), 3. Real estate (12.5), 4. Wholesale and retail commerce (10.2), 5. Information and communications (9.3)
Macedonia	1. Manufacturing (34.9), 2. Finance and insurance (23.2), 3. Wholesale and retail commerce (12.3), 4. Electricity and gas (7.5), 5. Construction (5)
Poland	1. Manufacturing (31.7), 2. Finance and insurance (24.3), 3. Wholesale and retail commerce (14.2), 4. Real Estate (6.9), 5. Specialized, scientific, and technical activities (5.6)
Romania	1. Manufacturing (31.2), 2. Finance and insurance (18.5), 3. Wholesale and retail commerce (11.4), 4. Electricity and gas (8.9), 5. Mining and quarries (5.8)
Serbia	1. Manufacturing (24.0), 2. Wholesale and retail commerce (22.0), 3. Finance and insurance (17.1), 4. Construction (1.4), 5. Transportation and warehousing (8.5)
Slovakia	1. Manufacturing (30.6), 2. Finance and insurance (22.8), 3. Electricity and gas (16.7), 4. Wholesale and retail commerce (9.8), 5. Real estate (6.2)
Slovenia	1. Finance and insurance (34.6), 2. Manufacture (28.0), 3. Wholesale and retail commerce (16.2), 4. Real estate (7.0), 5. Information and communications (3.0)

Source: Adapted from WIIW (2014)

Acceding to EU membership and becoming integrated into the European market explains the increased influx and overall high levels of FDI in recent years. The proportion of FDI relative to GDP and its contributions to productive investment, employment, and exports, reveal the enormous weight of FDI in the economic activity and specialization of the region's companies. The last countries to join--Bulgaria, Romania, and Croatia--benefited greatly from this integration effect without slowing the growth in FDI flow towards the Western Balkans, which were fully engaged in the accession process at the time. Capital inflows have had, and continue to exert, a positive influence on the region's growth rates, which have surpassed EU-15 rates (Transition Report, 2014).

THE EFFECT OF FDI ON REGIONAL ATTRACTIVENESS AND RESTRUCTURING

Institutional changes and significant industrial restructuring directly influenced the pace of FDI flowing into the region. Initially, with the exception of a few countries, particularly Hungary (which decided early on to open up by selling its companies to foreign buyers), the influx of foreign investment has been slowed by defensive and protectionist policies enacted to counter foreign investment. These measures have included distributing shares to the population free of charge, for example, in the Czech Republic, or Poland issuing a decree that a majority of domestic firms were considered “strategic companies.”¹⁴⁸ Governments were using these measures in an effort to retain control over national industries. Limited domestic financial resources available for investment and the elevated costs of much-needed restructuring caused these governments to adopt more welcoming and generous strategies towards foreign investors. They were nevertheless able to protect and retain control over large public sector telecommunications and energy companies. It should be emphasized that this attitude is not irreversible. Hungary, the pioneer in encouraging FDI, currently opposes the massive presence of foreign companies in the country, and the present administration is now questioning standing agreements with large European companies.

Foreign investments linked to privatization (through public sales and private contractual operations) resulted in a lever effect in the acquisition of companies at bargain-basement prices. Sales to foreign investors presented several advantages, including rapidly restructuring companies, generating revenue, and providing access to foreign and EU markets. Rapid, massive sell-offs of shares helped to create positive externalities for the industrial base through the establishment of branches and sub-contractors and the “swarming” effect generated by the presence of new companies. These sales also contributed to net increases in available jobs following an initial adjustment phase. For Western companies, entering such markets enabled them to quickly become operational, often within a few months.

As mentioned earlier, industrial heritage also played an important role in attracting investment to certain locations. Other attributes contributed to the appeal of these areas as well, including a professionally trained workforce of qualified workers and engineers and advanced technological development in several sectors such as defense industries. Indeed, systematic scarcity under socialism led a number of companies to innovate independently in order to maintain or improve existing machines that were difficult to import due to a lack of foreign currency (Richet 1992).

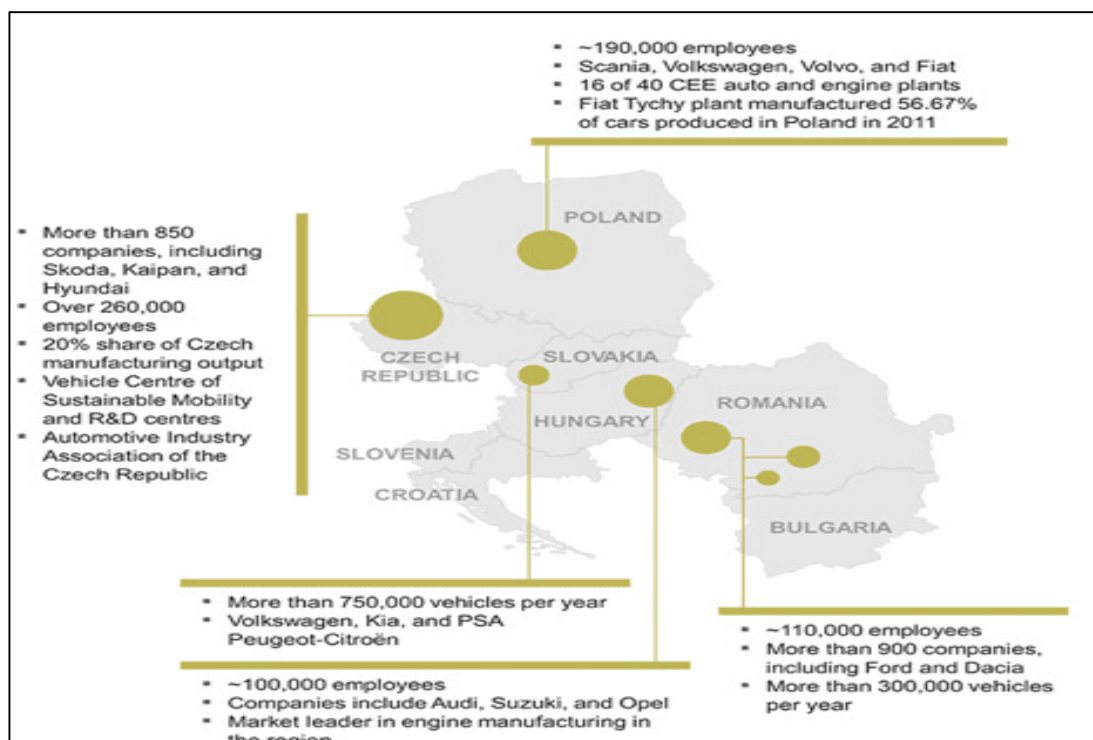
The Czech Republic¹⁴⁹ possessed a pre-existing, high-quality automotive industry that continued to operate under the socialist regime. The existence of a highly qualified labor pool with a wage differential, given equal qualifications, of 1 to 5 (see Table 1) helped accelerate outsourcing and investment in several sectors, including information technologies and automobile manufacturing.

The encounter of skilled human resources, foreign firms supplying capital and markets with an integrative project encouraged the emergence of a number of industrial clusters (see Figure 2) in the region—in the south of Poland (Katowice-Cracow) and in the west of Hungary (Győr) around Bratislava. Pitesti, to the north of Bucharest, is the location of the Dacia factory headquarters, has become a veritable manufacturing and corporate hub. Logan automobiles are constructed at the site, which is the focal point of the group’s strategy with respect to the EU-28, Russia, and Morocco.

¹⁴⁸ Which also continues to possess one of the most significant state-owned sectors in Europe. Cf. *Financial Times*, “Poland Barriers to Business,” April 5, 2015

¹⁴⁹ The Czech Republic was the only Central European country that had developed a domestic automobile industry (Skoda) before the turn of the twentieth century.

Figure 2: Human and Capital Resources: The Cluster Effect



European MNFs, like those in other large market economies, employ regional/national strategies to take advantage of markets, labor pools, technology, and cost advantages. Eastern Europe did not elude Western investors. Before the fall of communism, Eastern Europe was unattractive to European manufacturers, whose presence was limited to joint ventures in a small number of countries--Fiat in Poland, Renault in Romania. The supply of vehicles was limited, while demand was minimal. The opening of these markets attracted investors to these sectors for the reasons discussed earlier. Most CEECs are currently included in the regional strategies of large European and Asian groups (see Table 3). Their presence has significant influence on production and employment (see Table 4). These investments have greatly altered the industrial landscape (see Figure 3), attracting top-ranking suppliers who contribute to rapid technological development and the specialization of production units.

Table 3: Major Investors in the CEEC Automobile Sector

Rank	Rank /500	Company/Sector Name	Country	Owner
1	3	Skoda Auto	Czech Rep.	VW (All.)
2	14	Volkswagen Slovakia	Slovakia	VW (All.)
3	16	AUDI Hungaria Motor	Hungary	VW (All.)
4	25	Kia Motors Slovakia	Slovakia	Kia (Korea)
5	26	Automobile-Dacia	Romania	Renault (FR)
6	32	Hyundai Motor Manufacturing Czech	Czech Rep.	Hyundai (Kor.)
7	40	Fiat Auto Poland	Poland	Fiat (Italy)

Source: Deloitte, 2014

Table 4: Production, Employment, and FDI in the Automobile Industry in the PECO

	<i>Production</i>		<i>Employment¹</i>		<i>Foreign direct investment²</i>	
	In millions of EUR	In % of manufacturing	Persons	In % of manufacturing	In millions of EUR	In % of manufacturing
Bulgaria	561.1	2.3	10,087	2.0	n.a.	n.a
Czech Republic	31,647.8	22.4	138,575	13.1	8,091	27.4
Hungary	15,800.8	18.6	65,022	10.3	3,382	19.6 ³
Poland	26,669.1	11.2	146,685	6.7	7,456	15.3
Romania	9,046.0	14.9	116,156	10.4	2,838	16.3
Slovakia	16,435.8	28.5	50,998	13.2	2,425	18.6
Slovenia	2,598.5	11.7	12,837	6.8	201	7.6

Source: Hanzi-Weiss Doris, Robert Stehrer (2014): Table: Automotives clusters in CEEs

The massive infusion of capital into this sector over the past two decades has driven a steady increase in regional automobile production (see Table 4). Manufacturers supply these markets and orchestrate distribution on the regional level. They also develop specialized operations at certain sites that assemble limited-edition cars and manufacture major components (motors, gearboxes, drive-trains, and transmissions) and entry- and mid-market cars. The economic and political stabilization of the Balkans encouraged the return of companies that contributed to the development of this sector, like Fiat in Serbia.

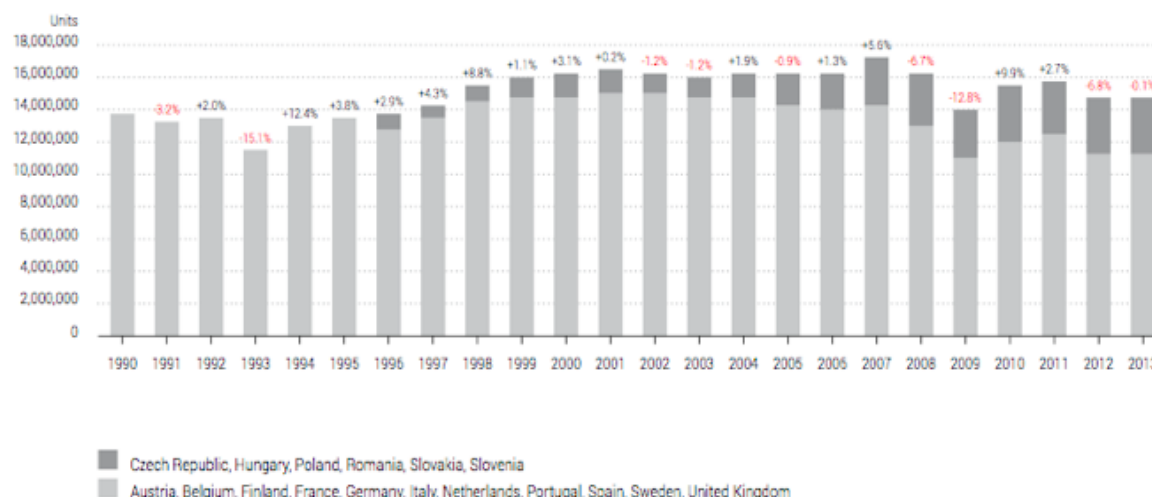
Figure 3: FDI and Industrial Facilities in Southern and Eastern Europe



Source: Amighini Alessia, Giovanni Balcet, & Xavier Richet (2015)

Chinese manufacturers are presently attempting to enter the European market from the south (for example, the Chinese firm Great Wall in Bulgaria). Other countries like Croatia specialize in sub-contracting and are seeking to establish niches for foreign investors and to become top-ranking suppliers. The fact remains that cost and proximity, typically critical in attracting FDI, will probably no longer suffice in the future, as competition in the automobile manufacturing sector increasingly focuses on on-board technologies and services. (*Financial Times*, 2015)

Table 4: Contribution of Central and Eastern European Countries to Automobile Production in Europe, 1990-2013



Volkswagen, the largest European automobile group, is present at every level of the automotive market, from Bentley to the VW Polo, and is present in at least thirty countries, which is also true of Renault, PSA, and FIAT, including facilities in South America, Asia, and the United States. Volkswagen manages the group's activities through a regional framework by coordinating its various facilities. One example is the company's Czech subsidiary Skoda, which manufactures its own components its new models while also enjoying access to the company's parts bank in Germany. The company can thus produce its own parts and components for models manufactured and assembled in its German plants. Renault also targets its manufacturing sites on specific markets and models. Clio's manufactured in Slovenia are destined to supply the South of France and Italy, while those manufactured in Turkey satisfy demand in Southeast European markets. The company has delegated the manufacture of low-cost Logan line to its Romanian unit in order to supply regional as well as more distant markets.

Automotive parts manufacturers have also increased their activities in these countries, urged on by manufacturing firms to follow their new acquisitions closely in order to reduce costs and transportation times. There has been a veritable explosion of the vertical model that has resulted from these firms' networking and from assigning each company specific functions depending on the group's regional strategy.

The arrival of automobile manufacturers in the region transformed the industrial landscape while forging strong connections between these sectors and major multi-national groups. Acquisitions and new companies also answered to powerful internal demand. Companies outsourced relatively costly activities associated with high salaries and limited margins of maneuver to the East to increase labor productivity and innovation.

Is it possible that these flows of investment might dry up? There has been steady growth in FDI in the region in recent years, reflecting the integration of CEEC companies thanks to networking

strategies implemented by European FMNs. Late-coming EU member-states, such as Bulgaria and Romania, did not reduce FDI flows for reasons related to proximity and institutional transformations to protect investments, as well as subsequent near-term (Croatia) and longer-term (Serbia) expansions.

A DEPENDENT, HIERARCHIZED PRODUCTION SYSTEM IN AN EXPANDED EUROPE?

The massive presence of foreign firms was a blessing in disguise during the early phase of this transition because CEEC governments were sometimes obliged to sellequities, occasionally at deeply discounted prices, and benefited from the availability of capital and management skills as well as access to western markets. Rapid, continually expanding inflows of FDI, which continued despite contra-indications such as the rise in wage costs and competition from other countries with lower labor costs, have not diminished in recent years. The presence of foreign capital in the region raises sensitive questions related to the appropriation and control of companies (see Table 5).

Table 5 Foreign Companies, by Country and Sector, among Top 500 Companies in the CEEC

<i>By Industry:</i>				
Situation in 2013	External Control	Central European Control	Government Companies	Total
Distribution and Transportation	108	58	13	179
Energy and Resources	51	31	64	179
Life Sciences and Health	12	6	-	18
Manufacturing	81	27	6	114
Public Sector	-	-	6	6
Real Estate	5	1	1	7
Technology, Media, Telecom.	22	6	2	30
Total	279	129	92	500

<i>By Country:</i>				
Situation in 2013	External Control	Central European Control	Government Companies	Total
Bosnia and Herzegovina	2	-	1	3
Bulgaria	3	3	1	7
Croatia	1	7	4	12
Czech Republic	44	22	13	79
Estonia	2	2	1	5
Hungary	48	9	6	63
Latvia	5	1	1	7
Lithuania	4	7	2	13
Poland	90	33	38	161
Republic of Macedonia	1	-	-	1
Romania	33	4	5	42
Serbia	4	3	3	10
Slovakia	20	1	7	28
Slovenia	4	9	3	16
Ukraine	18	28	7	53
Total	279	129	92	500

Source: Deloitte (2014)

The strategies of Western firms tend to favor the time-honored model of labor division within multinational firms in spite of more recent developments such as the network effect, increased

autonomy, and the specialization of different units according to regional company strategies. This has been the case with the American automobile manufacturer GM's plans to divest itself of its German affiliate, Opel, which itself owns affiliates in Poland. A domino effect ensued in which the German government was prepared to finance the re-acquisition of Opel by making deep cuts in the Polish and Belgian affiliates. Several years earlier, the management of the Spanish group SEAT had envisioned outsourcing some of its activities in Slovakia within the VW group. In response, the FIAT management threatened to repatriate some of its activities from Poland to Italy. The French government offers aid to French car manufacturers if they invest in France, whereas demand is highest in China, where Renault and PSA are funding the development of vast industrial capacity.

The fact remains that governments and local investors cannot control the decisions and choices of FMNs except that governments can use the allure of fiscal advantages ("fiscal dumping"). The most competitive companies in the region have become affiliates of the large industrial groups. This pattern of integration does not prevent the emergence of highly competitive domestic businesses in the supply niches of various markets. Certain CEEC companies with mostly or exclusively domestic capital have joined other firms operating in the same sector in the region. One example of this is MOL, a Hungarian company operating in the energy sector that has made acquisitions in Slovakia and Croatia.

CONCLUSION

In the span of two decades, the CEEC have succeeded in transforming their systems of production, inserting themselves into international (i.e., European) divisions of labor by developing comparative advantages associated with proximity, "industrial heritage," high-quality education systems, and competitive labor costs. Privatization and the massive entry of Western European companies have done the rest by enabling these economies to rapidly adapt themselves to the new environment.

Several threats nevertheless loom over the industrial futures of these economies. The continuing impact of the international financial crisis and its negative effects on employment could accelerate offshoring and delocalization activities to companies' countries of origin that are deeply affected by unemployment (such as the opposition of the French government's opposition to Renault's plans to create a manufacturing plant in Turkey). The other threat is that foreign investment in the CEEC could leave for economies with even lower costs such as Bulgaria or China. The crisis that menaces certain sectors such as the automobile and steel industries that have surplus capacity, as well as the rise of the power of industrial groups from emergent countries such as China and India, could imperil the specialization of the New Member States, in turn endangering the industrial model that has developed during the past twenty years.

Two conclusions can be drawn from this process of regional integration:

- The capital of multinationals has no borders (or morality): There is always a country that produces less expensively than another. Numerous Chinese companies, for example, are currently investing in Malaysia and North Korea.

- Because of globalization, "national capitalism" no longer exists. The transition of the CEEC has contributed to rich economic integration within an expanded European marketplace, enabling EU-15 companies to locate there but also leaving little space for national actors such as governments, banks, local institutions, and industrial groups to control and influence operators from the EU-15 or elsewhere over these new spaces in order to valorize capital.

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CAN GLOBALIZATION BE SOCIALLY INCLUSIVE THROUGH TOURISM 2.0?

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ABSTRACT

Can globalization be socially inclusive through new 2.0 digital initiatives? This is the thought-provoking question we ask in this article, with a special focus on the Republic of Moldova. Part 1 begins with a reflection on the intersection between globalization, development studies and the current Moldovan context. Part 2 is devoted to the promising field of emergent tourism, and more particularly, tourism 2.0, a blossoming concept that we try to uncover. Part 3 presents a concrete application with the example of Moldova Tours 2.0, a new digital initiative in the field of e-tourism. Finally, we conclude.

Keywords: Republic of Moldova, tourism 2.0, globalization, start-up, social inclusiveness

JEL classification codes: L83, M13

INTRODUCTION

The Republic of Moldova is a small (33,843 sq. km), relatively densely populated country with a rich History that gained its independence by becoming a sovereign state on 27 August 1991. Situated in South Eastern Europe, sandwiched between Ukraine and Romania, in the north of the Balkan Peninsula, the distance between the North and the South is 350 km, and between the West and the East 150 km. The Republic of Moldova adopted its Constitution in July 1994, and became a democratic republic (endorsing the separation of the legislative, executive and judicial powers), functioning under the Rule of Law. The legislative power is exercised by the Parliament, which is elected for four year-terms. There have been eight parliamentary elections since 1991. The latest were held in Moldova on 30 November 2014. The elections were admittedly "more a loss than a victory" for the pro-European coalition, because center-right parties were divided by sharp tensions. The pro-Russian Socialist Party (PSRM), composed of former communists, emerged as the winner of the 2014 elections, and the strongest party in Parliament, with 20.51% of votes. Yet these facts are seldom known outside the small circles of specialists, journalists and commentators of this rather tormented region of the world. But what do people really know about the Republic of Moldova? Will they eventually book a flight to the capital Chisinau? Unfortunately, the Republic of Moldova does not quite enjoy a good reputation abroad: (oft-amplified) stories of poverty, traffic of organs, prostitution, conflicts involving minorities abound.

Moldova is one of the poorest countries in Europe and has a large foreign debt and high unemployment. It is heavily dependent on Russia for energy supplies, and Russia has not hesitated to take advantage of this fact as a way of exerting economic pressure on Moldova (BBC, 2015).

In reality, Moldova presents a more appealing outlook and potential: small roads winding through the vineyards, sunflower fields and verdant pastures, bucolic and romantic waterfalls, beautiful monasteries carved into the limestone cliffs not to forget the festive spirit that reigns in Chisinau, the capital. In Part I, we sketch out a synthesis between globalization trends and modern developments in the Republic of Moldova. Part II investigates the question of tourism and the underlying causes behind the disappointing figures in this small country sandwiched between

Romania and Ukraine that gained independence in 1991, following the collapse of the Soviet Union. Part III puts forward a groundbreaking socially inclusive 2.0 digital initiative aimed at reconciling the dynamics of globalization with the ongoing development trends in the Republic of Moldova.

REPUBLIC OF MOLDOVA AND GLOBALIZATION: WHERE DO WE STAND?

A Country at the Crossroads

Globalization is an umbrella term employed to describe a multi-factor causal process, which results in an increased level of interconnectedness between national economies, regional blocks, financial, capital, and information flows, and also people across the world. Globalization is a derivative of the terms “globe” and “global”, which refer to an interconnected whole, in sum a totality. It arguably originated with the industrial revolution in Great Britain in 1640, or with the French revolution in 1789. Other authors (O'Rourke & Williamson, 2002) date back the phenomenon of globalization to the nineteenth century. The common denominator of the often nebulous, definitions thereof, is a wide-ranging process of change that entails “social, cultural, economic, and political interdependencies and consequences” (Marsella, 2012: 456). The Republic of Moldova signed an agreement of association with the European Union in Vilnius in 2014 (BBC, Internet, 2015). The EU being deeply involved in the globalization process, it is self-evident that the Republic of Moldova too is also a part of globalization. The latter is not only circumscribed to the political and economic spheres, but also the cultural one. The results of the cultural integration of the Republic of Moldova into globalization may already be observed by the most vigilant observers. Thousands of Bessarabia's natives work abroad today. Some of them will eventually return, but others have decided to establish, to set new roots in their country of adoption. They do not leave Moldova alone, but often with their family, their traditions, the cultural heritage they grew up with. They are the principal representatives abroad of the Republic of Moldova that they incarnate in this complex globalization process. Thanks to these emigrates, people from other nations are exposed to the culture of the Republic of Moldova, while the former are exposed to other cultures in a continuous process of cross-cultural interaction. What is taking place with this Moldovan cultural model being transposed to other people, traditions, models of existence and cultures? Is there any renunciation whatsoever to the essence of Moldovan culture? The latter certainly offers a wide range of activities to the interested visitor: literature, theater, music, plastic arts, architecture, radio and television broadcasting, library archives, design, book publishing, scientific research, cultural tourism... This diversity will be the coping stone of the novel thematic tours offered in the context of our innovative 2.0 digital platform presented in section 3.

Globalization carries substantial changes in the international political sphere, thereby affecting all member countries of the international community, including, of course, the Republic of Moldova. On the one hand, world-systems analysis has shown that globalization goes hand in hand with the emergence of a world hegemon, namely the United States in the case at hand, or more generally, a notable domination by Western advanced economies, thereby conferring a truly asymmetric nature to the globalization process. On the other hand, countries that appear to play a more passive role in the globalization process often point to cultural disruption, if not imperialism (Phillipson, 1992, 2000). All in all, globalization is never a zero-sum game. Corporate restructurings, mergers, bankruptcies, outsourcing, temporary employment are long-term societal trends that affect the lives of millions, thereby shaping anew the pattern of capital accumulation and technology transfers across the globe. In spite of the unprecedented level of functional integration achieved by economic units that take part in the globalization process, the latter is also characterized by a growing and multidimensional phenomenon of fragmentation. Interestingly enough, the different types of fragmentation “are not incompatible and indeed reinforce each other. They are specific:

organizational fragmentation, geographical (by nation states) fragmentation; and fragmentation of the production process, which results in the international location of different components of manufacturing or services products in different countries" (Grazialetto Gillies, 2005, p.206). Moreover, another fundamental type of fragmentation is observed, that of the labour force itself through a "divide and rule strategy" (Cowling and Sugden, 1987), which can be seen as a mere by-product of the globalization process wherein firms respond to attacks by rivals in the international arena by the search for cheaper labour and a divided labour force with a reduced bargaining power. The 2007-2008 global turmoil has sent shock waves throughout the world, thereby destabilizing the hard-fought configurations previously in place, and finally presiding over the emergence of a multipolar world, wherein the US can no longer be seen as the single superpower in a globalized world. What we can see, from a geopolitical standpoint, is an emerging plurality of centers of power on the world stage. The recent creation of the New Development Bank in 2014 bears testimony to this shift towards a multipolar world with the recognition of a rebalancing of power in favour of BRICS. The weight of this reconfiguration is particular acute in the Republic of Moldova where neighboring Russia exerts a pernicious influence on the economic affairs of the country:

The fact the Moldovan economy has traditionally been heavily dependent on the export of wine to Russia has also allowed Moscow to apply economic pressure by occasionally banning the import of Moldovan wine. In 2013-14, wine was among a broad range of Moldovan agricultural exports banned by Russia before and after the country's signing of an EU association agreement, along with Ukraine and Georgia (BBC, 2015, Internet).

What is so specific about the Republic of Moldova is the fact that globalization trends are superimposed on the unfinished agenda of modernization undergone by a country slowly moving in the direction of a functional democracy. At present, the Republic of Moldova needs its own geopolitical framework that would help her acquire more stability in our fast-changing world, having in mind of course long-term national interests of Moldovan society.

Moldova's Development Strategy (horizon 2025)

Devising a sound development strategy for the Republic of Moldova at the horizon 2025 is the safest way to overcome the global economic crisis that has plagued the world since 2007-2008, to stabilize the institutions, and ensure the modernization of the country. Since its independence in 1991, Moldova has undergone a wide-ranging transformation process. Yet, in spite of many important reforms in justice, education, and the economy that have helped achieve a more stable balance in key strategic areas, it remains unclear what exactly the nature of Moldova's development thread is. Delineating the development strategy of Moldova is made even more complex by the incomplete transition from the Soviet past toward a functional democracy with an efficient and sustainable model of economic growth and governance. The Republic of Moldova has suffered from the global crisis. In 2009, Moldova's economy experienced a massive recession (-6.5%), with a budget deficit amounting to 9% of GDP. The table below presents the evolution of nominal, real and per capita GDP between 2005 and 2009. After an impressive period of growth between 2005 and 2008, Moldova was hit violently by the global financial crisis.

Evolution of population income during 2005-2009

	2005	2006	2007	2008	2009
Nominal GDP per capita (MDL)	10488	12497	14955	17649	16260
Real GDP per capita (MDL, prices for year 2000)	6294	6613	6828	7379	6542
GDP per capita (USD)	832	952	1232	1699	1463

Source: Stratan (2010)

Negative phenomena within the economic and political systems have been felt painfully in the most important areas of Moldovan life, thereby amplifying social issues, polarizing trends in society, and amplifying various expressions of alienation and intolerance in the social and political environment. It is increasingly clear that conventional (and often schematic) approaches to the Moldovan conundrum fail to provide the answer to the enduring question 'where should we go from now?' The political elite of the country, forming the state structures at all levels, tends to make electoral promises as part of ambitious development strategies, without being able to provide answers to the key questions for society, inter alia, how should the resources of the country be allocated, how can we attract foreign investment, and what should be the new priorities, in order to achieve a new qualitative level of development? Today, Moldovan society is characterized by a lack of consensus that further feeds internal and damaging contradictions, thereby hampering the potential of the country to set foot on the path toward development and prosperity.

The hybrid model of a democracy and a market economy, which has made the success of countless countries throughout the world, has proved largely ineffective in Moldova, due to limited knowledge of the modern world by the majority of the population, lack of sincerity at the upper echelons of power, faltering motivation to improve the lives of the Moldovans, irresponsibility on the part of politicians, who remain entangled in bureaucratic practices and finally corruption scandals

A contradiction persists between the oligarchic structure of the economy, and the need to develop a strong entrepreneurial base, without exacerbating the tensions between the dominant business and political groups. A pressure exists to develop broad international cooperation schemes. Yet the latter economic activities that would be supported should not be detrimental to the ecological configuration of the country, and should help maintain acceptable standards of food quality and health care for the citizens. Moldova needs to consolidate the rule of Law, and move away from reform inertia, which has characterized the country for so long. It needs to put an end to the control of the judiciary power by politicians, thereby propelling judicial nihilism and corruption in Moldovan society. Social peace and harmony is threatened by rising inequalities that is the widening gap between the rich minority and the poor majority of society of the country. Drawing on Sen's concepts of capability and justice (Sen, 2004, 2010, 2012), the National Development Report (2014, p.4) acknowledges that "recent economic growth and social progress has disproportionately benefited the bigger cities, while people in rural areas continue to have fewer economic opportunities and only partial access services such as health, education, water and sanitation at best".

The apparent openness of society, and the pluralism of the Moldovan mass media in the developing civil society come in sharp contrast with opposing trends conducted through the same channels aiming at manipulation and concentration of power in the hands of a handful of public organizations and NGOs. There is a growing tension between, on the one hand, the need to study the genuine History of Moldova, to develop a national identity, a true Moldovan patriotism with full respect for the interests of neighboring countries and, on the other hand, the absence of such a consciousness in the ranks of Moldovan citizens, on whom are imposed imaginary and manipulative versions as regards the origin and the History of the Moldovan people, whether consciously or unconsciously, often subordinated to intellectual elites and outside (foreign) influences.

The accumulation of these contradictions leads to the continuous deformation of the socio-cultural context of the contemporary Moldovan society in its entirety, thereby turning it into a society with dual or even triple standards. This is why elements of the systemic crisis, the general crisis within which Moldova finds itself, requires a deep interpretative guidance, an analysis of reality from the same perspective as the problems and phenomena that society is currently faced with, inventing the modalities to solve the latter problems and ensure a stable development of the country. The country's development strategy must ensure high quality, systemic and irreversible evolutions in key areas of social life supported by general democratic principles thanks to the real and enduring values of the Moldovan people, based on their tremendously rich culture and ancient history. As Nicolas Harrington-Buhay, UNDP Representative and United Nations Resident Coordinator in the Republic

of Moldova, puts it: "Moldova has a historic opportunity to modernize its economy and ensure inclusive sustainable development for all" (UNDP, Moldova, National Development Report, 2014, p.4).

Tourism in Moldova: Some Issues

In our endeavor to understand the determinants and the potential of tourism in the Republic of Moldova, we draw on a benchmark in Moldovan cyberspace, namely www.moldovenii.md, which represents a platform of information that regroups the most significant news and information obtained from credible sources on History, culture, diaspora and development programs of Moldova. A powerful search engine offers advanced access to a rich library that contains a wide variety of information that pertains to Moldovan music, films, literature, art, nature, architecture... Independent of public authorities and political parties, www.moldovenii.md is a platform for discussions where opinion may be expressed and where polls are available on topics of interest to Moldovans and foreigners. This makes www.moldovenii.md an innovative collaborative and interactive 2.0 platform promoting new projects, and empowering visitors of the website.

Moldova is so small and diverse, so familiar and unfamiliar at the same time. There is no paradox, because even we, the majority of the Moldavian citizens, know too little about our country. Sometimes we think we know it well, but all of a sudden, one day, traveling outside Chisinau, Balti and Tiraspol somewhere into the country, on a picnic or to pay a visit, taking a tour or a hike with friends, having just moved from the central highway we start discovering those little wonders, which astonish us deeply (Source: <http://www.moldovenii.md/en/section/311>)

	2014		% variation (2013 = basis 100)	
	Tourists and excursionists	Days of tourism	Tourists and excursionists	Days of tourism
TOTAL	238053	1631892	116,2	114,4
Inward tourism (<i>hosting foreign citizens in Moldova</i>) - total	14362	37050	109,2	88,3
Out of which whose objective was:				
Leisure, recreation	8355	14605	131,7	94,9
Professional / business	4952	13889	83,1	82,1
Health tourism	559	7586	93,8	93,7
Other objectives	496	970	199,2	62,5
Outward tourism (<i>trips of Moldovan citizens abroad</i>) - total	180646	1287340	114,7	117,0
Out of which whose objective was:				
Leisure, recreation	178260	1269617	115,5	118,1
Professional / business	1144	7412	79,9	114,9
Health tourism	1164	10042	77,3	61,0
Other objectives	78	269	25,3	9,8
Domestic tourism (<i>flows of Moldovan visitors in Moldova for tourism purposes</i>)	43045	307502	126,0	108,1

Source: <http://www.statistica.md/newsview.php?l=ro&idc=168&id=4641&parent=0>

Out of the 14400 foreign tourists, who visited the Republic of Moldova in 2014 and consumed services of tourism agencies and tour operators, 58.2% traveled for leisure or recreational purposes, 34.5% for professional/business purposes, 3.9% to receive health care services. These tourists were respectively from Romania (21,2%), Russian Federation (13,9%), Ukraine (10,7%), Germany (4,9%),

Turkey (4,8%), Italy (4,0%), USA (3,9%), Israel (3,7%), Poland (3,0%), United Kingdom Nord (2,9%), Bulgaria (2,7%), Belarus (2,5%), Netherlands (2,3%), Austria (1,9%), Sweden (1,7%), France (1,3%), Lithuania (1,2%).

Through tourism agencies and tour operators, 180600 Moldovan tourists and excursionists went abroad in 2014 for tourism purposes, a 14.7% increase compared to 2013. An overwhelming majority of Moldovan citizens went abroad for leisure and recreational purposes (98.7%). Most citizens of the Republic of Moldova opted for Turkey (35, 2% of the total who went abroad), Bulgaria (33.4%), Romania (10,2%), Greece (8,5%), Egypt (2,1%), Ukraine and United Arab Emirates (both 1,6%), Spain (0,9%).

The number of tourists who took part in domestic tourism in 2014 amounted to 43000, a 26% increase compared to 2013. Trips of Moldovan residents inside the country were organized by tourism agencies and tour operators of the municipality of Chisinau (49. 5%) the Centre (24.6%) and the South (21.0%).

Lonely Planet in 2013

An online article by Leif Pettersen published by Lonely Planet on July 02, 2013 depicts a bleak (albeit forward-looking) picture of the tourism industry in Moldova. Lonely Planet (2013) reminds us of the mere 9000 international arrivals in the country in 2011. Instead of a defeatist attitude, Moldova is adopting a pro-active and forward-looking attitude towards tourism. In fact, the country was voted by Lonely Planet readers as the #2 off-the-beaten-path destination in the world (behind Bhutan) in the 2013 Traveler's Choice poll, Moldova has new-found tourism purpose. Cooperative tourism sector is actively given support by USAID (www.usaid.gov) and CEED II (<http://ceed.md/>); Moldova's is telling the world how and why we must look at the other side of the coin of un/popularity. Numerous people have become jaded by the beaten path, and would certainly find the Republic of Moldova a land worth spending time in. Why not head toward a breathtaking cave monastery perched above a winding valley at Orheiul Vechi, taking a ride in an over-stuffed minibus and bounce down busted up roads squashed in the back row between villagers returning from a shopping afternoon in Chisinau? Do you fancy a Soviet-loving, communist-era Moscow immersion in the breakaway republic of Transdnestr? Do you feel like queuing up at the militarized border crossing and sweating out the tedious formalities, before entering a beautiful territory out of space and of time. Wine lovers visiting Moldova will also get the chance to visit the wine caves in Cricova (www.cricova.md), Purcari (www.purcari.md), Chateau Vartely (<http://vartely.md>), and Milestii Mici (www.milestii-mici.md) where rewarding tastings and tours can already be staged year-round. The 2012 legalization of small wine production was a milestone in Moldova. Prior to that, small producers were dependent on large, state-run producers (a legacy from the Soviet era) to bring their wine production to the market. Since then, the export wine market has experienced a second youth, as shown by the dynamism of Moldova's Wine Festival (www.facebook.com/moldovawineday), held during the first week of October, which is arguably the biggest event on the country's calendar. Close to Orheiul Vechi, a sensorial agro-tourism experience can be found at Agro Pensiunea Butuceni (www.pensiuneabutuceni.md), a welcoming place that offers a variety of rooms, and can arrange meals, tours, cultural activities and performances. Interested observers will also be interested in the recent Consolidated Unit for Implementing and Monitoring the Wine Sector Monitoring Program, which offers an interesting Internet platform for all stakeholders in the wine industry (<http://www.winemoldova.md/>). First-time visitors to Chisinau are surprised by how green the city actually is, one of the leafiest capital cities in Europe, Chisinau's eating and drinking scene is now turning the city into an exciting place for gourmets. Chisinau's nightlife has also acquired a good reputation, and gotten rid of some of the obnoxious clichés of the past. Don't forget the amazingly rich museums of the city, bother to exchange a few words with the shopkeepers, you will be pleasantly surprised to see how warm and hospitable these people really are.

Finally, for people with the nostalgia of the Soviet kitsch combined with a pinch of the bizarre, dare to make a day-trip to the breakaway republic of Transdniestria and its capital-city-living-museum Tiraspol. Tributes to Lenin, a sense of the good old USSR, and a distinct sensation of time travel will punctuate your visit. Though the region is in a separatist conflict with Moldova, visits to Transdniestria have become virtually trouble-free in recent years.

Deficient Infrastructures, High Poverty Levels and Rising Geopolitical Tensions

Despite a sharp decline in poverty in recent years, Moldova remains one of the poorest countries in Europe. Structural reforms are needed to promote sustainable growth. Based on the Europe and Central Asia (ECA) regional poverty line of US\$5/day (PPP), 55 percent of the population was poor in 2011. While this was significantly lower than 94 percent in 2002, Moldova's poverty rate is still more than double the ECA average of 25 % (IMF, 2014, p.4). Geopolitical tensions that originated with the Maidan revolution have also triggered fears for Moldova. For the IMF (2014, p.7), "the impact of recent regional geopolitical developments on the Moldovan economy will depend on whether the crisis spreads beyond Ukraine, trade tensions with Russia escalate, and trade routes and gas supply are disrupted". The IMF believes that adverse consequences can be mitigated if external macroeconomic shocks are better absorbed, and if the Moldovan economy increases its levels of integration into global trade and energy markets over the medium term. Surprisingly enough, the direct impact of the Ukrainian crisis on the Moldovan economy is likely to be fairly limited due to the modest trade and financial linkages between the two countries. Ukraine's share of Moldovan exports is about 6 percent and remittances from Ukraine represent around 1 percent of GDP. Likewise, on the financial side, the direct impact would also be negligible due to the very limited cross-border financial relations. Contrariwise, a further slowdown in the Russian economy and/or an escalation of trade tensions with Russia may prove harmful for Moldova. Russia's share of Moldovan exports is roughly 26 percent, and remittances from Russia represent about 15 percent of Moldova's GDP (REF). Moreover, Russia is an important source of inward FDI to Moldova (about 10 percent of the total stock of FDI). A disruption of trade routes and gas supply would necessarily have harmful consequences on the Moldovan economy. The CIS's share in Moldovan exports is 40 percent and most land routes to CIS countries pass through Ukraine. Similarly, Moldova is very reliant on Russian gas transported via pipelines in Ukraine (over 90 percent of total gas consumption in Moldova). Substituting gas imports from Russia will be most problematic. Over the medium term, increased integration into global trade and energy markets would help reduce the impact of shocks in any single trading partner (IMF, 2014, p.7). Furthermore, the Moldovan banking system is still heavily reliant on funding from Russian banks. A disruption of cross-bank funding between Russian and Moldovan banks could destabilize the already fragile banking system of the country. An embarrassment has been caused by a massive scandal threatening to destabilize the banking system in the country of 3.5 million people. The Central Bank of Moldova shed light on the disappearance of a billion dollars (12.5% of the country's GDP) involving the three banks Banca de Economii, Banca Sociala and Unibank that hold about a third of all bank assets of the country, including money for pension payments. The transactions allegedly happened just before the parliamentary elections in late November 2014. These adverse socio-economic factors and geopolitical uncertainty do not create favorable conditions for the growth of tourism in the Republic of Moldova. Yet, as we will see in Section 3, there might be a way out of this economic and geopolitical deadlock. Put differently, it might not be the end of History for tourism in Moldova.

A socially Inclusive Digital 2.0 Platform in the Field of Tourism

Moldova needs a truly transformational change if it is to overcome these challenges. Such a change cannot be achieved by any one actor. However, the role of the private sector is essential in driving development; this report argues that the private sector's contribution to economic growth, technological change and general welfare has yet to be fully harnessed in Moldova. As a matter of fact, the present era requires the enhancement of IT skills

The implementation of new information technologies, which is a true revolution in the contemporary evolutionary process of science, and includes nano and biotechnologies, television laser, optical and quantum computers, depends heavily on the quality of resources and knowledge of contemporary specialists. In this regard, graduates in science of the Free International University of Moldova (ULIM) and the Technical University of Moldova, are highly appreciated not only in the United States and Canada, but are given to employment opportunities in universities, businesses and companies intercontinental and especially in scientific research centers (International Conference of Rectors, Shanghai, 2011).

The Transformative Power of Tourism 2.0

In tourism 1.0 (the current scenario), the user books on the Internet a range of services (hotel, travel agency, cultural site, museum...) that will form the thrust of the touristic experience. Yet, as Edu (2010) has argued:

The tourism model 1.0 guarantees neither access by SMEs nor equality of conditions to maintain the same level of competitiveness. The tourism 1.0 model solves neither the problems of access to and transparency of information nor those of cooperation between businesses and destinations. The tourism 1.0 model does not incorporate knowledge transfer as a factor determining the productivity of destinations and enterprises.

Tourism 2.0 (the expected scenario) is a new agent-based infrastructure enabling the handling and the organization of tourism-related information by the user, the creation of innovative services, and the dynamic, adaptive, intelligent, and autonomous composition of tourism services. The architecture of the tourism 2.0 solution allows the integration of heterogeneous and distributed information sources as well as the interoperability among heterogeneous information systems. The guiding principle behind tourism 2.0 is to help the user access services and information over the Internet, through the use of smart mobile devices that evolve from being mere transmitter/receiver of information to full-fledged information-centric devices at the heart of a network containing active and pro-active elements. Tourism 2.0 is the business revolution in the tourism and leisure industry caused by the move to the tourist ecosystem as platform, and an attempt to understand the rules for success on that new platform. Chief among those rules is this: Build business and destinations that harness network effects to get more productive the more people and business participate them. So, "harnessing collective intelligence.

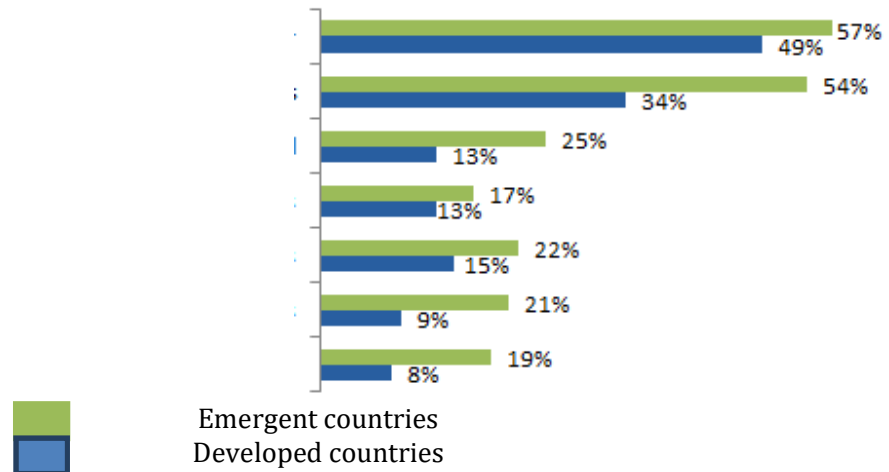
A Brief Outline of the Project

As shown on Figure 5 below, the Internet (whether it be websites consulted on a computer or on a smartphone), was the predominant mode of decision-making for tourists planning to visit an emergent country in 2012. It will come as no surprise that the Internet will be a market penetration strategy of choice to successfully conquer the e-tourism market in the Republic of Moldova.

Moldova Tours 2.0 is a start-up company in the field of tourism aimed at foreigners with a thematic approach to its product-offer, to take into account the aspirations and needs of visitors travelling to Moldova. Moldova Tours 2.0 is an online travel agency of a new kind that offers a blend of entry points to discover beautiful Moldova so as to fill your personal aspirations and objectives. It

offers thematic tours on a wide range of levels to ensure that the visitors' experience will be an unforgettable one for themselves, their friends, their family and their colleagues.

The main sources of decision-making to book a trip abroad



Source: PhoCusWright. Empowering Inspiration: The Future of Travel Search, février 2012

Highlights of Moldova Tours 2.0's product offer

The **monastery tour** is one of the highlights of the company's product offer. Notorious monasteries and churches in Moldova include Capriana Monastery, Hincu Monastery, Rudi Monastery, Saharna Monastery, Tipova Monastery, Curchi Monastery, Frumoasa Monastery, Cosauti Monastery, Japca Monastery, the Assumption of the Virgin Mary Church. The churches and monasteries represent the most valuable spiritual treasure of the republic, and remind us of the country's historical background. For the first-time visitor, a tour that includes short trips to the Moldovan monasteries will be a good choice for spending your time in a pleasant way. Capriana monastery is one of the oldest and beautiful monuments in the Republic of Moldova, the cradle of the Moldovan literature, music and architecture. Capriana Monastery is located in one of the most picturesque places of the Codry, about 40 km from Chisinau city, the oldest Moldovan monastery dates back to the early 1420s being initially built of wood. For a long time the monastery was the residence of the Metropolitan of Moldova, and it was patronized by many Rulers of Moldova including Stefan cel Mare himself. And it is known that the Moldovan State chronicler Eftimie as well as the first poet of Moldova Chiprian lived here. Saharna Monastery is situated about 110 km north of the Moldovan capital, the Holy Trinity Monastery of Saharna is considered to be one of the biggest centers for religious pilgrimages in Moldova. According to one of the local legends, one day a monk saw the shining figure of St. Maria on top of one of the highest rocks. When the monk reached the rock he discovered a footprint left by St. Maria on the ground. Frumoasa Monastery is a must-see in Moldova. The name "Frumoasa" in Romanian means "beautiful" due to the beauty of terrains and picturesque landscapes of surrounding vineyards, orchards and forests. Today it is a convent, though initially it was founded as a monastery. The monastery founders first lived in earth-houses, and worked at the construction of the church, built of wood all days long. Today, there is a museum opened in one of the restored buildings. Real rarities are held there: ancient church books and icons, spinning wheels and jugs. Tipova Monastery is located about 100 km to the north from Chisinau city on a rocky bank of the Dniester River represents a marvellous complex of historical monuments and natural landscapes

that affects by its pure beauty, it is an "isle" of the untouched nature of Moldova. A small Tipova River brings its waters to the Dniester River and forms several beautiful waterfalls of 10-16 meters height. There is a legend that the mythological poet Orpheus lived his last years in these rocks and the remains of the poet rest in the niche of one of the cascades gorge. The monastic community of the monastery was founded here before the creation of the Moldovan feudal state. The monastery complex consists of 15 caves on the dizzying height in the middle of a huge rock. An active monastery is located in the upper part of the complex, but the cave complex remains attractive for both pilgrims and tourists. Let us finish with Curchi Monastery founded in the times of Stefan Cel Mare. The monastery is made of three churches, one of them - the "Virgin's Assumption" Cathedral, is almost an exact replica of "St. Andrew" Cathedral in Kiev, built by the lay-outs of Bartolomeo Rastrelli. In all churches there is an amazing acoustics, and the voices of monks singing during the service, enshroud you in full, fascinate and make you forget about the vanity of life.

The **History Tour** will take you through the rich cultural heritage of great interest to tourists from the whole world. As many as 140 cultural heritage sites may be included in visits programmes. Points of interest include the earliest visible remains of the built heritage are Geto-Dacian sites and Roman fortifications, the remains of medieval fortresses, archaeological complexes such as Orheiul Vechi, cave monasteries, nobles' mansions and peasant houses offer a diversity of visitor attractions. Chisinau also features cultural heritage monuments that epitomize domestic architecture from the 19th and 20th centuries. The Republic of Moldova has 87 museums with rich collections of art. Additionally, museums are mostly housed in buildings of a special architectural importance. Notorious museums include "Alexei Mateevici" House & Museum, "Alexandr Pushkin" House & Museum, "Constantin Stamati" House & Museum, Igor Vieru House and Museum, Museum Complex "Old Orhei", National Museum of Ethnography and Natural History, National Archaeology and History Museum of Moldova, the Museum of Popular Art, National Gagauz history and ethnographic museum "Dumitru Cara-Ciobanu". The Republic of Moldova is definitely a mosaic of nationalities and cultures with many traditions, languages, folklore, cooking, etc. There are more than 880 folk music groups in the country, reflecting the distinct traditions of their districts and ethnic origins. The national craftsmanship supplies souvenirs for tourists. Moldova has made lots of progress in poverty alleviation over the last decade, and should be given credit for its accomplishments according to the International Monetary Fund and the World Bank. However, it is still the case that many people still live under the poverty threshold. Solidarity is paramount at Moldova Tours 2.0, but it is not pity or condescendence. The company wants to offer to its customers the possibility to make fully secured online donations to eminent grassroots-level NGOs through a payment platform managed from Luxemburg. In relation to the latter observation, Moldova Tours 2.0 offers a **social business tour** with visits guided by professionals in underprivileged areas of Moldova. The visits have nothing to do with voyeurism or ill-spirited intentions, but all the reverse, carry the hope that the social and development needs of Moldova will be better understood by foreigners in the future. For instance, on the occasion of the International Roma Day, visitors will get the chance to meet the Roma community in Moldova (through notably concerts and special cultural events), which is an integral part of Moldovan society and has long made important contributions to Moldova's history and culture. The **wine tour** will take you through the vineyards that constitute remarkable attractions of the Moldovan countryside. Throughout its History, Moldova has gained rich traditions of growing grapes and wine production. There are now 142 wineries in the Republic of Moldova, of which 23 have experience and tourism capabilities to receive visitors. Visitors will experience and learn about the complex wine-making processes, including the bottling and sample the end-product. Moldovan wine enjoys an excellent reputation internationally for its quality. As a wine country, Moldova Tours 2.0 offers visitors opportunities to select their favourite itineraries: underground cellars and towns, wine storage facilities, wine processing factories, production processes of sparkling wine, divin, heres, balsam, etc. Along with the vineyards that surround them into the tourist route "The Wine

Road in the Republic of Moldova", the wineries that include Cricova Winery, Milestii Mici Winery, Purcari Winery, Cojusna Winery, are an excellent reason to visit this beautiful country.

The **academic tour** is a stunning innovation offered by the 2.0 travel agency. The founder is temporarily evolving away from academia; he is connected to the Moldovan academic community. Visits in Moldovan Universities and academic events in English are offered with, in mind, future collaborative initiatives.

The **corporate tour** is designed for potential investors in Moldova. Knowing that the Moldovan workforce is young, skilled, dynamic and multilingual, we plan to offer to our clients in the future investment services (on a consulting basis) for these willing to expand their activities in this promising country.

Due to its favourable geographical position, Moldova is an attractive location for international organisations and transnational corporations, and becoming increasingly important as a place to conduct business between western and eastern markets (PwC, 2014, p.9). The corporate tour could become a flagship service offered by Moldova Tours 2.0 in the future on the doorstep of future foreign direct investment projects.

Summary of the benefits of the project

In the short-run, like all businesses, the primary financial management objective must be to breakeven. However, as part of a renewed conception of the firm that espouses the corporate social responsibility philosophy, Moldova Tours 2.0 is proud to set for itself some long-term aims that is to develop tourism in Moldova, and improve the global perception of the country abroad. Just like any business venture, Moldova Tours 2.0 must take cognizance of its environment, which certainly features some favourable characteristics, such as the pro-European policies adopted by the country since 2009. This pro-European stance is likely to be reinforced by the Association of Agreement signed in Vilnius in 2014. It is true that tourism is only embryonic in this post-soviet Republic and transition economy. Yet, increased attention is being placed on the Republic of Moldova by notorious tourist guides, such as Lonely Planet that voted it second country worldwide for off-the-beaten track destinations. The economy in itself has great potential, as shown respectively by the 8.9% and 4.6% growth rates achieved in 2013 and 2014. Unfortunately, the Moldovan economy is projected to suffer a slight recession in 2015 as a consequence of the Ukrainian crisis, and most of all, the Russian embargo bound to be detrimental to agriculture (BBC, 2015). Another encouraging sign is the improvement in the quality of the infrastructures, and the money recently invested by the European Investment Bank (2015, Internet). In spite of the Ukrainian crisis, there are valid reasons to be optimistic for this country, for instance, the fact that the improving quality of higher education constitutes an increasing source of skilled workers in the form of dynamic, motivated and multilingual graduates. One must further look at the drivers of growth for Moldova Tours 2.0, such as demographic changes, economic and legislative factors.

Macro and mezzo-economic benefits of this 2.0 digital initiative

These effects are uneasy to measure from a mere prospective standpoint, but one can envision the following benefits:

- Enhanced visibility of cultural sites in the Republic of Moldova (potential for larger inflows of foreign visitors) thanks to the History tour.
- Potential for social inclusiveness of the social business tour (active project management involving eclectic actors in rural areas often left aside or marginalized).

- The corporate tour can be a stepping stone for future FDI initiatives (FDI inflows in the Republic of Moldova)
- The academic tour should enable the cross-fertilization of ideas, and the development of new collaborative schemes between foreign academics, on the one hand, and Moldovan professors and higher education administrators on the other hand. Hopefully, this will contribute to the internationalization of the Moldovan higher education system, and eventually emphasize its newly established pro-European stance.
- We have in mind a geopolitical tour in Transnistria that could help raise awareness on the issues that pertain to this autarchic and separatist region of Moldova.

The Role of the Diaspora

In 1991, Moldova became an independent and sovereign state. Its citizens enjoy freedom of expression, to travel and explore the world. But a large number of Moldovans have left their homeland in search for a happier destiny. This mass of people scattered throughout the world, forms the "Moldovan Diaspora". Who are they, how many are, why have they left, what have they left behind them, and how rich of a heritage do they offer to their host country?

Throughout history, many Moldovans were forced to enter the diaspora, voluntarily for political, economic or social, spiritual or religious reasons. In recent years, the Moldovan Diaspora has widened noticeably, the list of Moldovans belonging to different social groups. There are no exact statistics reflecting the number of those who left "an estimated 300,000 to 600,000 Moldovans live outside of the country with remittances representing more than 30 per cent of GDP, making it one of Europe's most emigration affected countries"(Rusu, 2012, p.103). Rusu (ibid., pp.103-4) defines the diaspora as follows:

Diaspora population may consist of people living permanently in the country of origin or country of destination, and migrants who work abroad temporary, people who hold double citizenship, ethnic diaspora, citizens of the host country or second generation groups. In the contemporary context, with the acceleration in international mobility, the term diaspora has been used more broadly to encompass expatriate populations who are living outside of their home countries or contemporary diaspora linked with issues of transnationalism and globalization.

Their homeland being far away, Moldovans feel the need to create organizations designed to close and unite the Moldovan diaspora, strengthen its economic and spiritual potential, contribute to the effective integration of its members into society. Currently, the Moldovan Diaspora is well implanted in 31 countries of the world: Austria, Azerbaijan, Belarus, Belgium, Bulgaria, Canada, Estonia, France, Germany, Greece, Ireland, Israel, Italy, Kazakhstan, Kyrgyzstan, Latvia, Lithuania, Norway, Poland, Portugal, Czech Republic, Romania, Russia, Spain, USA, Sweden, Turkey, Ukraine and Hungary.

Public associations set up by Moldovans abroad aim to better organize the Diaspora structurally in order to support a new level integrating newcomers and those arriving earlier. This is part of their concerns to strengthen relationships between community members, through mutual aid, by initiating various activities, maintaining spiritual ties with the homeland. The Diaspora has great importance, and forms an adequate representation of Moldovans in dealing with government bodies and NGOs in countries of residence or in Moldova. Diaspora plays a major role in promoting a positive image of Moldova abroad. In this context it becomes particularly important effort to institutionalize the Moldovan diaspora, which has significant potential to contribute significantly for enhancing bilateral relations in various fields, to find ways to support their home country with all the experience gained abroad.

CONCLUSION

In this article, we have put into perspective the current configuration of the Republic of Moldova in the context of globalization. The Republic of Moldova is a particularly interesting country at the experimental level, due to its rich History and cultural heritage, and its complex geo-political environment. We have tried to outline the idiosyncratic features and the potential benefits of tourism 2.0 in this new configuration. Finally, we have put forward a concrete entrepreneurial project in the field of tourism 2.0, a start-up company named Moldova Tours 2.0. This experimental project at the crossroad between business venture and social entrepreneurship is expected to bring a set of benefits and the socio-economic level with the help of important stakeholders (NGOs, business partners, creditors, the State and society at large).

Through increased and multidimensional high-quality interactions between the Moldovan land, and people coming from all over the world, we believe that Moldova Tours 2.0 marks a significant step towards enhanced human, economic and social development of the Republic of Moldova in a globalized world.

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ENTREPRENEURIAL PROACTIVENESS, COMPETITIVE AGGRESSIVENESS AND PERFORMANCE AMONG SINGLE-UNIT SUPERMARKETS

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ABSTRACT

This study examines the relationship between the level of proactiveness (opportunity-seeking) and aggressiveness (advantage-seeking) in a firm's set of competitive behaviors in explaining performance among a sample of small, single-unit supermarkets over a two-year period. Drawing from and integrating corporate entrepreneurship and competitive dynamics, we predict that proactiveness positively relates to both subjective and objective measures of store performance. But, we also provide competing predictions as to how the proactiveness-performance relationship is either mediated or moderated by aggressiveness. Using structural equations modeling, we find strong support for the mediation model. More specifically, our results suggest that a firm's proactive, opportunity-seeking orientation is indeed an important antecedent of its ability to compete aggressively and only has indirect relationship with firm performance. As such, this study has important implications for advancing both theory and empirical research in strategic entrepreneurship, entrepreneurial orientation and competitive dynamics.

Keywords: Entrepreneurial Orientation, Competitive Dynamics, Strategic Entrepreneurship, Corporate Entrepreneurship, Proactiveness, Competitive Aggressiveness

JEL classification codes: L260, M190

INTRODUCTION

Researchers are increasingly interested in studying entrepreneurship as an organization-level phenomenon. Entrepreneurship is conceptualized as a process reflected in particular organizational strategies and systems, managerial practices, leadership styles, or collective entrepreneurial mindset that stimulate frequent discoveries of entrepreneurial opportunities (Lumpkin and Dess, 1996; Ireland, Hitt, and Sirmon, 2003). These organizational processes are manifest characteristics of organizations' entrepreneurial orientation that drive overt

entrepreneurial actions (Lumpkin and Dess, 1996). Such entrepreneurial activities, in turn, lead to sustained regeneration, organizational rejuvenation, strategic renewal, and redefinition of product markets and industries (Covin and Miles, 1999). It is therefore proposed that firms with entrepreneurial orientation will be able to systematically outperform rivals and gain superior performance.

In an ambitious essay, Lumpkin and Dess (1996) attempted to clarify the content domain of the entrepreneurial orientation (EO) construct. These authors defined EO as the methods, practices, and decision-making styles managers use to act entrepreneurially. In terms of relationships with organizational performance, two dimensions of EO — proactiveness and competitive aggressiveness — are particularly germane (Ferrier, 2001; Ferrier, Smith, and Grimm, 1999; Lumpkin and Dess, 2001).

Lumpkin and Dess (2001, p. 431) defined proactiveness as “an opportunity-seeking, forward-looking perspective involving introducing new products and services ahead of the competition and acting in anticipation of future demand to create change and shape the environment.” They defined competitive aggressiveness as “the intensity of a firm’s efforts to outperform industry rivals, characterized by a combative posture and a forceful response to competitor’s actions” (p. 431). Drawing on these definitions, they summarized the differences by stating that “proactiveness is a response to opportunities whereas competitive aggressiveness is a response to threats” (p. 434).

Although progress has been made in the study of EO dimensions and organizational performance in the past several years, much remains to be discovered about the relationships among proactiveness, competitive aggressiveness, and performance. Indeed, although research has demonstrated that proactiveness and competitive aggressiveness are distinct dimensions, little is known about the interplay between these dimensions in terms of predicting organizational performance. For example, Lumpkin and Dess (2001) argued that the relationship between proactiveness and competitive aggressiveness may be sequential and dynamic, but these authors gave somewhat contradictory descriptions of the nature of the interplay. On one hand, proactiveness may increase firms’ potential to identify opportunities for introducing new competitive actions (such as product or service improvements, developing creative advertising, or discovering more efficient ways of distributing goods); thus proactiveness may directly affect firms’ abilities to compete aggressively. In this sequential formulation, proactiveness affects performance via aggressive competitive behavior, and competitive aggressiveness serves as a partial mediator of the relationship. On the other hand, it is also possible that proactiveness and aggressiveness vary independently of each other and will interact in explaining firms’ performance. In this view, firms can gain superior performance when they simultaneously engage in proactive and aggressive competitive behavior. This implies that proactiveness and aggressiveness will have multiplicative (synergistic) effect on performance — beyond a mere additive effect. To our knowledge, tests of these alternative formulations have yet to appear in the literature.

Close examination of the interplay between these two dimensions is important for developing greater understanding of the recently developed concept of “strategic entrepreneurship” (Ireland, Hitt, and Sirmon, 2003). Ireland *et al.* (2003) conceptualized the entrepreneurial part of this concept as an opportunity-seeking activity and the strategic part as an advantage-seeking activity, which closely corresponds to the distinction between proactiveness and aggressiveness. Given the increased importance of integrating the research of entrepreneurship and strategic management for understanding why some firms are able to systematically outperform rivals and gain sustainable competitive advantages (Alvarez and Barney, 2004; Ireland, Hitt, Camp, and Saxton, 2002), our study provides new insights into the relationship between the entrepreneurial (opportunity-seeking) and strategic (advantage-seeking) components of the strategic entrepreneurship concept in a fiercely competitive, yet relatively understudied competitive context – single-store supermarkets.

Furthermore, given that proactiveness, together with risk taking and innovativeness, has been an essential dimension of corporate entrepreneurship research (Covin and Miles, 1999) and

that competitive aggressiveness has been a central concept in competitive dynamics research (Smith, Ferrier, and Ndofor, 2001), examination of the interplay between these two dimensions will contribute to extending the current research in both areas. A sequential relationship between these two dimensions will demonstrate that a proactive entrepreneurial posture is an important antecedent of competitive activity, whereas the interaction between proactiveness and competitive aggressiveness will reveal that these two dimensions have a contingent nature.

Finally, we know little about (a) how proactiveness and competitive aggressiveness relate to each other in service-based industries, and (b) how these two dimensions affect performance of small service-oriented firms. Given the substantial bias toward large public firms in competitive dynamics research (Smith, Ferrier and Ndofor, 2001), our study provides new evidence for the relationship between competitive aggressiveness and performance of smaller, service-based firms.

We begin by briefly elaborating on the conceptual foundations of proactiveness and competitive aggressiveness. We develop two alternative formulations (the mediation model and the moderating model) of the relationships between these dimensions and organizational performance. The alternative hypotheses are tested among a sample of single-unit supermarkets over a two-year period. We conclude by discussing the implications of this study for research and theory.

CONCEPTUAL FOUNDATION AND THEORY

Entrepreneurial Proactiveness and Competitive Aggressiveness

According to Lumpkin and Dess (1996), competitive aggressiveness and proactiveness are two related but independent dimensions of the higher order (latent) construct of entrepreneurial orientation. These authors referred to entrepreneurial orientation as all “the methods, practices, and decision-making styles managers use to act entrepreneurially” (p. 136). This construct is conceived as a purposeful enactment of entrepreneurial mindset, which is “reflected in a firm’s ongoing processes and corporate culture” (Dess and Lumpkin, 2005, p. 147). It “includes such processes as experimenting with promising new technologies, being willing to seize new product-market opportunities, and having a predisposition to undertake risky ventures” (Lumpkin and Dess, 1996, p. 136). Firms with entrepreneurial orientation are more successful in their efforts to identify and launch corporate ventures (Dess and Lumpkin, 2005). Lumpkin and Dess (1996) identified five related but independent dimensions of the EO construct: autonomy, innovativeness, risk taking, proactiveness, and competitive aggressiveness. Among these, our study examines the influences of proactiveness and aggressiveness on performance.

Lumpkin and Dess (2001, p. 431) defined proactiveness as “an opportunity-seeking, forward-looking perspective involving introducing new products and services ahead of the competition and acting in anticipation of future demand to create change and shape the environment.” Proactive organizations were seen as being characterized by their ability to be “quickest to innovate and first to introduce new products and services” (1996, p. 146). Within this research stream, it has been commonly accepted that proactiveness, along with innovativeness and risk taking, are the central elements of entrepreneurial orientation of firms and thus are considered to be the key internal organizational processes that drive entrepreneurial behavior (Covin and Miles, 1999).

Competitive aggressiveness is a widely recognized concept in competitive dynamics research and is generally defined as the volume, intensity, or total sum of competitive actions carried out by the firm in a given time period (Ferrier, 2001; Ferrier, Smith, and Grimm, 1999; Ferrier, MacFhionnlaioich, Smith and Grimm, 2002; Smith, Ferrier, and Ndofor, 2001). Although rarely empirically investigated as an independent dimension of entrepreneurial orientation, this definition of competitive aggressiveness is indeed consistent with the behavioral model of corporate entrepreneurship (Covin & Slevin, 1991; Zahra, 1993b). It is centered on the observation of the firm’s

newly created, externally directed, and observable competitive actions initiated to enhance its relative competitive position and can include a broad array of competitive strategies and tactics, such as new products, service, advertising, and price policy (Covin & Miles, 1999; Covin & Slevin, 1991; Smith, Ferrier, and Ndofor, 2001; Zahra, 1993a).

The Mediation Model

Proactive orientation can be an important antecedent of the firm's propensity to compete aggressively. We posit that proactive firms, compared with their less proactive rivals, will have *greater need* and *greater potential* for competing more aggressively. First, because firms that are proactive are more likely to discover and introduce innovative products and services ahead of competition, they more frequently gain first-mover advantages. However, creation of first-mover advantages does not automatically imply greater profits. First-mover advantages can be converted into profits only when the first-mover firms are able to sustain those advantages long enough to recover the cost of developing new products (Lieberman and Montgomery, 1988). This necessity, we argue, creates increased need for a firm to further enhance its advantages (e.g., by frequently introducing quality improvements or launching creative advertising and promotional campaigns to strengthen brand name) or to protect and sustain its advantages (e.g., by initiating deterrent actions such as building excess capacities, preemptively acquiring geographic locations, or offering price cuts to drive competitors from the market [Grimm, Lee, and Smith, 2006; Porter, 1985]). Consistent with this need-driven argument, Atuahene-Gima (1996) argued that brand new products and services are initially not closely compatible with customer preferences, and therefore firms must continuously adjust their product's characteristics to customers' specific needs. This necessity requires changing promotional approaches, launching new advertising campaigns, introducing several product versions, designing appropriate store displays, or creating new distributional approaches. This argument suggests that introduction of innovative products and services will produce increased need for more intensive competitive activity.

Second, frequent discoveries of new products also create a greater *potential* for firms to compete aggressively. Consider, for example, Dell's entrepreneurial discovery of an innovative distributional approach. At first, this efficient online distribution approach decreased Dell's inventory costs, which enabled Dell to introduce a PC that performed similarly to those of competitors but at a significantly lower price. More important, however, this entrepreneurial discovery enabled Dell to subsequently recognize several *additional* opportunities for outdoing their competitors by introducing more affordable LCD monitors, digital cameras, projectors, and printers. This series of new product offerings, along with various improvements such as introducing new versions, advertising intensively, and offering further sale incentives, enabled Dell to compete more aggressively and gain market share.

In addition, as Lumpkin and Dess (1996) argued, entrepreneurial orientation — and proactiveness as its vital component — reflects the managerial tendency to implement methods, practices, and decision-making styles that stimulate entrepreneurial initiative. This observation suggests that managers with proactive leadership styles may encourage formation of entrepreneurial culture or mindset that will permeate every level of the organizational hierarchy (Covin and Miles, 1999; Ireland, Hitt, and Sirmon, 2003; McGrath and MacMillan, 2000). This proactive mindset, we argue, creates enormous potential for a firm to compete aggressively. Because knowledge of particular circumstances of time and place is unevenly distributed across individuals (Hayek, 1948), ideas emerge from below for better, more creative, or more efficient ways of serving customers' needs. That is, innovations may be generated by middle managers, salespersons, or researchers who have "intimate knowledge of the market, the technologies involved, customers' needs, etc." (Stevenson and Jarillo, 1990, p. 24). Hence, firms with proactive leadership will make better use of such tacit

knowledge that their employees hold and therefore will have greater potential for frequently introducing innovative competitive actions.

Thus, we propose that proactive firms will have greater need and greater potential for competing aggressively in the market; therefore, proactiveness will be positively related to aggressiveness.

Hypothesis 1: Entrepreneurial proactiveness will be positively related to future competitive aggressiveness.

Previous research in competitive dynamics and entrepreneurial orientation has demonstrated that proactiveness and competitive aggressiveness are both positively related to firm performance. On one hand, research in competitive dynamics has provided substantial evidence that firms that compete more aggressively than rivals are able to gain market share and increase profits and stock price. Adopting the Austrian view of the market as a process of incessant discovery of better or cheaper ways of satisfying customers' needs and wants (Hayek, 1948; Kirzner, 1973; Mises, 1949), this research argues that firms that frequently surprise and overwhelm rivals with, for example, an intense attack consisting of many competitive actions, quick responses to competitors' attacks, and an unpredictable combination or sequence of competitive actions can sustain and enhance market position and earn above-average profits (Ferrier, 2001; Grimm, Lee, and Smith, 2006; Smith, Ferrier, and Ndofo, 2001). Overall, this empirical research has demonstrated that competitive aggressiveness – defined as the total number of newly created competitive actions initiated by a firm in a given year – positively affects its market share and profits (Ferrier, 2001; Ferrier, Smith and Grimm, 1999; Young, Smith, and Grimm, 1996).

On the other hand, research in corporate entrepreneurship has argued that the primary interest in studying entrepreneurial orientation is the proposition that entrepreneurship creates competitive advantage and superior performance (Covin and Slevin, 1991). Proactive orientation is characterized by managers' forward-looking *perspective* that results in introducing new products and technologies that shape the environment rather than reacting to competitors' actions (Lumpkin and Dess, 1996; Miller and Friesen, 1983). Alert firms that more frequently get a head start over competitors are expected to gain above-average profits (D'Aveni, 1994; Lieberman and Montgomery, 1988). Empirical research has provided substantial support for the relationship between both entrepreneurial orientation (as latent construct) and performance (Wiklund, 1999; Wiklund and Shepherd, 2003; Zahra, 1991) and proactiveness as a dimension of entrepreneurial orientation construct and firms' performance (Lumpkin and Dess, 2001).

Taken together, these findings suggest that competitive aggressiveness has a mediating effect on the relationship between proactiveness and firm performance. First, in Hypothesis 1, we argue that proactiveness will be positively related to aggressiveness. Second, the empirical evidence from entrepreneurship research has shown that a proactive perspective is positively related to performance. Third, research in competitive dynamics has shown that competitive aggressiveness is positively related to performance. Hence, we can expect that proactiveness will indirectly affect the firm's performance through its impact on competitive aggressiveness, and thus competitive aggressiveness will mediate the relationship between proactiveness and performance.

Hypothesis 2: Competitive aggressiveness will mediate the relationship between entrepreneurial proactiveness and organizational performance.

The Moderation Model

Alternatively, proactiveness and competitive aggressiveness may be two independent dimensions of the strategic behavior of firms. This means that different firms can exhibit different levels of proactiveness and competitive aggressiveness, which in turn can independently affect performance. Some firms may predominantly exhibit combative postures, characterized by

aggressively attacking rivals and quickly responding to their actions, without being overly proactive (Lumpkin and Dess, 2001). Other firms may put greater emphasis on discovering radically new products and technologies and thus avoiding direct competition with rivals. These firms may focus their capabilities on exploring new products, markets, and technologies and thus show that they tend to be market leaders who create change rather than responders who aggressively react to it.

When a firm pursues more proactive entrepreneurial behavior (relative to competitive aggressiveness), it may not be able to sustain first-mover advantages long enough to compensate for the heavy investment in research and development of new products and technologies. In line with this observation, March (1991, p. 71) argued that firms that “engage in exploration to the exclusion of exploitation are likely to find that they suffer the costs of experimentation without gaining many of the benefits.” Gupta, Smith, and Shalley (2006) argued that researchers hold a near consensus that firms must *balance* between *explorative* activities (i.e., commitment of resources to processes such as experimentation, search, and innovation, which lead to the creation of new technologies, new products/services, or discoveries of new markets) and *exploitative* activities (i.e., commitment of scarce organizational resources for refinements, improvements, or increased operational efficiency, which lead to continuous improvements of the existing technologies, products, and markets) (Benner and Tushman, 2002; Gupta, Smith, and Shalley, 2006; He and Wong, 2004; Levinthal and March, 1993; March, 1991). He and Wong (2004) provided empirical support for this so-called “ambidexterity” hypothesis, showing that when firms pursue both explorative and exploitative innovation strategy, they exhibit greater sales growth beyond the direct effects.

This literature suggests an alternative, moderating relationship between proactiveness and competitive aggressiveness. Different firms may exhibit various levels of proactiveness and aggressiveness, and only firms that intensively pursue both will outperform rivals. This perspective is consistent with Ireland, Hitt, and Sirmon’s (2003) model of strategic entrepreneurship. They argued that firms must be simultaneously engaged in opportunity-seeking and advantage-seeking behavior if they are to achieve superior performance. This conceptualization assumes that these two dimensions (a) vary independently, and (b) will have multiplicative (rather than additive) joined effects on performance. Hence,

Hypothesis 3: Entrepreneurial proactiveness and competitive aggressiveness will interact in predicting organizational performance, such that the positive relationship between proactiveness and performance will be stronger when firms subsequently exhibit high levels of competitive aggressiveness.

METHOD

Sample

Data were collected from a sample of single-unit supermarkets. We randomly selected 1,000 stores from the 2002 “single-unit” supermarket edition of the *Chain Store Guide*. After a letter and phone call to identify the key informant and encourage participation, we mailed a questionnaire to the store manager. Four to six weeks following the initial mailing, we mailed a letter encouraging participation and another copy of the questionnaire to store managers who had yet to return a completed questionnaire. A total of 320 questionnaires were returned—a 32% response rate. Two years later (*time 2*), a follow-up questionnaire was mailed to each store manager in conjunction with the distribution of an ongoing feedback process. A total of 135 follow-up questionnaires were returned—a 42% *time 2* participation rate and an overall 14% response rate. Archival performance data (store sales) that corresponded to the *time 1* and *time 2* questionnaire waves were obtained from the annual editions of the *Chain Store Guide* (2002 and 2004).

Measures

Entrepreneurial proactiveness (time 1). To measure proactiveness, we adapted the scale used in previous research (Covin and Slevin, 1989; Lumpkin and Dess, 2001; Miller and Friesen, 1983) to the context of the supermarket industry. Proactiveness was defined as an opportunity-seeking and forward-looking perspective that reflects firms' tendencies to be first on the market to offer new products or services. Accordingly, we measured this construct by asking managers to use a 5-point scale to indicate to what extent their store emphasizes the following approaches to gain competitive advantage: "being the first store in the market to offer a new product," "offering products that other grocery stores don't," "frequently trying out new ways of serving customers," "finding unique ways to serve customers better." The internal consistency reliability of this measure was .85.

Competitive aggressiveness (time 2). We measured competitive aggressiveness at the competitive action level. Two years following the first questionnaire, we sent the second questionnaire asking managers to report on a 5-point scale the extent to which they have made changes in the following areas: "increase of vendor allowances," "new advertising campaigns," "store expansions," "sales promotions (e.g., in-store demonstrations, coupons, etc.)," "renovations of the store interior," "renovations of the store exterior," "shelf space reallocations," "price reductions," and "new distribution methods." The responses to the above nine items were then averaged to compute the "competitive aggressiveness" index.

Store performance (time 2 and archival). We measured performance using both subjective and objective measures. First, similar to Lumpkin and Dess (2001), we obtained *subjective performance* by asking managers to report how well their store performed in the past year relative to (a) similar stores in their industry, (b) the store's past year performance, and (c) their expected (aspired) performance. The coefficient alpha for this measure was .82. Second, we calculated sales growth using sales data available in the *Chain Store Guide* for the two years corresponding to *time 1* (2002) and *time 2* (2004) of the questionnaire data collection. We computed sales growth rate as: Sales growth rate = [(Archival 2004 Sales – Archival 2002 Sales) / Archival 2002 Sales]

Control variables (time 1). We controlled for alternative explanations of our hypothesized relationship by including several potentially confounding variables. We controlled for *past performance* because previous research has found that past performance can influence subsequent competitive activity and performance (Ferrier, 2001). Past performance was measured at *time 1* by asking managers to rate on the scale 0–100 their store's overall (a) performance and (b) efficiency. In addition, we controlled for several organizational level variables that could affect supermarkets' performances. Prior research has suggested that *organizational size* is related to competitive aggressiveness and performance. For example, research has shown that larger organizations are more likely to initiate more competitive actions (Young, Smith, and Grimm, 1996), whereas smaller organizations do so with greater speed (Chen and Hambrick, 1995). We operationalized organization size by asking store managers to report the *number of employees*. In addition, we obtained an archival measure of *store size* reported in square feet and controlled for *organizational age* as reported in 2002 *Chain Store Guide* and *number of specialty departments* as reported by store managers. Previous research has shown that organizational age is related to both competitive aggressiveness and performance (Covin and Covin, 1990; Young *et al.*, 1996), whereas the number of specialty departments may directly affect a firm's sales as well as the need for frequently changing the venue such as the store's interior, exterior, and shelf-space allocation, or adding in-store demonstrations (i.e., increasing the need to initiate competitive actions). Finally, we asked managers to report the levels of organizational hierarchy (from the owner/general manager to the lowest level employee) to depict the degree of centralization and/or formalization of the reporting relationships within the organizational structure, which is shown to affect the organizational decision-making processes (Covin and Slevin, 1989; Eisenhardt and Zbaracki, 1992).

RESULTS

Response Bias Checks

To check for nonresponse bias, we compared the responding with nonresponding organizations on an array of variables available in the 2002 *Chain Store Guide* (organizational age, total square feet, sales, number of registers, and number of specialty departments). Following Shaw, Delery, Jenkins, and Gupta (1998), we used logistic regression and coded responding organizations, 1 and nonresponding organizations, 0. Only the number of specialty departments was significant in the equation, indicating that responding organizations had slightly more specialty departments. We included the number of specialty departments as a control variable in our multivariate analyses. In a second logistic regression, we compared organizations that participated in both waves ($N=133$; coded 1) with all other organizations from the initial sampling frame across the same array of variables from the 2002 *Chain Store Guide*. None of the variables was significant in the equation. In addition, because we collected data at two time points, we tested for a possibility of "selective attrition" of the firms in *time 2*. We coded organizations 1 if they participated in both waves and 0 if they participated only at Time 1 and regressed this variable on the control variables. None of the variables was significant in this analysis. In all, these tests showed little evidence that response bias affected our results.

Hypotheses Tests

We tested our hypotheses using a structural equation model. This model allowed us to increase validity and reliability of the two latent constructs (proactiveness and performance) and to more closely examine the direct and indirect effects of proactiveness and aggressiveness on firm performance in testing the mediation model.

Table 1 shows the correlation matrix and the descriptive statistics for all observed variables in the model. The supermarkets had approximately three organizational levels (store managers, middle managers, and entry-level employees). On average, across all supermarkets in our sample, the number of employees averaged 32; the square feet reported in each store averaged 13,482, and the number of specialty departments averaged 2.

Table 1: Descriptive statistics and correlations

	Mean	SD	1	2	3	4	5	6	7	8	9	10
1 Subjective Performance T2	5.00	1.02	1									
2 Subjective Performance T1	77.75	11.50	0.2708**	1								
3 Objective Performance (T2-T1)/T1	0.01	0.15	0.1501	-0.0481	1							
4 Proactiveness (Pro)	3.47	0.94	0.2680**	0.1875**	0.1282*	1						
5 Aggressiveness (Agg)	1.99	0.65	0.3689**	0.0122	0.2835**	0.2927**	1					
6 Organizational Levels T1	2.73	4.33	0.099	0.0378	0.0323	0.0077	0.0364	1				
7 Store Size T1	13482.78	7832.37	0.0963	0.1282*	0.1255*	0.1738**	0.0555	0.1439*	1			
8 Number of Departments T1	1.99	2.16	0.1771+	0.0565	0.0345	0.1784**	0.0354	0.0096	0.1610*	1		
9 Number of Employees T1	31.93	19.36	0.0909	0.0267	0.1311*	0.2522**	0.1438	0.2204**	0.5926**	0.2784**	1	
10 Organizational Age	32.72	20.53	-0.1789+	0.0661	0.041	0.1155+	-0.0059	-0.0002	0.1028	0.1105+	0.1689**	1
Ns = 125 to 267												
+ significant at 10% ; * significant at 5% ; **significant at 1%												

The measures of the same construct were highly correlated with one another. For example, the correlations among performance items ranged from .50 to .64, and the correlations among proactiveness items ranged from .55 to .66. This indicates convergent validity of the measures of our latent (underlying) constructs. Two other indicators provided further support for convergent validity of the measures. Tables 2 through 5 show that factor loadings were statistically significant ($p=.000$) and that they were greater than the minimum factor loading of .71. Variance extracted for

proactiveness and performance, was above the rule of .5 (the variance explained by the factor, which is computed as the average of the squared standardized factors loadings). Finally, the variance extracted for each factor was higher than any path coefficient in the structural model (Figure 1), providing support for discriminant validity of the constructs (i.e., the latent construct explains its own items better than it explains any other construct). The above analysis also suggested that the relationships between our variables were not because of the so-called "common source bias." Nevertheless, we also applied Harman's one-factor test, which indicated no presence of common source bias (Podsakoff and Organ, 1986).

Hypothesis 1 proposed that proactiveness will be positively related to competitive aggressiveness of firms two years later. Model 2 in Table 1 and Model 4 in Table 3 show that the standardized coefficients of proactiveness were positive and statistically significant (.29; $p > .003$ and .27; $p > .006$) in predicting competitive aggressiveness, providing support for Hypothesis 1. Hypothesis 2 proposed that competitive aggressiveness will mediate the effect of EO dimensions on future performance. Table 2 shows the results for subjective performance and Table 3 for objective performance.

Table 2: Mediation model with subjective performance

Model 1					
MEDIATION MODEL WITH SUBJECTIVE PERFORMANCE AND NO AGGRESSIVENESS		Regression Weights	Standard Error	P-value	Standardized Regression Weights
Subjective Performance	<--- Proactiveness	0,3430	0,1210	0,0040	0,2840
Proactiveness (item 1)	<--- Proactiveness	1,0000	-	-	0,7480
Proactiveness (item 2)	<--- Proactiveness	1,1050	0,0870	0,0000	0,8360
Proactiveness (item 3)	<--- Proactiveness	0,8890	0,0750	0,0000	0,7690
Proactiveness (item 4)	<--- Proactiveness	1,0610	0,0900	0,0000	0,7660
Performance (item 1)	<--- Subjective Performance	1,0000	-	-	0,8150
Performance (item 2)	<--- Subjective Performance	0,7510	0,1120	0,0000	0,6640
Performance (item 3)	<--- Subjective Performance	0,9310	0,1250	0,0000	0,7780
Subjective Performance	<--- Organizational Levels	0,0580	0,0220	0,0080	0,2410
Subjective Performance	<--- Store Size	0,0000	0,0000	0,8070	0,0230
Subjective Performance	<--- Number of Departments	0,0600	0,0440	0,1720	0,1240
Subjective Performance	<--- Number of Employees	-0,0010	0,0050	0,8370	-0,0190
Subjective Performance	<--- Organizational Age	-0,0130	0,0050	0,0040	-0,2640
Subjective Performance	<--- Past Performance	0,0240	0,0080	0,0040	0,2640

Model 2					
MEDIATION MODEL WITH SUBJECTIVE PERFORMANCE AND AGGRESSIVENESS		Regression Weights	Standard Error	P-value	Standardized Regression Weights
Aggressiveness	<--- Proactiveness	0,2180	0,0750	0,0030	0,2910
Subjective Performance	<--- Aggressiveness	0,5550	0,1490	0,0000	0,3350
Subjective Performance	<--- Proactiveness	0,2020	0,1160	0,0810	0,1630
Proactiveness (item 1)	<--- Proactiveness	1,0000	-	-	0,7480
Proactiveness (item 2)	<--- Proactiveness	1,1010	0,0860	0,0000	0,8330
Proactiveness (item 3)	<--- Proactiveness	0,8880	0,0750	0,0000	0,7690
Proactiveness (item 4)	<--- Proactiveness	1,0630	0,0890	0,0000	0,7680
Performance (item 1)	<--- Subjective Performance	1,0000	-	-	0,8140
Performance (item 2)	<--- Subjective Performance	0,7690	0,1060	0,0000	0,6840
Performance (item 3)	<--- Subjective Performance	0,9520	0,1150	0,0000	0,7960
Subjective Performance	<--- Organizational Levels	0,0870	0,0210	0,0000	0,3540
Subjective Performance	<--- Store Size	0,0000	0,0000	0,6140	0,0420
Subjective Performance	<--- Number of Departments	0,0670	0,0410	0,0980	0,1370
Subjective Performance	<--- Number of Employees	-0,0040	0,0040	0,3880	-0,0700
Subjective Performance	<--- Organizational Age	-0,0130	0,0040	0,0040	-0,2440
Subjective Performance	<--- Past Performance	0,0240	0,0080	0,0020	0,2630

Table 3: Mediation model with objective performance

Model 3						
MEDIATION MODEL WITH OBJECTIVE PERFORMANCE AND NO AGGRESSIVENESS			Regression Weights	Standard Error	P-value	Standardized Regression Weights
Objective Performance	<---	Proactiveness	0,0210	0,0120	0,0790	0,1150
Proactiveness (item 1)	<---	Proactiveness	1,0000	-	-	0,7450
Proactiveness (item 2)	<---	Proactiveness	1,1050	0,0870	0,0000	0,8330
Proactiveness (item 3)	<---	Proactiveness	0,8960	0,0750	0,0000	0,7720
Proactiveness (item 4)	<---	Proactiveness	1,0680	0,0900	0,0000	0,7680
Objective Performance	<---	Organizational Levels	0,0000	0,0020	0,9030	0,0070
Objective Performance	<---	Store Size	0,0000	0,0000	0,2700	0,0680
Objective Performance	<---	Number of Departments	-0,0010	0,0040	0,8210	-0,0140
Objective Performance	<---	Number of Employees	0,0010	0,0000	0,2680	0,0670
Objective Performance	<---	Organizational Age	0,0000	0,0000	0,8500	0,0120

Model 4						
MEDIATION MODEL WITH OBJECTIVE PERFORMANCE AND AGGRESSIVENESS			Regression Weights	Standard Error	P-value	Standardized Regression Weights
Aggressiveness	<---	Proactiveness	0,2050	0,0740	0,0060	0,2710
Objective Performance	<---	Aggressiveness	0,0670	0,0210	0,0020	0,2830
Objective Performance	<---	Proactiveness	0,0070	0,0130	0,5970	0,0380
Proactiveness (item 1)	<---	Proactiveness	1,0000	-	-	0,7460
Proactiveness (item 2)	<---	Proactiveness	1,1030	0,0870	0,0000	0,8330
Proactiveness (item 3)	<---	Proactiveness	0,8930	0,0750	0,0000	0,7710
Proactiveness (item 4)	<---	Proactiveness	1,0670	0,0900	0,0000	0,7690
Objective Performance	<---	Organizational Levels	0,0000	0,0020	0,8480	0,0110
Objective Performance	<---	Store Size	0,0000	0,0000	0,2140	0,0750
Objective Performance	<---	Number of Departments	0,0000	0,0040	0,9570	-0,0030
Objective Performance	<---	Number of Employees	0,0000	0,0000	0,4020	0,0500
Objective Performance	<---	Organizational Age	0,0000	0,0000	0,7480	0,0190

Model 1 in Table 2 shows that the coefficient of proactiveness was positive and statistically significant in predicting subjective performance (standardized coefficient $b = .28$; $p > .004$). Model 2 in Table 2 shows that proactiveness was positively related to aggressiveness ($b = .29$; $p > .003$). Furthermore, competitive aggressiveness in Model 2 positively affected subjective performance ($b = .335$; $p > .0001$). Finally, a comparison of the coefficients of proactiveness in Models 1 and 2 (see also Figure 1) indicated that once we controlled for competitive aggressiveness, the effect of proactiveness on performance became insignificant ($b = .28$; $p > .163$). These results provided strong support for Hypothesis 2. The effect of proactiveness on performance was fully mediated by competitive aggressiveness. Total effect of proactiveness on performance was composed of direct effect of .163 and indirect effect via aggressiveness of .0986, which indicated effect ratio of .38 (38% of the total effect was mediated by aggressiveness). Hypothesis 2 was further corroborated using objective measure of firms' performance in Models 3 and 4 in Table 3. First, the coefficient of proactiveness in Model 3 was positive and marginally significant ($b = .115$; $p > .079$). (We used the more conservative two-tailed critical values for testing significance of the coefficients, so we considered this level of significance to be sufficient for inferring positive relationship between proactiveness and objective performance). However, once we entered aggressiveness into Model 4, the coefficient of proactiveness in predicting sales growth rate became insignificant ($b = .038$; $p > .59$), whereas the coefficient of aggressiveness was still significant in predicting objective performance ($b = .28$; $p > .002$). This again provided support for the mediation model proposed in Hypothesis 2. Figures 1 and 2 illustrate the mediation role of competitive aggressiveness on the relationship between proactiveness and both subjective and objective performance.

Figure 1: Mediation models with subjective performance

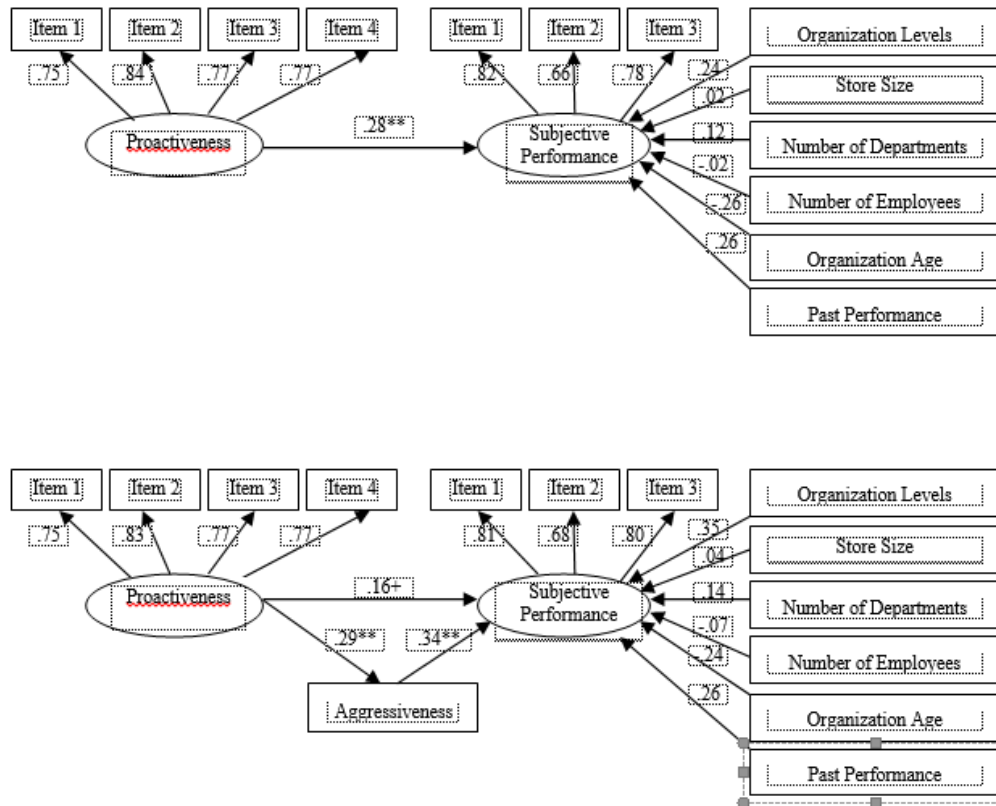
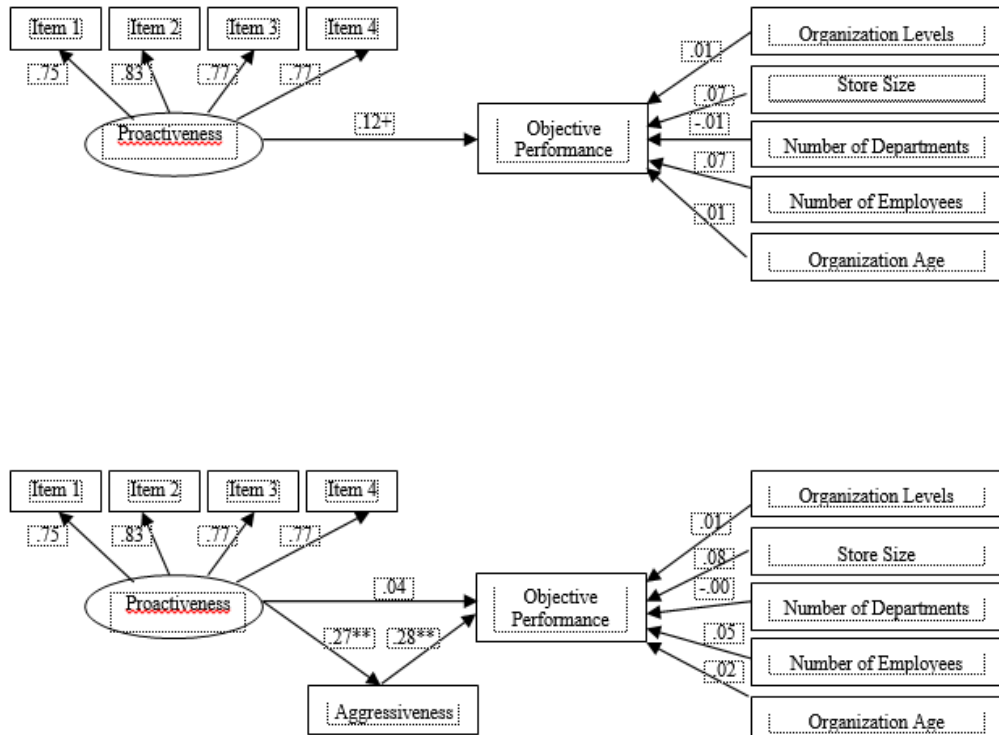


Figure 2: Mediation models with objective performance



The overall model fit statistics for both Models 2 and 4 (CFI=.764 (.744), NFI=.707 (.707), RMSEA=.095 (.118) and $\chi^2 = 260.693$ (206.048) df= 75 (43)) indicated poor fit with the data. However, when we dropped the control variables whose coefficients were not significant, our models showed a good fit with the data (e.g., Model 2 fit statistics: CFI=.98; NFI=.92; RMSEA .032 and $\chi^2 = 54.012$; df= 42 (p>.10)).

Hypothesis 3 stated that proactiveness and aggressiveness will interact in explaining firm performance. Tables 4 and 5, respectively, show the effect of the interaction between proactiveness and aggressiveness on subjective and objective measures of performance. (We standardized competitive aggressiveness and the items of proactiveness before constructing the product terms to reduce the multicollinearity problem.) In both models the standardized coefficients of the latent construct of the interaction term (Proactiveness X Aggressiveness) were not significant (b=.09; p>.30 for subjective performance and b=-.05; p>.55 for objective performance). Thus, Hypothesis 3 was not supported.

Table 4: Moderation model with subjective performance

MODERATION MODEL WITH SUBJECTIVE PERFORMANCE		Regression Weights	Standard Error	P-value	Standardized Regression Weights
Subjective Performance	<--- Aggressiveness	0.3250	0.0910	0.0000	0.3150
Subjective Performance	<--- Proactiveness	0.2520	0.1270	0.0480	0.1830
Subjective Performance	<--- Interaction (Latent)	0.0980	0.0950	0.3020	0.0920
Proactiveness (item 1)	<--- Proactiveness	1.0000	-	-	0.7470
Proactiveness (item 2)	<--- Proactiveness	1.1180	0.0880	0.0000	0.8350
Proactiveness (item 3)	<--- Proactiveness	1.0320	0.0870	0.0000	0.7710
Proactiveness (item 4)	<--- Proactiveness	1.0250	0.0870	0.0000	0.7660
Performance (item 1)	<--- Subjective Performance	1.0000	-	-	0.8110
Performance (item 2)	<--- Subjective Performance	0.7570	0.1110	0.0000	0.6650
Performance (item 3)	<--- Subjective Performance	0.9360	0.1210	0.0000	0.7790
Proact_1 X Aggress	<--- Interaction (Latent)	1.0000	-	-	0.8440
Proact_2 X Aggress	<--- Interaction (Latent)	1.1380	0.0800	0.0000	0.9660
Proact_3 X Aggress	<--- Interaction (Latent)	0.9630	0.0800	0.0000	0.8720
Proact_4 X Aggress	<--- Interaction (Latent)	0.9630	0.0810	0.0000	0.8680
Subjective Performance	<--- Organizational Levels	0.0800	0.0210	0.0000	0.3380
Subjective Performance	<--- Store Size	0.0000	0.0000	0.6370	0.0410
Subjective Performance	<--- Number of Departments	0.0660	0.0410	0.1090	0.1370
Subjective Performance	<--- Number of Employees	-0.0030	0.0040	0.5230	-0.0540
Subjective Performance	<--- Organizational Age	-0.0130	0.0040	0.0040	-0.2520
Subjective Performance	<--- Past Performance	0.0230	0.0080	0.0030	0.2570

Proactiveness and aggressiveness standardized

Table 5: Moderation model with objective performance

MODERATION MODEL WITH OBJECTIVE PERFORMANCE		Regression Weights	Standard Error	P-value	Standardized Regression Weights
Objective Performance	<--- Aggressiveness	0.0490	0.0130	0.0000	0.3280
Objective Performance	<--- Proactiveness	0.0160	0.0130	0.2350	0.0760
Objective Performance	<--- Interaction (Latent)	-0.0090	0.0140	0.5540	-0.0540
Proactiveness (item 1)	<--- Proactiveness	1.0000	-	-	0.7460
Proactiveness (item 2)	<--- Proactiveness	1.1180	0.0880	0.0000	0.8330
Proactiveness (item 3)	<--- Proactiveness	1.0360	0.0870	0.0000	0.7720
Proactiveness (item 4)	<--- Proactiveness	1.0300	0.0870	0.0000	0.7680
Proact_1 X Aggress	<--- Interaction (Latent)	1.0000	-	-	0.8450
Proact_2 X Aggress	<--- Interaction (Latent)	1.1370	0.0800	0.0000	0.9660
Proact_3 X Aggress	<--- Interaction (Latent)	0.9630	0.0800	0.0000	0.8720
Proact_4 X Aggress	<--- Interaction (Latent)	0.9620	0.0810	0.0000	0.8670
Objective Performance	<--- Organizational Levels	0.0000	0.0020	0.8740	0.0090
Objective Performance	<--- Store Size	0.0000	0.0000	0.1930	0.0780
Objective Performance	<--- Number of Departments	0.0000	0.0040	0.9190	-0.0060
Objective Performance	<--- Number of Employees	0.0000	0.0000	0.4570	0.0440
Objective Performance	<--- Organizational Age	0.0000	0.0000	0.7850	0.0160
Proactiveness and aggressiveness standardized					

DISCUSSION

In this paper we test two alternative explanations of the relationship between proactiveness and competitive aggressiveness in predicting firms' performance. Our findings provide support for the mediation model, showing that proactiveness affects performance through its positive impact on competitive aggressiveness. More specifically, we find that firms with forward-looking perspectives – whose managers relentlessly search for opportunities to “surprise” rivals with new products and services – have greater need and potential to compete aggressively. We argue that proactive firms have greater *need* to compete aggressively because (a) proactive orientation often requires a large investment in experimentation and market research, which can lead to financial loss unless firms compete aggressively to sustain the first-mover advantages long enough to make profits, and (b) new products are not initially closely compatible with customer wants, which creates a necessity to introduce competitive actions for further adjustment to specific customer preferences. Furthermore, proactiveness creates greater *potential* for firms to compete aggressively because (a) it creates an entrepreneurial mindset that stimulates the idea-generation process at every level of organizational hierarchy, and (b) innovative products and technologies open new opportunities for incremental improvements of product and service offerings.

To illustrate, consider how Tesco's proactiveness led to an entrepreneurial discovery that increased its potential for competing aggressively. Tesco PLS is well known for its relentless search for information about specific customers' needs and wishes. Tesco's proactive approach enabled the company to recognize that Asian herbs, cooking oil, and other ethnic foods are demanded in neighborhoods where many Indians and Pakistanis live. Once Tesco recognized this opportunity, the company introduced new advertising for a specific target audience, entered new market segments (affluent white customers), and offered sales promotions, which increased Tesco's market share in the United Kingdom (Rohwedder, 2006).

Our study finds no support for the moderating model. Proactiveness and competitive aggressiveness are not independent dimensions that interact in explaining superior performance. We find that proactiveness causes aggressiveness, and thus these two concepts do not vary independently. When proactiveness increases, firms exhibit more aggressive competitive behavior. This finding, however, must be interpreted within the context of supermarkets or perhaps more generally within service-oriented industries. Compared with firms in the manufacturing sector, service-oriented firms have little purposeful investment in research and development of new products or technologies. Because entrepreneurial and strategic activities are not separated, proactive orientation stimulates increased alertness to opportunities for new ways of satisfying customers (Kirzner, 1973, 1979). Our study suggests that proactive entrepreneurial orientation is mostly reflected in small incremental recognitions of opportunities for better serving customer wants, which in turn lead to increased intensity of new competitive-action initiations. We encourage future research to explore this relationship in more R&D-intensive industries. In such environments, firms may frequently disrupt the market by frequently developing radically new technologies, products, and services, thus avoiding direct competition with rivals (and being less competitively aggressive).

Our study attempts to accomplish greater empirical integration of the research in the entrepreneurship and strategic management areas. Ireland, Hitt, and Sirmon (2003) argued that firms must engage in *strategic entrepreneurship* if they are to succeed in today's highly volatile environments. Strategic entrepreneurship refers to "the integration of entrepreneurial (i.e., opportunity-seeking actions) and strategic (i.e., advantage-seeking actions) perspectives..." (Hitt, Ireland, Camp, and Saxton, 2002: 2). Hitt *et al.* (2002) argued that entrepreneurial actions enable firms to identify new opportunities for establishing competitive advantages, whereas strategic actions help firms develop and exploit current competitive advantages. Proactive orientation in this respect enables firms to more frequently discover opportunities for creating new competitive advantages, whereas aggressiveness represents the "strategic" part of the strategic entrepreneurship concept, which is needed to exploit or appropriate the value created by the entrepreneurial actions. Once a new product or service is introduced, firms attempt either to protect the first-mover advantages (e.g., by initiating price cuts or intensive advertising), or to further extend those advantages (e.g., by aggressively improving or updating existing products and services). Our study demonstrates that in service-based industries, proactive (opportunity-seeking) orientation is an important driver of firms' abilities to extend their current competitive advantages. Firms with forward-looking and opportunity-seeking orientation have greater capacity and propensity to intensively attack rivals with many competitive actions. Hence, our results suggest that strategic entrepreneurship is a *sequential* process in which proactiveness stimulates competitive aggressiveness, which in turn leads to increased performance.

This process of increased performance also suggests that competitive aggressiveness can be regarded as an independent concept distinct from the other EO dimensions. It refers more to the exploitative, advantage-enhancing, and strategic behavior of firms that may not be driven by innovation. Given that innovation is a central component of the corporate entrepreneurship concept (Covin and Miles, 1999), a firm may exhibit highly aggressive competitive behavior (e.g., by frequently introducing price reductions, offering sale incentives, or launching aggressive advertising) without being innovative, which is not a characteristic of entrepreneurial firms. However, the entrepreneurial orientation is critical for aggressive competitiveness because it stimulates frequent recognition for new opportunities for launching competitive actions. Although our findings provide support for only one dimension of EO construct—proactiveness, we reason that the other two dimensions, innovativeness and risk taking, will also affect competitive aggressiveness. A firm that is innovative may discover new opportunities not only for introducing radically new products and services, but also for developing incremental improvements of production processes and existing products and services. Because these small and incremental value-enhancing actions are more

frequent (compared with the introduction of radically new products), it is reasonable to expect that innovative firms will have greater potential for competing more aggressively. Similarly, risk-taking encourages experimentation with new competitive actions, which again increases the overall intensity of initiating new competitive actions. We encourage future research to empirically investigate how each EO dimension relates to competitive aggressiveness, whether dimensions have different effects on competitive aggressiveness, and whether these relationships vary across different industries.

The above discussion also suggests that the models examining the relationship between proactiveness, innovativeness, and risk taking on one hand and performance on the other may be underspecified. If our results are found to be generalizable across different industry contexts, then it is possible the observed positive relationship between EO dimensions and performance is because of the mediating effect of competitive aggressiveness that is not included in the model (i.e., omitted variable bias). Our study indicates that future research should incorporate competitive aggressiveness in the corporate entrepreneurship–performance models.

Our study extends the current research in the competitive dynamics area in two important aspects. First, although previous researchers have explored the effect of several organizational level variables (organizational age and size, market dependence, past performance, slack resources, and top management team characteristics), and industry level variables (industry growth, concentration, barriers to entry, and inter-firm coordination) on competitive activity (Smith, Ferrier, and Ndofor, 2001), it is still relatively underexplored as to how entrepreneurial orientation affects the propensity to compete aggressively. Our study provides evidence that proactive orientation is an important driver of competitive activity. As such, our findings are consistent with and provide support for the emerging awareness-motivation-capability framework of competitive strategy (Chen, 1996; Chen, Su, and Tsai, 2007). Here, it seems apparent that entrepreneurial proactiveness is related to the firm's awareness of the need to carry out aggressive competitive action, as well as the firm's motivation and capability to do so. Second, Chen and colleagues' research on the airlines industry notwithstanding, the bulk of recent empirical research in competitive dynamics has focused on large public companies, predominantly from the manufacturing sector (see Smith, Ferrier and Ndofor, 2001). By contrast our study runs counter to this bias by providing support for the positive relationship between competitive aggressiveness and performance in the context of relatively small firms competing in service-based competitive environments.

To make these contributions we had to approach the operationalization of our variables differently from common practices followed in competitive dynamics research. We used questionnaires to collect self-reported data from a single key informant—the store manager. Gerhardt, Wright, McMahan, and Snell (2000) have argued that a single key informant may not provide reliable information, especially when organizations are large, complex, and consist of many divisions and business units. Gerhardt *et al.* (2000) showed that including several informants can substantially increase the reliability of the measures (far more than adding more items, for example). We believe our study minimizes these concerns because (a) we focused on a sample of relatively small organizations (single-store supermarkets), and (b) our key informants were the store managers who have authority and knowledge to provide accurate and reliable information about their entrepreneurial orientation and their competitive activity.

Another limitation of our study may be that we collected managers' self-reported data on both of our main constructs: proactiveness and aggressiveness. This can create a problem of so-called "common source bias," which could inflate the observed relationships between our variables. Although our longitudinal design significantly reduces the impact of this issue as well as that the single-factor test indicates no presence of common source bias, the content analysis of published news articles as source of competitive actions data (used predominantly in competitive dynamics research) would clearly provide more objective data (in terms of independence from the subjects under study) on competitive activity of firms. However, despite this advantage, content analysis of

published news articles also limits researchers to focusing on a sample of large corporations for which data on competitive activity is publically available. To our knowledge, our study is among the first to examine how competitive aggressiveness exhibited by small organizations is related to performance in service-based competitive environments.

In addition, most of the research in the competitive dynamics area measures the number and the type of competitive actions rather than the actual extent of each action (e.g., a firm can offer a price cut ranging from 5% to 50%, or distribution channels can be slightly modified or completely restructured, which can have substantially different impacts on performance). Our measure of competitive aggressiveness incorporates both the number of actions and the magnitude of competitive actions, which we believe more accurately captures both competitive aggressiveness of firms and the impact of firms' competitive actions on competitors.

CONCLUSION

Our study extends the previous research in the areas of corporate entrepreneurship, competitive dynamics, and strategic entrepreneurship. Our longitudinal study shows that in service-based industries a proactive entrepreneurial orientation is an important antecedent of the intensity with which firms initiate competitive actions. Firms that continuously seek to discover products and services ahead of competitors compete more aggressively to either extend their first-mover advantages or to fiercely protect those advantages. Furthermore, we find evidence that proactiveness indirectly affects both objective and subjective performance through its impact on competitive aggressiveness. Our study demonstrates that a substantial portion of the effect of proactiveness on organizations' performance is mediated by the intensity with which a firm initiates competitive actions. This suggests that current models that examine the relationship between EO dimensions and performance may be underspecified because a relevant variable is excluded: competitive aggressiveness. In addition, the supporting evidence for the mediation model indicates that the entrepreneurial and the strategic component of the construct of strategic entrepreneurship are sequential; increased "opportunity-seeking" behavior leads to greater intensity of "advantage-seeking" competitive actions, which in turn positively affects performance. Finally, to our knowledge our study is among the first to demonstrate empirical support for the relationship between competitive aggressiveness and performance in small and service-oriented firms.

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ADVANCED METHODS FOR MANAGING THE ORGANIZATIONAL DEVELOPMENT

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ABSTRACT

In the contemporary tendencies of a vast scope and character of enterprises, one of the most intriguing managerial attempts is undoubtedly the strive for creating and maintaining a model of organizational development which would enable an optimal allocation of their resources and capabilities in accordance with the achieved degree of leaders and business development, on one side, and making an effective usage of the mindfulness leading to enhanced business preparation for a change continuity, on the other. The profound enterprise orientation for planned and continuous organizational changes, as a prior condition for managerial attempt to achieve the maturity degree of organizational development, relates to the specific phase of the life cycle of the analyzed product/service, process, structure and values encompassed within the prevalent vision, as well as to changing the vital business determinants, oriented towards the ongoing business developmental reorientation. An appropriate position and potential of organizational resilience in practice leads to increasing the capacity of organizational interventions within organizational development, which in return creates a business environment for their leaders' development of a dynamic competitive advantage, as well as for anticipating and solving periods of organizational crisis. The process of managing organizational development, in fact, leads to establishing and further developing a method, technique or model able to integrate the changes within the employees, strategy, structure, leadership and environment, towards the selected objectives, all of them harmonized on individual, group/team, organizational and environmental business change level.

Keywords: Organizational development, mindfulness, organizational resilience and OD interventions

JEL classification codes: M10, M13

LITERATURE OVERVIEW

The modern theory of Organizational Development (OD) emerged predominantly from the strive for a more thorough and inter-related approach in managing the focused and constrained tendency for simultaneously creating and further maintaining organizational health and, particularly, the effectiveness of its processes.

In such context, initial attempts have been made within the *traditional OD approach* (Herzberg, Maslow, Harris, Argyris, Lewin, Beckhard etc.) shifting the dominant focus from creating groups and teams to determining the benefits that derive from the action research concept and the very survey feedback (Whyte, Likert etc.). The intentions of this *traditional OD approach* have been advancing *inter-personal relationships and group dynamics*, developing the most appropriate model of leadership, as well as individual achievements and the creation of sufficiently new knowledge.

The continuation in the OD theory's development has led to entering the *second OD phase*, in which various fields, such as participative management, productivity and quality of work-life (Likert, Trist, Deming etc.), were considered as most influential in treating human resources as the key internal resource, especially with its potential for enriching the majority of employees from the creative business units, focusing on managerial dimensions such as inclusive intra-relations, quality circles, self-managed groups and teams, as well as the adoption of technologies in accordance with human potential, and not vice versa. In the *latter analyses of this second OD phase*, the issue of strategic change and choice has emerged (Worley, Beckhard, Harris etc.), in order to strategically position and re-position the firm within the externally determined technical, political, cultural and environmental business constraints. In detailing such OD second phase research focus, we would best illustrate its fundamental characteristics (Beckhard, 1969), determined as following:

- *"It is planned and involves a systematic diagnosis of the whole organizational system, a plan for its improvement, and provision of adequate resources,*
- *The top of the organization is committed to the change process,*
- *Whether it may be a top-down process in terms of the way it is culturally introduced and strategically organized, it may imply a bottom-up process wherein human resources are all involved and committed to achieve constant change,*
- *It aims at improving the effectiveness of the organization in order to help to achieve its mission,*
- *It is a medium- long-term process, typically taking not less than 2-3 years to achieve strategic change,*
- *It requires a modern and dynamic mindset that is typically brought by organizational leaders, who are carriers of such culture and mentality,*
- *It is action-oriented,*
- *It is achieved through people's empowerment and full commitment to the organization's goals,*
- *Changing attitudes and behavior is a focus of the change effort,*
- *Experiential-based learning is important as it helps to identify current behaviors and needed modifications,*
- *Groups and teams form the key focus for change".*

It seems evident that this second OD phase may rather be considered as a preparing concept for the '*entire and inter-related treatment of employees*', a managerial dilemma that is crucial to OD theorists and practitioners, while entering in the *third OD stage*. The most prevalent interest in this phase is the excessive usage of organizational culture as a source of competitive advantage (Schein, Douglas, Hofstede, Seel etc.), as well as modifying organizational behavior with the concepts of motivation, reward and learning (Wilson, Bak, Litwin etc.), initially aimed at reducing the scope and application of the strict understanding of the procedures, rules, policies etc., as the restricted areas of development, and more profoundly determining the changes from the '*inner business capacities*', like organizational change, culture, values, enabling the usage of OD practitioners and consultants (Nicholl, Burke etc.), change simulations and interventions etc.

In the *third stage*, the most challenging dimension for behavioral development is empowering in order to achieve simultaneous advancements at both individual and organizational level. We refer to a managerial moment that best illustrates the necessity for achieving both internal integration and external adaptation, as a pre-condition for an effective organizational change. Therefore, in such developmental phase, the utmost challenge for OD practitioners would be illustrated through the *dominant OD orientations towards managers* (Gelinas and James, 1999), on the following way:

1. *"To make the organizations more inclusive (multiple level of involvement in decision making), possibly adopting a participative leadership, able to make everybody participate in the process and with the additional benefit of improving everybody's commitment and job satisfaction,*
2. *To create mutual accountability (linking performance remuneration to adherence to core values, stake-holders' interests, and corporate sustainability),*
3. *To reinforce inter-dependence (between individuals, organizations, and the society as a whole),*
4. *To explain notions of time and space (considering the impact of decisions for future generations),*
5. *To ensure the wise use of natural resources (consideration of renewable and non-renewable resources), and,*
6. *To redefine the organizational purpose in terms of multiple stakeholders (including customers, stockholders, community, planet, descendants, organizational leaders, employees and directors)".*

The integration of the above managerial orientation inclines to the process of exporting the internal strengths and capabilities to the outside perspective, in order to re-integrate the enterprise in light of the era of information, communication and new knowledge.

Our fundamental *research interest and purpose*, with this paper, is, in fact, *clearing up the path for the most appropriate, optimal application of interventions in OD, with entire respect to the relationship with the external and internal environment, with the life cycle phase of each analyzed change level (individual, group/team and organization as a whole), and attempting to emphasize the contingency application of the advanced methods for OD management.* Thus, our key research questions are determined as the following:

1. *What are key critical factors for modeling a consistent and inter-related concept of organizational development?*
2. *What are the peculiarities and influencing potential of leaders the modern organizations need in order to reach substantial advancements in organizational character?*

The applied *methodology* consists of *qualitative research techniques, such as analyses, syntheses, comparative analyses, in-depth models application, as well as various behavioral role-playing, as well as quantitative leadership success indicators.*

CONTEMPORARY ENVIRONMENT FOR ORGANIZATIONAL DEVELOPMENT

For decades, the intention of advanced and long-term oriented owners and managers has been focused on *increasing the quality of the analyzed products/services, processes, structures and values encompassed within the prevalent vision, in order to enable the creation of a sustainable model for competitive advantage*, which would be publicly recognizable, on one hand, and contribute to a proper harmonization of the effectiveness and efficiency, on the other. In major managerial

developmental tendencies, the dominant interest was placed, up to the third OD phase, to adopting the change initiatives and interventions, to the changing external environment, within the existing combination of resources and capabilities from the internal environment.

When entering the final OD phase, the interest for the behavioral issues of commitment, trust, respect, self-realization etc. (deriving from both the internal and external environment) emerged on top of OD practitioners' interest scale, mostly because the humanistic treatment of organizations relies predominantly on the potential to position the system with an entire and continuous implementation of the planned organizational changes. In this context, *OD is initially dependent on managerial development*, determined four decades ago according to the following assertion (Appelbaum, 1975):

"Managerial development can not succeed and exist as an entity within its own vacuum. It must be the major component within the sphere of organizational development, which is a long range effort (3-5 years) and commitment to improve the problem-solving capability of an organization, while sensitizing it to anticipate, cope with and manage change. In this context, by definition, development means change; thus the manager concerned with his development must realize that his behavior at first must change".

The process of creating a *developing environment*, initially driven by managerial potential to change, is directly linked to *increasing the capacity for implementing the principles of behavioral sciences, with the intention of achieving a continuous organizational improvement*. As such, the organization inclines to a *developmental concept*, which creates a total managerial perspective, at both internal and external level.

As an interdisciplinary change management approach, *OD* is defined in various ways, among which the most prominent are the following ones:

- ✓ *"Organizational development attempts to change the organization by changing its structure, technology, people and/or tasks" (Appelbaum, 2002);*
- ✓ *"Organizational development is a system-wide application and transfer of behavioral science knowledge to the planned development, improvement, and reinforcement of strategies, structures and processes leading to organization effectiveness" (Cummings & Worley, 2009);*
- ✓ *"Organizational development deals with the gamut of 'people issues' and 'work system issues' in organizations – morale, motivation, production, quality of work, leadership, performance, structure, culture, processes, response to environmental demands, customer relationships, and alignment between the organization's strategy, structure, culture and processes" (Cheung-Judge, 2001).*
- ✓ *"Organizational development can be defined as a planned, organization-wide, continuous process designed to improve communication, problem solving, and learning through the application of behavioral science knowledge" (Egan, 2002).*

The process of harmonizing managers' attempts to achieve the state of OD with the actual degree in the organizational life cycle is in close interaction to the process in which the change is being understood and unfolded in the present identification of environmental instances in which the existing assumptions are no longer proven to be valid and, at the same time, altering the routines that guide the assumptions that relate to the overall organizational behavior. As a concept, the above-integrated elements of the harmonizing process lead to the application of *mindfulness*, as a term, mainly determined in the following way:

"Mindfulness is being attentive to and aware of what is taking place in the present" (Brown & Ryan, 2003), which, as a change stimulator, leads to opening minds towards change initiatives,

eliminating the assumptions that serve as obstacles to change, and giving significant meaning to all employees' operative actions.

The concept of *mindfulness* is highly important to creating advanced methods for OD, particularly because it increases the *readiness for change*, as one of the key contributors to OD effectiveness, theoretically determined by the following approach:

"Readiness for change is a key concept comprised of both psychological and structural factors, reflecting the extent to which the organization and its members are inclined to accept, embrace, and adopt a particular plan to purposefully alter the status quo" (Holt, Helfrich, Hall & Weiner, 2010).

Readiness for change potential is mainly dependent on the beliefs of change recipients with regard to the outcomes and goals of organizational change. Therefore, in our explorations, the employee's readiness for change implies the following *most influential readiness determinants*:

- ✓ *Clear understanding of the implementation goals, policies and plans needing to be achieved through a planned and continuous change,*
- ✓ *Vivid articulation within the organization of the above change implementation elements, which are aimed at increasing employee support for a proper, continuous and integral implementation of organizational change,*
- ✓ *Creating a positive combination of values, norms, beliefs, behavioral standards, attitudes etc. contributing to the perception of managers and non-managers' organizational readiness for change,*
- ✓ *Enabling qualitative and quantitative measurements of the scope and depth of employee development by implementing the proposed organizational change,*
- ✓ *Improving an excessive application of incentives' system that manifest a capacity for achieving the desired above change implementation elements,*
- ✓ *Achieving a feedback of the discrepancies for the future increased and more influential organizational readiness for change.*

It is quite crucial to emphasize that the above detailed determinants of readiness for change are different from the traditional ones fostering change readiness, essentially because the change in values, norms, beliefs, behavioral standards, attitudes etc., does not lead to its automatic fulfillment in overall employees' behavior, mainly due to the application of the mindfulness construct with a holistic approach. In this context, *as mindfulness is critical for changing mostly routinized behaviors, readiness for change becomes crucial for reshaping the overall employee beliefs towards the more thorough and detailed understanding of change initiatives, as a pre-condition for applying OD interventions.*

MODELING ADVANCEMENTS IN ORGANIZATIONAL DEVELOPMENT

In determining the most applicable internal and external circumstances applying to the managerial concept of OD, it is useful to categorize the change approach with regard to the orientation of the *interventions in OD*. Their scope and intensity of manifesting effects varies whether managers benefit from changes in the individual, group/team and overall organizational behavior, on one hand, or the dominant focus is placed on the environmental pathway to plan and implement organizational changes.

The categorization of OD interventions that best illustrates the modality of choices in which the sources of the advanced dimensions in OD are about to be chosen, implies to the following one (Cummings & Worley, 2009):

- *The first category* is in a relation to the human process, concentrating on individual behavior in organizations, aimed at meeting the individually set tasks, objectives, needs etc. It comprises of creating a mutual cooperation between individuals, such as *team-building, laboratory training (including role-playing, simulations and on-line learning), survey feedback, coaching, inter-group interventions, models of accompaniment, like the consultation process etc., all of them in the field of creating best solutions for the determined human types of developmental problems.*
- *The second category*, in fact, attempts to bring about managers' interest to techno-structural interventions, fundamentally oriented towards solving the imperfectness of *structures, technologies, individual and intellectual accomplishments at work, yet at individual level.* These changing organizational segments are influenced by a dynamic and complex business environment, leading to more configurable and complementary final solutions, such as *collateral organizations, parallel learning systems, socio-technical systems, job enrichment and enlargement, semi-autonomous teams etc.*
- *The third category* refers to determining the necessity of developing human resources, with a particular focus on their skills, abilities, capabilities etc. It is obvious that the far advanced method in increasing the effectiveness in planning organizational changes is *modeling leadership development.* In practice, it is performed through various managerial change techniques, such as *career management, 6 Sigma model, management-by-objectives and its contemporary modifications, detection, promotion, appreciation and reward of most prominent employees etc.*
- *The last, fourth category* relates to the strategic segments of OD interventions and, as such, it is strategically oriented and mostly inter-related to creating more trustful relations with the external environment. In applying this category, high attention is placed on *organizational learning, strategic networks and alliances, organizational culture development etc.*

In unifying the above-mentioned OD categories, managers seek for the individual developmental constraints that have to be applied to specific structures, processes and technologies. It means that *advancements at individual and organizational level are socio-technical and contextual, obtained through cooperative and communicative developmental elements, in order to create pathways for a systematic, organic OD.* The most effective usage of human resources is achieved by combining leadership and management models, so that both change management phases may be properly covered – planning and implementing organizational change. In order to maintain continuous and supportive relations with the environment, change environmental signals should be an integral part of all previous intervention categories.

Managerial potential for harmonizing all the above categories of interventions in OD leads to enabling the modeling advancements in every single one, in order to specify which of them contributes most to creating and maintaining competitive advantage. Therefore, each development model should comprise the managerial solutions to constraints in each category, in order to properly absorb the rising presence of *organizational resilience.* As such, most illustrative presentation of usefulness of organizational resilience would be illustrated in every single intervention category, as it follows:

- ✓ *At resilient type of individuals, focus is placed to possessing potential for a various meanings of values, attitudes, norms, behavioral standards etc., positive working approach, developing imaginary application of the individual knowledge, increasing the capacity for employee*

creativity etc. The ultimate goal of this developmental segment is creating a more complex and organic individual, who is capable of a proper cooperation with the majority of his/her colleagues,

- ✓ *At resilient modification on organizational, i.e. socio-technical dimension*, managers are making entire efforts for an increase in more combinations of machines, organizational structures and entire processes, with a primary intention to set the stage for a better cooperation with the external environment. It implies to *collective creativity, improvising and finding-out more optimal pathways*, in order to select an ideal one after the completion of the final intervention categories,
- ✓ *At resilient collective developmental category*, prior importance is given to clearing up *the most appropriate leadership style*, in accordance with limitations from the above explained developmental intervention categories. In practice, it is a central category to adding value to certain businesses, mostly due to its influence in *reducing work stress, justifying resource distribution and substitutability of organizational segments, reducing the influence of crisis in business, emphasizing business priorities etc.* Therefore, substantial developmental modeling attention in our paper would be placed to detailing an *application of leadership development at contemporary businesses*,
- ✓ *At resilient strategic category of developmental interventions*, managers are permanently attempting to orient the entire organization to the tendencies arising from the external environment, which are *crucial for a sustainable OD*, such as *several modalities of organizational learning, changing organizational culture, benefiting from network partnerships, strategic investments etc.* Managerial impetus in this category enables *most efficient usage of the external adaptation to characteristics of internal organizational integration*.

In order to entirely benefit from advancements deriving from organizational resilience and to enable modeling OD, prospective managers should *connect changes in all above categories of interventions in OD, with most applicable phases of management process*, which would be illustrated through the following approach:

1. *Planning* – most useful for interventions on a *strategic scale*, besides its *initial orientation to individual intervention category*,
2. *Organizing* – although *initially applied to the organizational intervention category*, in the context of advanced modeling, it is far more *concerned with the strategic oriented developmental category*,
3. *Motivating* – predominantly oriented towards the *socio-technical intervention category*, even though *managers incline it more often to the individual intervention category*,
4. *Coordinating* – best applicable in *individual, human type of development*, always having in mind that *organizational element* is frequently developed through this stage,
5. *Controlling* – as the final, and in every next management process initial phase, pay major attention to *leadership intervention category*, especially its relation to management hierarchy.

Besides the above managerial phases, while applying OD interventions, in recent developmental modeling it is present another segment named *Civil society*, because it contributes to *grounding behavioral manifestations according to achieved developmental stage of entire society, and especially of that particular economic sector*, creating an increased public awareness for establishing a *sustainable roots of OD*.

Having in mind that majority of OD interventions are undertaken while facing a certain type of crisis, it is quite relevant to create *an integrated model that is focused on managing crisis, with an*

excessive usage of OD interventions, and selective application of managerial phases. It is detailed in the following Table 1:

Table 1 Conceptual model of OD interventions in crisis management

		Principal dimensions of crisis management			
		Planning	Coordination	Civil society	Leadership
OD interventions	Human Process	Survey feedback		Education Programs	Adaptation of the managerial grid and other leadership programs, harmonizing leadership model to external adaptation and internal integration
		Laboratory Training	Team-building, brainstorming		
	Techno-Structure	Collateral organizations		Cooperative organizations	
		Process consultation (facilitator)	Crisis cells, integration of emerging groups		
	Human Resource Management	Coaching, Mentoring	Job design (enrichment and/or enlargement)		
		Stress management			
		Organizational diagnosis based on the Open-systems Strategic approach Strengths, Weaknesses, Opportunities and Threats (SWOT)	Network structure, Differentiation between strategic plans and contingent tactics, Integration of strategy in operative business segments		
	Strategy				

Source: Adopted according to Lalonde, Carole (2011), "Managing Crises through Organizational development: a Conceptual Framework", Disasters, April, Vol.35, No.2, p.447.

The above structurally presented detailed Conceptual model is an initial managerial strive for focal determination of the following *major OD modeling directives*:

- *Leadership* is placed within every single OD intervention, especially in the human resource management organizational development.
- *Most structured intervention category* in the model is the *Strategy*, a moment emphasizing the importance of achieving harmonized and balanced long-lasting relationship with the environment, particularly the external one. At the same time, *strategy influences to profound*

organizational diagnosis of key developmental problems, and consistently serves as an integrative element in developing operative business segments.

- *The human process side of OD interventions* is mostly concerned with initial managerial stages, like planning and coordinating, whereas the *techno-structural OD segment* is concentrated to increasing coordination and integration, partly increasing the importance of the segment *Civil society*. The managerial implications of this orientation are the creation of a desired internal environment, particularly with the tendency to develop quality resources in accordance with increasing skills, abilities, capabilities, and not vice-versa.

For the intention of an in-depth model analysis of the *degree of advancement of components* of each principal crisis managerial dimension in the Conceptual model, while being integrated to fundamental OD interventions, we would present a comparative analysis to *traditional, Consultative approach to organizational development* (Argyris, 1964):

1. The consultative OD segments named *Pain* is related to application of *Human process intervention type*, but developed with anticipating the employee professional needs and enabling their entire satisfaction, through various training and educational forms of interventions,
2. *Aggression*, as consultative OD segments, is in majority of applicative cases in a close interaction to *Techno-structural OD intervention category*, mostly due to the imperative of creating more optimal quantitative and qualitative combination of processes, structures and technologies. It leads to more optimal fulfillment of overall objectives, policies and plans, reorienting the direction for a future employee development,
3. The advanced development of the consultative OD segment named *Affection* can be observed within the conceptual intervention category of *Human resource management*. It means that techniques like coaching, mentoring, reducing stress etc. contribute to *developing employee orientation for higher professional achievements and, at the same time, to reduce the feeling of uncertainty and ambiguity due to the effects of OD interventions*,
4. The last consultative OD elements named *Dependency and Ego Ideal*, in fact are the theoretical roots for conceptual intervention segment *Strategy*. In modern business environments, no manager is in a position to develop its business without long-term strategic relations with the external environment. In this context, *managers should reduce the level of their Ego perception, whereas Dependency should be understood in the need for reducing the unbalanced level of organizational success indicators, to group/team and individual dominant areas of interest, increasing the level of congruency*.

Every managerial attempt to increase the potential for a more stable and sustained OD should initially focus on the chosen leadership approach. Therefore, the latter analysis would pay predominant attention to this important behavioral category of OD.

LEADERSHIP ADVANCEMENTS IN FUNCTION OF ORGANIZATIONAL DEVELOPMENT

In attempting to select the most applicable method of OD intervention, managers, in essence, intend to select an action-oriented combination of internal and external developmental elements, which best suit to the prevailing leadership style within an organization. Therefore, *developing mutual trust and respect between managers, behaving as leaders, and their following employees, not treated primarily as sub-ordinates, is crucial for the fulfillment of OD effectiveness*.

Leadership aspiration to incorporate mutual trust and respect in everyday business operations implies the necessity of a *structural kind of planned and continuous organizational change*, aimed at integrating personal, inter-personal, intra-group and inter-group developmental tendencies. In our thorough researches, we firmly believe that an illustration of the *Eclectic approach to OD* best elucidates the above tendency, presented in the following way in its application to a specific manufacturing company (Huse & Beer, 2000):

- “OD programs must be simultaneously concerned with tasks and organizational structures, as well as relationships of individuals and groups, especially if change is to last after employees shift jobs,
- Most important OD approaches, including leadership manifestation, for a manufacturing type of company are the following:
 - ✓ Job enrichment,
 - ✓ Autonomous or integrated work teams,
 - ✓ Implementing the principle of integrator – implying to the role of leader.
- Prior organizational changes have been felt in all four OD intervention categories, leading to the following final program outcomes:
 - ✓ Drop in rejects in control of workers – from 23% to 1% for the period of 6 months,
 - ✓ Absenteeism reduction – from 7% to less than 1%, for the same period,
 - ✓ Productivity increase of 84% for the same period,
 - ✓ Increase of quality (overall, not only related to products) for 50% etc.”

As a final outcome of the above-explained Eclectic model, managers as leaders managed to observe *desired responsibility by employees, perception of their working position, as more challenging and intentional for further growth and development*.

Manifestations of leadership developments can be perceived also in *transactional treatment of OD*, in terms of series of independent, sequential, but mutually inter-related developmental actions, fundamentally aimed at *increasing employee commitment and work compliance*, aspects that are central to OD. The process of creating specific skills for continuous changing of overall organizational behavior that possesses leadership role as being central one is related to the creation of *Autogenic leadership development (ALD)*.

In essence, the ALD concept is determined in the following way:

“Autogenic leadership development (ALD) is a general model of leader behavior, as well as a guide to behavior, that can be practiced in everyday and in extra-ordinary circumstances, something one can practice on a daily basis, that is, it can form a learning action plan” (Raelin, 2000).

Initially, creation and application of ALD model is connected to work of Metz, back to 1998, within the framework of establishing *new leadership success models*, which fundamentally rely on leaders’ competencies for behavioral development. In its structure, this *ALD* transactional organizational model consists of the following *developmental elements* (Lyons, 2007):

- ✓ *Background* – individual knowledge, beliefs, attitudes, values, norms, behavioral understanding, individual learning model etc.
- ✓ *Mental preparation* – incorporates all intellectual preparations for the purpose of continuous inter-personal process and development, including development of mutually acceptable and needed skills, abilities and competencies,
- ✓ *Inter-personal processes* – all organizational strategies, tactics, politics, power distribution, gaining methods etc.

- ✓ *Skillful application of Influential tactics* – indicates controlling mechanisms for determining achieved leadership developments, usually perceived through self-management and self-control behavioral models, for underlying the efficiency of the undertaken previous three elements.

A comparative analysis of the above *leadership developmental elements enables strong and visible relations with the above detailed categories of imperatives of OD*, in our researches in the following way:

- *Background* is connected to *Individual, human type of processes*,
- *Mental preparation* relates to behavioral preparation for *Techno-structural intervention category*,
- *Skillful application of Influential tactics* is an indicator for changes within *Leadership developmental category*, whereas,
- *Inter-personal processes* are an indicator of the readiness for change in the intervention category *Structure*, especially in light of the relations with the external environment.

The above harmonization of leadership developmental elements with the categories of OD imperatives emphasizes that *no consistent and profound OD is possible without applicative advancements in leadership, particularly with its inclusive and cooperative potential*.

CONCLUSION

The modern theory of Organizational Development (OD) emerged predominantly from the strive for a more thorough and inter-related approach in managing the focused and constrained tendency for simultaneously creating and further maintaining organizational health and, particularly, the effectiveness of its processes.

The intentions of traditional OD approach have been advancing inter-personal relationships and group dynamics, developing the most appropriate model of leadership, as well as individual achievements and the creation of sufficiently new knowledge. In the latter analyses of the second OD phase, the issue of strategic change and choice has emerged in order to strategically position and reposition the firm within the externally determined technical, political, cultural and environmental business constraints. In the third stage, the most challenging dimension for behavioral development is empowering in order to achieve simultaneous advancements at both individual and organizational level. We refer to a managerial moment that best illustrates the necessity for achieving both internal integration and external adaptation, as a pre-condition for an effective organizational change.

In major managerial developmental tendencies, the dominant interest was placed, up to the third OD phase, to adopting the change initiatives and interventions, to the changing external environment, within the existing combination of resources and capabilities from the internal environment. When entering the final OD phase, the interest for the behavioral issues of commitment, trust, respect, self-realization etc. (deriving from both the internal and external environment) emerged on top of OD practitioners'. In this context, OD is initially dependent on managerial development.

The concept of mindfulness is highly important to creating advanced methods for OD, particularly because it increases the readiness for change, as one of the key contributors to OD effectiveness. As mindfulness is critical for changing mostly routinized behaviors, readiness for change becomes crucial for reshaping the overall employee beliefs towards the more thorough and detailed understanding of change initiatives, as a pre-condition for applying OD interventions.

In unifying the OD categories, managers seek for the individual developmental constraints that have to be applied to specific structures, processes and technologies. It means that advancements at individual and organizational level are socio-technical and contextual, obtained through cooperative and communicative developmental elements, in order to create pathways for a systematic, organic OD.

Each development model should comprise the managerial solutions to constraints in each category, in order to properly absorb the rising presence of organizational resilience. In order to entirely benefit from advancements deriving from organizational resilience and to enable modeling OD, prospective managers should connect changes in all categories of interventions in OD, with most applicable phases of management process. Every managerial attempt to increase the potential for a more stable and sustained OD should initially focus on the chosen leadership approach.

Leadership aspiration to incorporate mutual trust and respect in everyday business operations implies the necessity of a structural kind of planned and continuous organizational change, aimed at integrating personal, inter-personal, intra-group and inter-group developmental tendencies. Manifestations of leadership developments can be perceived also in transactional treatment of OD, in terms of series of independent, sequential, but mutually inter-related developmental actions, fundamentally aimed at increasing employee commitment and work compliance, aspects that are central to OD. The process of creating specific skills for continuous changing of overall organizational behavior that possesses leadership role as being central one is related to the creation of Autogenic leadership development (ALD).

Harmonization of leadership developmental elements with the categories of OD imperatives emphasizes that no consistent and profound OD is possible without applicative advancements in leadership, particularly with its inclusive and cooperative potential.

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APPLICATION OF BUSINESS PROCESS INTEROPERABILITY METHODOLOGY AS MATURITY LEVEL ASSESSMENT OF THE E-PUBLIC PROCUREMENT IN THE REPUBLIC OF MACEDONIA

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ABSTRACT

The impact of Information and Communication Technologies on public administrations has given strong leverage on net-enabled public services or e-Government. The level of e-government development is influencing the business environment. E-government projects have been evaluated by different methods. Until recently, the level of maturity of e-government projects was measured by the level of sophistication of the services provided to constituents. Leveraging e-government to deliver development impacts depends on effective usage; the provision of e-government services on supply side is maturing, but improvements are also needed on the demand side i.e. on e-government uptake. Measurement of the quality of the services has two dimensions-service content and service delivery. Several maturity models will be discusses based merely on the holistic approach or on the “whole-of-government” approach. However, lately the focus is changing from defining and measuring the quality of basic services to so called assessment of quality provided to “life events” by the method of backward-chaining by modelling the steps to solve problems that cut across organizational boundaries. This consistent approach is known as BPI (Business Process Interoperability). BPI roadmap is a high-level methodology that can help in the implementation of BPI. An assessment of a governmental agency’s maturity is an assessment of its BPI. Electronic public procurement is one of the key enablers to increase the competitiveness. Explained methodology is applied on e-Public Procurement in the Republic of Macedonia. After the analysis, the conclusion is that the overall BPI maturity level is between siloed-ad hoc and tactical collaboration.

Keywords: e-Government, maturity model, business process, public procurement, Republic of Macedonia

JEL classification codes: 030, H10

INTRODUCTION

Evidence-based economy states that investments in capital (human and in other physical terms) combined with an appropriate institutional platform are the necessary prerequisites of economic growth. Wellbeing of the citizens is the final goal that is to be achieved by primarily by rising competitiveness of the economic activity, fully-fledged R&D activity and good macroeconomic environment that means lowinflation and non-excessive deficits and moderate government spending, tradeopenness and advanced financial markets.

Public administration reform can support macroeconomic benefits through reductions in public spending, deficits and debts, reductions in time and monetary costs to citizens and businesses for doing business (increases in government productivity) and good governance (transparency and accountability) that can lead to better outcomes in all policy sectors. In addition to the direct benefits of improved productivity on the economy, if productivity improvement in the public sector is brought about by a change in technology (use of ICT – Information and Communication Technologies) to digitalize processes, this could have positive impact on business sector output. These changes in technology could lead to an increase in demand for certain inputs (or intermediate goods) purchased by government from the private sector, increasing private sector output (Cosseddadu, Felli, Cozzolino, 2012).

The three pillars of the reform scheme include: a) modernization of the public administration, b) innovation and digitalization within the public administration and the country, and c) relationship between the public administration, citizens and business (Cosseddadu, Felli, Cozzolino, 2012). Digitalization in the context of public administration is known under the term e-Government (e-Gov) that emerged in the late 1990s, but the history of computing in government can be traced back to the beginnings of computer history. For example, Fountain's definition: "... a government that is organized increasingly in terms of virtual agencies, cross agency and public-private networks whose structure and capacity depends on the internet and web" (Fountain calls this phenomenon "Digital Government" or "Virtual State") (Fountain, 2001) is compressive.

E-Government is usually defined as a continuous process of using ICT to serve constituents and improve their interaction with the state. However, there is impossible to expect a uniquely definable e-Government. E-Government can be defined as special case of ICT-enabled business process change (Scholl, 2003). E-Government more radically can be seen as an innovation because it redefines and improves transaction processing via an IT platform (Esteves, Joseph, 2008). In the definitions of e-Government, the dominant ones emerged from fields of practice. Governments across the globe set up definitions as basis for national strategies to achieve excellence based on use of ICT. At the offset of the first wave of e-Government policy steps (Grönlund, 2002) reviews some of these and find them similar and typically explicitly mentioning three goals: more efficient government, better services to citizens, and improved democratic processes. Nowadays, these goals still remain, but the rhetoric about improved democratic processes was played down a bit in practice and in definitions. Moreover, technological standards such as openness, usability, customization and transparency for public portals and interoperability between systems in agencies on different levels are a must for the implementation of e-Government projects. In the Table 1, an attempt to present some of most representative strategies and definitions of E-Government is outlined.

Table 1. Representative e-Government strategies and definitions

Strategy (document)	Main features, targets and characteristics
Digital Government Strategy (2014) USA	<p><i>Objectives</i></p> <ul style="list-style-type: none"> • Enable the American people and an increasingly mobile workforce to access high-quality digital government information and services anywhere, anytime, on any device. • Ensure that as the government adjusts to this new digital world, to seize the opportunity to procure and manage devices, applications, and data in smart, secure and affordable ways. • Unlock the power of government data to spur innovation across the Nation and improve the quality of services for the American people. <p>Four strategy principles: 1.Information-Centric, 2.Shared Platform, 3. Customer-Centric, 4.Security and Privacy</p>
The National e-Governance Plan NeGP (2006,2011) India	<p><i>Objectives</i></p> <p>Make all Government services accessible to the common man in his locality, through common service delivery outlets, and ensure efficiency, transparency, and reliability of such services at affordable costs to realise the basic needs of the common man.</p> <ul style="list-style-type: none"> • 31 Mission Mode Projects (MMPs)
e-Government Strategy (2006) Australia	<p><i>Objectives</i></p> <p>E-government is about more than just applying ICT to government processes. It is about applying ICT to reform and improve government processes. Merely applying ICT to something does not make it better. But applying ICT, and reforming the accompanying business processes, does</p> <p>Activities in four main areas:</p> <ul style="list-style-type: none"> • Meeting users' needs • Establishing connected service delivery • Achieving value for money • Enhancing public sector capability
ICT and eGovernment: European Action Plan 2011-2015 (2010) EU	<p><i>Objectives</i></p> <p>Four political priorities based on The Malmo Declaration (2009)</p> <ul style="list-style-type: none"> • Empowered citizens and businesses (User empowerment) • Reinforce mobility in the Single Market (Strengthening the internal market) • Enable efficiency and effectiveness (Improving efficiency and effectiveness of Governments and administrations) • Create the necessary key enablers and pre-conditions to make things happen (Creating preconditions for the development of e-Government)
UNESCO (2008)	<p><i>Objective</i></p> <p>The delivery and enhancement of public value of e-Government to citizens, businesses, communities, and employees and (other) governments in their interactions with government and the public sector.</p>

Source: Different mentioned documents (in References)

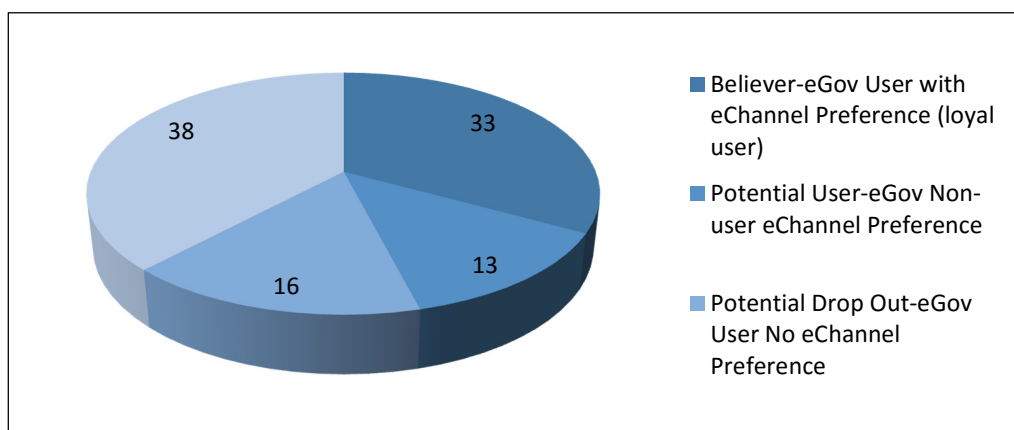
E-Government is about change and on the last instance; e-Government becomes government. Most of the strategies (and definitions) include three broad areas. The first area, service provision, includes public access to all services and information via dedicated site between government and its citizens, businesses, and other government agencies. The second key area included in a broad definition of e-Government is the concept of digital democracy (e-participation). More advanced forms of digital democracy also called e-Government 2.0 can radically change how the public interacts with government by increasing participation and the level of knowledge that citizens have about government. The use of technology to support economic development, the third key area, represents new territory for many governments. Forward thinking governments realize that economic viability is becoming more dependent upon access to information and the use of technology to improve service delivery. As government goes global with the rest of society, the role of technology in economic development will increase. These three key areas, service provision, digital democracy, and economic development, represent a broad definition of e-government.

MEASURING E-GOVERNMENT

The discussion about how is e-Government progressing in any country is actually focused on several problems. Firstly, the question is how to define measurement system meaning what to measure and how to measure. Secondly, benchmarking is necessary. Finally, there are methods for defining maturity models of e-Government. From the historical perspective, the measurement systems have started from electronic public services. Until recently, EU measured progress of e-public services (for citizens and businesses - 20 in total) by their level of availability on-line (fully or not availability on-line of 20 basic public services) (Capgemini, IDC, Rand Europe, Sogeti and DTi, 2009). In the report of 2010, user experience of service delivery was measured by five dimensions (transparency of service delivery, multichannel service provision, privacy protection, easy-of-use and user satisfaction monitoring) as well (Capgemini, IDC, Rand Europe, Sogeti and DTi, 2011). User experience of portals was measured by usability, user-focused portal design and one-stop-shop approach. However, these popular measurements were criticized due to the fact that they are irrelevant for majority of EU members because most of them reached 100% level of availability online and therefore there is nothing to measure! Even the analysts proposed so called "empowering users: life events measurement" and focus on common horizontal enablers (or behind the web). The shift in paradigms was proposed by Danleavy and Margetts (2010). As leading theorist, they introduced the term "The second wave of DEG – Digital Era Governance" not implying that the first wave of DEG is over – but arguing that "the importance of key DEG themes has increased – Specifically reintegrating government services, pushing towards holistic delivery to clients and responding to the digitalization wave in public services." In the latest report (Capgemini, 2013) there is a radical shift in the proposed methodology although still not strictly defined. The authors argue that digital is happening and can have positive impact if embraced in the right manner. Europeans are on the intense and constant pressure to remain competitive in the changing environment (demographic change; environmental impacts; natural resource shortfalls; social cohesion) and to fully embrace outbreaks in technologies like cloud computing. The measurement paradigms are changing from "inside out" view to "outside in" more integrated customer-centric view. The 2012 survey is redesigned to align with EU policy priorities. Insights are provided in three broad areas: a demand-side citizen view of public services, three life-event assessments of customer experiences: (i) starting and early trading of a business (ii) losing and finding a job (iii) studying (elements that are core to a healthy economy) and assessment of five key technology enablers. The User Survey exercise provides a new and true-demand picture of how European Citizens perceive online public services (Capgemini, 2013). The survey reached 28,000

internet-using citizens (interlaced age / gender and representative for NUTS 1 regions across 32 EU countries), exploring 27 questions, and 19 most common citizen services. This provides a picture with 95% confidence (relevancy) of the views of the 600 million European citizens (Capgemini, 2013). The target population was reached via online survey panels. It is very interesting that the analysts decided to present personas that have similar behavior (Graph 1). The approach to analyse several life events is used to send recommendations to EU policy makers.

Graph 1. The structure of EU citizens according their behaviour towards E-Government



Source: Adapted from Capgemini, 2013

In this context a composite index that measures the level of digital economy in EU (Digital Economy and Society Index – DESI) is worth mentioning. Namely, this index consists of five main dimensions (connectivity, human capital, use of internet, integration of digital technology and digital public services). The fifth term – digital public services, is composed of two different sets of indicators – eGovernment and eHealth. The level of e-Government is measured by e-Government users, pre-filled forms, online service completion and open data. This methodological concept is more traditional one which can be expected having in mind that the level of digital economy and society is measured by total set of 33 indicators of which 4 are e-Government measures. It is interesting to mention that the coefficient of variation across member states (CV) for digital public services is the highest among all the dimensions with the values of 39,3 for 2014 and 36,5 for 2015 (Directorate-General for Communications Networks, Content and Technology, 2015). The variations among EU member states concerning different aspects of e-Government are recognized by many researchers and this issue is recommended to be addressed in future policies.

There are two sides on e-Government equation - supply side and demand side. Effective usage can leverage development impacts of e-Government. Leveraging e-Government to deliver development impacts depends on effective usage. Supply side or more narrowly provision of is constantly increasing. E-government uptake in EU countries is 46%) which is similar as in OECD countries 50% (Capgemini, 2013). Countries' efforts to develop e-Government therefore need to go hand in hand with their efforts to increase demand through usability features such as simplicity and personalisation, usage monitoring and tracking and user feedback and usage promotion. Policy to promote both supply side and demand side must go hand in hand. Policy efforts to increase take-up should, however, not aim just to increase usage, but should also focus on obtaining the maximum value of the service.

E-Government benchmarking is mainly based on surveys carried out at international, supranational and national levels. In the report EGDI (E-Government Development Index) is calculated for countries as a construct of three sub-indexes – Online Service Index, Telecommunication Infrastructure Index and Human Capital Index for 193 countries (United Nations Department of Economic and Social Affairs, 2014). These three indexes are also constructs of different measurements from the official statistics or based on surveys. This index is important because it can suggest trends and depict certain patterns in development. As expected, countries from EU are among leaders with South Korea and Canada, USA etc. A well-known truth is that the income level of a country is a general indicator of economic capacity, level of development and progress, which thus influences its e-government development. Access to ICT infrastructure and the provision of education, including ICT literacy, are related to the income level of a nation. However, from the data and analysis (coefficient of determination of 0,5834 from the Survey) it is clear that national income per capita is not by no means clear way of guaranteed e-government development (United Nations Department of Economic and Social Affairs 2014). From the diffusion of data we can conclude that there is perfect pattern of almost liner correlation between GNP per capita and EGDI in the ranges of GNP per capita up to \$ 10 000 and EGDI of 0,55 or in the left lower part of the quadrant. There are many countries that have significantly advanced their e-government despite relatively low national income, just as there are many countries which are lagging behind despite their relatively high income and thereby have good opportunities for future improvement. It is explained in the Report that even in the case of countries with sufficient ICT infrastructures and good human capital it can be tricky to move to the higher stages with transactional and connected services. This is so because they require robust data protection and online payment systems, as well as secure data sharing across government institutions. It is obvious that additional so called “managerial and organizational” factors other than traditional ones are equally important. High-level political support and full commitment is a must, strengthening leadership and institutional capacity as well. There is a need for new forms of collaborative leadership and shared organizational culture, including re-shaping values, mindsets of public servants. Public service delivery can be greatly improved through a channel mix.

Changes inside government are omnipresent (the advent of social web, cloud computing, apps development etc.) in the context of transformation of the advanced industrial societies towards an online civilization. The concept of “open government” or Government 2.0 is based on the open government initiative of US government based on three principles: transparency, participation and collaboration (Chun, Shulman, Sandoval, Hovy, 2010). The required functions of open government can be easily achieved by adopting the Web 2.0 technologies, which promote public participation. Innovative governments need to develop strategies and models for how to use these enabling technologies to achieve a transformation of every aspect of government, such as service provision, decision and policy making, administration, governance and democracy. The differences are presented in Table 2.

Table 2. Comparison between Traditional Government vs Government 2.0

17. Traditional Digital Government	Social Media-based Digital Government (Gov 2.0)
Information provision (information sink) model	Information source (creation) model
Service provision model	Service demand model
Policy enforcement model	Policy making and negotiation model
Agency internal decision making/governance model	Shared governance

Source: Chun, Shulman, Sandoval, Hovy(2010) “Government 2.0: Making Connections between Citizens, data and Government” *Information Polity* pp.5

The main idea behind government 2.0 is participation by citizens. Traditional models of measurements are not applicable.

MATURITY MODELS FOR E-GOVERNMENT

Maturity models in evaluation of e-Government have origins in generic maturity models. Maturity models are invented actually to improve organizational performance. There are many maturity models like OPM3, CMMI, P3M3, PRINCE, BPM, Kerzner's project management maturity model etc. These models are different from each other in terms of factors and characteristics analysed and, there is no standard related to these models. Therefore, it is important for organizations to be able to assess their situation by a comprehensive and useful model (Khoshgoftar, Osman, 2009), (Judgev, Thomas, 2002). The e-Government maturity models are described in plural because there is not standard framework to measure maturity level of public agencies and/or different processes or public services. A very complete overview of methodologies can be found in Valdés, Solar, Astudillo, Iribarren, Concha (2011). Maturity model allows public agencies to be evaluated against international best practices in the area of e-Government, including the formulation of organizational strategies and policies, management of ICT, operative management, and organizational capabilities of human resources and the organization overall. It also proposes specific roadmaps for capability improvement, i.e., directives about where the financial and human resources of an organization should be allocated to improve its ability to carry out e-Government initiatives. The history of e-Government maturity models is short – only 15 years (Fath-Allah, Cheikhi, Al-Qutaish, Idri, 2014).

E-Government maturity is a multidimensional problem, sometimes perceived as almost elusive. Firstly, there is a difference in approaches while measuring *service quality* and *maturity models*. Public service quality can be perceived from the aspect of SERVQUAL as measurement for other type of services. For example, the quality of electronic public services can be observed from two aspects: *the service content quality* deals with what service is a user actually receiving from an e-Government website, and *service delivery quality* is about how well the user is accessing it. These two dimensions are inseparable. E-government service quality is defined as the extent to which services delivered via e-Government web site assist citizens and businesses in completing their governmental transactions. (5) SERVQUAL is based on five dimensions tangibles, reliability, responsiveness, assurance and empathy (Parasuraman, Berry, Zeithaml, 1988). As transactional frequency increases, citizens tend to place greater emphasis on the effectiveness of content functionalities such that the positive impact of service content quality on overall service quality is amplified. The same relationship is observed for service delivery quality when transactional frequency is low (Parasuraman, Berry, Zeithaml, 1988). Service quality is in correlation with the unique contextual characteristics of public e-services in that they cater to both recurring and non-recurring governmental transactions. Recurring governmental transactions are those occurring in a premeditated and predictable fashion (e.g., monthly payment for city services or annual filing of taxes) whereas their non-recurring counterparts refer to transactional activities that do not happen in a cyclical manner even though they may not necessarily be constrained to singular occurrences (e.g., application for a renovation permit or payment of traffic fines) (Parasuraman, Berry, Zeithaml, 1988). Therefore, there is difference in evaluating frequent versus infrequent transactional activities. Based on a broad empirical study come to a conclusion that if the e-government website is targeted at frequent governmental transactions, practitioners might prefer to divert more resources into enhancing content functionalities whereas if the e-government website offers infrequent transactions, offering ubiquitous accessibility to e-service content should be a priority (Parasuraman, Berry, Zeithaml, 1988).

E-Commerce firms have adopted web personalization techniques extensively in the form of recommender systems for influencing user behavior for customer retention. There are numerous studies in this area, but research addressing the role of web personalization in user acceptance of technology is very scant. Moreover, user acceptance problem in the context of e-Government is hardly even accessed. We will mention only two. The 'Consumer Acceptance and Use of Information Technology' theory proposed in previous research has been extended to include web personalization as a moderator and has been tested in an E-Government context (Krisharaju, Mathew, Sugumaran, 2015). Data collection involved conducting a laboratory experiment with the treatment group receiving personalized web forms for requesting an E-Government service. The analyses show that personalizing the web by self-reference and content relevance has a significant moderator role in influencing the relationship between determinants of intention to use and behavioral intention in certain cases. There is a recent extent to the theory of technology acceptance of consumer and use of technology also known as UTAT2 including web personalization as new dimension (Venkatsh, James, Xin Xu, 2012). This is also valid for evaluating e-Government. The quality of services is assessed on individual level. However, in the last decade we are experiencing so called "one-stop-shop" approach where there is one portal that leads to all services (and/or events). Lately, even portals can be personalized and fully customized.

E-Government maturity models can be divided in two groups - static and dynamic. Static models are developed by governments, consultants and academics to help agencies firstly, to identify and secondly, to improve their level of e-government maturity. An example is the "Canadian e-Government Capacity Check" which consists of a capacity diagnosis set of tools used to assess the capability of public agencies to deliver electronic services to citizens. This tool make evaluation on six criteria: e-Strategy, Organizational Capabilities, Architecture, Value Chain Integration, Risk and Program Management, Performance Management each subdivided in categories (KPMG, 2000).

The maturity models in the second heterogeneous group are dynamic; they suggest chronological stages (phases) that are to be achieved step-by-step. The second group of maturity models consists of "older" and "newer" methods. In the "traditional" ones there are 3-5 stages of development. For example, in the World Bank methodology the stages are as follows 1. Publish, 2. Interact, 3. Transact (Infodev, 2002). Another representative is the model of Layne and Lee with following stages: 1. Catalogue, 2. Transaction, 3. Vertical integration and 4. Horizontal integration (Layne, Lee, 2001). The latest models include features like political participation, digital democracy, service transformation, joined-up e-governance etc. The model of Lee and Kwak (2012) proposes a five stages maturity model. This model focus on open government and the use of social media and Web 2.0 tools and the stages are: 1 "Initial conditions" - static interaction with the citizen, 2) "Data transparency" - feedback from the public on usefulness and data quality, 3) "Open participation" - usage of social media tools to increase open participation and enhanced data privacy and security, 4) "Open collaboration" - interagency collaboration by sharing data and public input, 5) "Ubiquitous engagement". By the time the stage five is achieved, data should be accessed by mobile devices and portals and social media sites should be compatible with various platforms. Data should be vertically and horizontally integrated and data analytics is used for decision making processes. Some authors define four stages: 1) Presence on the web, 2) Interaction between the citizen and the government, 3) Complete transaction over the web, and 4) Integration of services (Alhomod et al. 2012).

The main differences between models that arise more than a decade ago and contemporary ones are the inclusion of constituents in decision-making and delivery channel's diversity. For example, one of four criteria for classification of maturity models is stage features (Fath-Allah, Cheikhi, Al-Qutaish, Idri 2014, a). The presence of the following main features is analysed: one-stop-shop, customer centricity, interoperability, personalization, payment and e-participation. Their

conclusion is that the model should be holistic and cover all the aspects of e-government e-portals. The same authors analysed three e-Government maturity models and depict their limitations (Fath-Allah, Cheikhi, Al-Qutaish, Idri 2014,b). They proposed new eclectic maturity model MBeGPMM (Measurement-Based E-Government Portals Maturity Model) and included in its features the following ones: quality model and associated measures, best practices, stages, guidelines to identify weaknesses of e-government portals at any maturity stage and set of recommendations to help agencies to move to higher stage of maturity. The proposed maturity stages are four – presence, interaction, transaction, integration. The process is cyclical 1. Identity the maturity stage to measured, 2. Execute survey corresponding to the maturity stage measured, 3. Calculate the quality level of each subcharacteristic, 4. Calculate the quality level of each characteristic, 5. Calculate the quality level of the selected maturity stage, 6. Identify needed best practices and implement them. This model is still a theory but its process characteristic and constant checking can prove its usefulness.

Better governance can be achieved with improved performance, lower cycle time, reduced complexity, minimized errors and maximize value by means of measurement or using the techniques of Six Sigma's DMAIC (Define, Measure, Analysis, Improve, Control) (Raja, Ramana, Damodaram,2012) They propose a model called eGSARMM that integrate security, availability and reliability in to the e-Governance Maturity Model at various stages. eGSARMM is a theoretical framework which is multidimensional concept with six sigma approach. The model consists of the following four Key Domain Areas KDAs:E-Government Strategy, IT Governance, Process management, Organization and People Capabilities and 54 process Areas (PAs). A PA is further specified in terms of Specific Goals (SGs) and Generic Goals (GGs) which are the required components of a PA to achieve good results in e-Governance.

BUSINESS PROCESS INTEROPERABILITY – EXAMPLE OF EVALUATION OF MATURITY OF EPP OF THE REPUBLIC OF MACEDONIA

In the following part we will discuss the relationship between BPI (Business Process Interoperability) and maturity levels of e-Government (the analysis will end with the example of public procurement as e-Government service of the Republic of Macedonia).

Public organisations are dynamic and complex entities responding to changes in their environment to remain relevant. Organisations evolve and grow in respect to external and internal factors. How an organisation react and responds and the type of changes that ensue depend on many factors, including the level of maturity of the organisation's capabilities to interoperate. This particularly holds for public organizations. Interoperability can range from internal functional collaboration and co-ordination through to integration of multiple processes across multiple agencies. An assessment of a public organisation's maturity is mainly an assessment of its interoperability readiness. Interoperability is more than just the flow of information between agencies and the connection of information technology systems. It requires a collective mind-set, an understanding of how each collaborating agency operates and the development of arrangements which effectively manage business processes that cut across organisational boundaries by usage of ICT.

In the following lines we will present (and apply) Australian maturity model for public organizations, one of the most advanced globally. The Department of Finance and Administration, through the Australian Government Information Management Office (AGIMO), is responsible for applying innovative services of the government. "AGIMO fosters the efficient and effective use of information and communications technology (ICT) by Australian Government departments and agencies. It provides strategic advice, activities and representation relating to the application of ICT

to government administration, information and services. This consistent approach is defined as business process interoperability. It aims to improve the ability of agencies to respond to new requirements quickly and effectively by providing a common language and the ability to develop a common understanding of business processes and business requirements. This is particularly important as the need for cross-agency collaboration increases with the drive towards 'connected government' (Australian Government Information Management Office 2007, pp. 6)

Interoperability is an important element and enabling capability in the government service reform and integration initiatives. To be interoperable, an organisation has to be involved in the circular process of ensuring that its systems, processes and people are managed in a way which maximises opportunities for internal and external exchange and re-use of information. It should be noted that organisational boundaries should not stand in the way of the right people having access to the right information to make informed decisions or to provide high quality services to citizens and businesses.

The need for business process interoperability is derived from the growing need for collaboration between agencies in the delivery of services, programs or projects and to increase consistency, reduce redundancy, identify opportunities for re-use of proven processes. These changes may be part of a business transformation initiative to improve operational efficiencies through shared services and the re-use of common business processes.

The AGIF (Australian Government Interoperability Framework) comprises three components of interoperability: business, information and technical. The BPI Framework contains a series of tools to assist agencies to adopt interoperability, including: a roadmap which provides a sequence of steps to facilitate progression towards interoperability, a capability maturity model which can be used by agencies to identify their current level of business process interoperability maturity and to define a strategy for achieving a desired maturity and a series of case studies to outline initiatives taken by agencies to improve business processes management and interoperability.

Mapping out business processes can assist in better understanding the existing inefficiencies in processes, particularly inefficiencies which exist between agencies. Processes that require the manual coordination and exchange of information between agencies are good candidates for business process interoperability initiatives, not only to improve efficiencies but also the responsiveness of government agencies. Business Process Management can embrace various business improvement practices, such as Six Sigma, Business Process Re-Engineering (BPR) and Total Quality Management (TQM), or other similar methods. Management leadership and full commitment of the management of the collaborating agencies is crucial for the implementation of effective business process interoperability. Senior management indifference or an inability to understand or accept the benefits of embracing business process interoperability will inhibit an agency's efforts to collaborate effectively. While technical problems can provide considerable challenges, people and cultural issues are often more challenging and require more attention and focused effort. Strong business case is a must.

Effective business process interoperability must never lose sight of the bigger picture - a whole of enterprise or whole of government perspective needs to be maintained, otherwise further opportunities for improvement can be missed and change may actually be slowed down. The main principles are: 1. Focus on outcomes, 2. Outcomes should be linked with whole of government initiatives, 3. BPI to be user-driven, 4. Identifiable outcomes, 5. Standardised documenting business processes, 6. BPI must be practical, rigorous and flexible, 7. Trust, confidence and security of data, 8. Governance arrangements must be agreed between collaborating agencies and 9. Cultural differences between collaborating agencies must be acknowledged and managed (Australian Government Information Management Office, 2007).

To assist organisations considering or implementing business process interoperability, a number of aids are provided such as Business Process Interoperability Roadmap divided into six stages (Table 3). The roadmap is not a linear process and each step will need to be reviewed or repeated as lessons are learned and goals, objectives and priorities change. Organisations will also naturally mature in their approach to business process interoperability and this will also change the approach.

Table 3. Business Process Interoperability Roadmap for e-Government

1. Plan	<ul style="list-style-type: none"> -Identify the relevant drivers or intent for change -Establish a functional view of your agencies in relation to other agencies. -Determine the capability and readiness of your agency for change. -Determine the capability and readiness of collaborating agencies
2. Agree	<ul style="list-style-type: none"> -Establish and agree arrangements for collaboration -Establish and agree appropriate cross-agency management and governance arrangements -Agree standards, reference models, modelling tools and standards that will be used to support the collaboration-one particular standard for modelling business processes is BPMN.
3. Discover	<ul style="list-style-type: none"> -Identify common processes which could be standardised between the participating agencies
4. Map and Model	<ul style="list-style-type: none"> -Model the 'as is' -Determine the 'to be'
5. Implement	<ul style="list-style-type: none"> -Develop an implementation strategy to move the selected processes from the 'asis' to the 'to be'. -Establish performance measures and the means for monitoring and managing them. -Engage process owners, users and participants on all proposed changes. -Ensure time-frames and impacts are well understood and any concerns are identified early and managed.
6. Monitor and Review	<ul style="list-style-type: none"> -Use agreed performance measures to monitor progress and to identify areas for ongoing improvement -Review the process

Source: Adapted from AGIMO, 2007

Moving to higher levels of business process interoperability maturity requires agencies to move to a functional view of what it is that the agency does in a whole of government context. In many ways, this is the greatest challenge to business process interoperability and requires agencies to break down well established structural perspectives and arrangements. Moving to higher levels of maturity also requires the establishment of effective cross-agency governance arrangements, controls and performance measures and viewing people, processes and technology as whole of government resources. For example, process owners will need to have responsibility outside of the organisational role which is not a short-term process.

According to the OECD, common business processes are those business processes that exist in different organisations yet have, in essence, the same goals and outputs, thereby creating the possibility for the arrangements to conduct these business processes to be optimised and delivered in a more efficient and standardised manner (OECD, 2005). The identification of common processes and services within government has the potential to achieve economies of scale, reduce duplication

and improve seamless service delivery. Some of the business processes that are relatively common across agencies can be management, grants management, parliamentary workflow and recruitment.

While the way in which they are being implemented may differ, many of the elements in these and other processes will be the same in most government agencies. Identifying, understanding and acknowledging the commonality of these processes can enable agencies to re-use processes and systems developed elsewhere in government or to engage in collaborative activities with other agencies to standardise practices.

Electronic public procurement is one of the most sophisticated services of Government. Electronic public procurement (ePP) usually plays an essential role in the national e-Government programs. One of the several ePP maturity models is e-Government Procurement Observatory Maturity Model (eGPO-MM); that focuses on the legal and institutional arrangements, as well as technical aspects of the portals (Concha et al, 2012). The model comprises two leverage domains, seven key domain areas, and 25 critical variables, and applies a weighted scoring system that produces quantitative indicators about portal capabilities and allows direct comparisons between them. The model was tested through its application to the eGP portals in 16 countries in Latin America and the Caribbean, generating results that fit well with the perceptions of the agencies involved. In addition to providing a clear reference point to allow each agency to determine a roadmap to higher e-procurement maturity, the use of eGPO-MM, according to the authors, resulted in the identification of the joint action areas and fostered knowledge sharing among governments, including identification and dissemination of e-procurement best practices. This work exemplifies two applications of the network concept: the first is the network of buyers (government agencies) and suppliers (businesses) engaged in transparent and "efficient vendor relationships" through the eGP portals (e-Procurement Network), and the second is the network of national-level agencies.

Electronic Public Procurement in the Republic of Macedonia is known as ESPP (Electronic System of Public Procurement). Having in mind that EU has a target that states that all public procurement should be electronically handled after 2016, our country is following the trend. The Bureau for Public Procurement is making constant efforts to increase the percentage of procedures fully electronically. However that percentage is stagnating in the last three years. Still, it's positive that there is when a company starts to use the system it continues. In 2013, 15% of the published total contract notices are via ESPP (Public Procurement Bureau of RM 2014). The trend is positive, but still the structure is unsatisfactory. Electronic public auctions, as the final phase of public procurement procedures, are since 2013 electronic (mandatory). There were 130 e-auctions on average per day in 2013 (Public Procurement Bureau of RM 2014). There are positive impacts of the e-auctions like price savings (17%) or in total Euro 55 million for 2013 (Public Procurement Bureau of RM 2014). Larger saving were for procedures with higher value thresholds and for highly standardized goods such as IT and telecommunication services. However, abnormal increase of the prices prior to e-auctions was noticed. Some goods proved to be not suitable for e-auctions. Still, the major disadvantage is the fact that more and more companies choose not to participate in e-auctions when the price is the only criterion. Those firms are oriented to achieving competitive advantage by distinctive qualities and area arguing that in e-auctions sometimes the final price is extremely low.

The maturity level of the electronic public procurement in the Republic of Macedonia can be approximately evaluated following the matrix constructed figuratively speaking of two dimensions. The first dimension is actually the criteria to be evaluated: *strategy, governance, process, people, and technology*. The second dimension is about the levels of the five criteria, which are *siloed-ad hoc, tactical collaboration, re-use, shared services, service oriented*. The maturity levels for all the criteria may not be the same.

1. Concerning the dimension *strategy* it can be explained by the mentioned five levels. After examination of the system of electronic public procurement in the country the conclusion is that there is an official strategy for the period 2014-2018. The strategy is very comprehensive, with formal elements. However, there are parts that are more concrete and certain measures and future policies are noted. That is mainly valid when future priorities for the ESPP is strategised. The level of maturity would be *tactical collaboration* with some of the following characteristics: collaborative in selected areas, adapt/react to change within 12 months, inconsistent knowledge of changes in customer needs, deliberate strategy driven by IT initiatives- IT leads change, architecture used to identify where fit, point-to-point links.
2. *Governance/Accountability* is the second important dimension to access BPI of this service. The chosen level is *siloed-ad hoc* with the following characteristics: vertical structure, agency-specific arrangements, no formal or consistent cross-agency performance measurement, coordination a major exercise. It is important to be mentioned that accountability is on respectable level and there are considerable amount of data available for the public.
3. *Processes and their fit* is probably the most important criterion. Maturity is not a discrete measurement and therefore we would choose for process fit *tactical collaboration* and some elements of *re-use*. The main elements of tactical collaboration for processes are aware of business processes and opportunities with potential for collaboration, vertical integration and selected horizontal integration, limited process mapping, reengineering, limited understanding of cross functional and cross agency process needs and dependencies. There are efforts to adopt business process management as the first step towards next level re-use.
4. *People* are essential asset for every public organization and its functioning. *Tactical collaboration* is the chosen level of maturity with the characteristics of shared skills in functional areas, cross functional/ process team (IT led), collaboration on some cross-agency processes, incomplete understanding of needs and value of business process interoperability. It is worth mentioning that due attention have been paid on training and constant upgrading the skills of the public servants in the Bureau.
5. *Technology* as an enabler and driver is evaluated as *siloed-ad hoc* with elements of *tactical collaboration*. That means that it can be defined by the following characteristics: independent systems, integration only within functions, legacy enterprises system(s), a bottleneck to change, point-to-point integration, IT leads cross functional initiatives.

The overall level of maturity of BPI of the electronic system of public procurement in the Republic of Macedonia is between *siloed-ad hoc* and *tactical collaboration*. The efforts to change in the direction to BPI are noticeable and the organizational structure is mixed which is the first important step towards more process oriented organization.

CONCLUSION

E-Government applications are changing the paradigm of the relationships between public administrations on the one side, and citizens and businesses on the other side. Evaluation of the level of development of the e-Government is not a straightforward from methodological viewpoint. There are many methodologies that are evaluating the level of sophistication of electronic public services. Still, the latest trends are evaluating the concept of “e-Government-as –a hole”. This comprises the problem of interoperability of business processes. One of the main evaluation techniques can be the measurement of the BPI. Electronic public procurement is key enabler service. Due to the fact, that

the processes of public procurement are complex and are crossing agency border, it's obvious that BPI is a must.

Public Procurement Bureau of the Republic of Macedonia is constantly making significant effort to improve the digitalization of the processes. After the application of the methodology of checking the maturity level by using BPI certain conclusions were made. Namely, the level of maturity was assessed by ranking of the five criteria according AGIMO (2007). Those criteria are: *strategy, governance, process, people and technology*. The conclusion is that there are small differences among the level of development (maturity) of the criteria. Strategy can be positioned as tactical collaboration, governance is between *siloe-d- adhoc* and *tactical collaboration*, processes and people are on the level of tactical collaboration, and technology is more on the level *siloe-d- adhoc* than *tactical collaboration*. We would propose the level of *tactical collaboration* as a motive for improvement of the ESPP of the Republic of Macedonia. The suggestion is to follow the steps of the maturity road map and BPI in order to improve the services. However, this can be done only if the approach of raising the level of the e-Government is holistic appreciating all elements for success such as cross-agency collaboration and coordination of plans, measures and actions

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CHALLENGES FOR THE FAMILY BUSINESS IN TRANSITION ECONOMIES: WITH A SPECIAL EMPHASIS ON THE REPUBLIC OF MACEDONIA

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ABSTRACT

The purpose of this study is to investigate some important strategic dimensions that could influence the performance and cause performance differences among the family and nonfamily businesses. External environment of a business, internal environment of a business, the level of organizational knowledge as a main source of competitive advantage, as well as a strategic oriented planning are particularly investigated in this study. Specifically, these strategic dimensions are investigated in the context of former socialist countries, above all those in the region of former Yugoslavian countries, through exploring the case of the Republic of Macedonia, as an illustrative country of the countries from this group, bearing in mind their similar historical, political and economic context. Empirical research is carried out to observe the important strategic dimensions in family and non-family business in the Republic of Macedonia. The research includes over 300 family and non-family business by various industries and geographic regions, with different number of employees and different years of existence of the business. Research provides meaningful results and conclusions considering important strategic dimensions relative to performance in family and non-family businesses. Particularly, external environment constrains, internal environment constraints, organizational knowledge, and strategic oriented planning have a significant positive relationship with performance. On the other hand, these important strategic dimensions strengthened with the family influence on performance show that there was no significant interaction effect between each of the four independent variables and performance. This means that there are no differences in performance in terms of important strategic dimensions between family and non-family businesses. Unlike the multiple moderation regression analysis, the simple slopes analysis revealed statistical significant differences between family and non-family business concerning the influence of external environment constrains on performance. This reveals one more very interesting fact in terms of the post-crisis period and the role of family business in encouragement of entrepreneurship, and that is the positive perception toward uncertainty and risk, as well as readiness of these businesses, even in such circumstances to fight for competitiveness and success.

Keywords: Family Business, Crisis, Performance, External Constrains, Internal Constrains, Organizational Knowledge, Strategic Planning

JEL classification codes: L260, M10, M13, M190

INTRODUCTION

Family businesses indicate advantages over non-family business especially in terms of crisis. Motivation and support of family members, i.e. the willingness and readiness to work long hours under difficult conditions, restrained by the limited opportunities for gaining financial compensation for the persons involved, are the main aspects which set apart family from non-family businesses. Apart from the short term orientation toward success envisioned in many non-family business, family business are characterized with a strong orientation towards sustainability, growth and development (Siakas et al. 2014). Notwithstanding, the major physiological element, family business indicate also a strong entrepreneurial component in times of crisis, which again entitle family business with a great importance for every economy in any country. Considering the great importance of family business, the performance of these businesses is of critical significance for the progress of any economy. There is a growing recognition that a better understanding of how family involvement influences performance, is essential for progress in the field of family business (Habbershon et al. 2003).

In the early nineties, followed by significant political and social changes, most of the former socialist countries tumbled in to an open market economy facing the raise and development of private ownership. Accordingly, the presence of small businesses grew, which in particular is implicated in the segment of family business. In that sense the attractiveness of family business has risen significantly in the last twenty years in these countries, simultaneously attracting researchers to consider the research gap in this field. It is obvious that family businesses in developing countries, especially those undergoing a crucial systematic change, have certain specifics which could differ from the developing world. Additionally family businesses in transition countries are considered to be quite young, not having faced any generational transition yet. The influences of the country historical development could not be diminished and every serious researcher should take into discussion the various country related aspects, such as social, political and legal factors. Nevertheless, family businesses have been strongly influenced in their performance by operating in countries with different institutional environments (Steier, 2009). There could be found a few studies in the former socialist countries, related mostly to countries such as Poland, Romania and Slovenia, primarily concentrating on the importance, definition and characteristics of family business (Poutziouris et al. 1997; Duh 2003; Dyer et al. 2005).

The majority of research on family firms in the past decade or so, has been directed toward the individual or group levels, with only limited recent interest in the organizational level. Topics such as organizational vision and culture development, marketing strategies used, human resource practices, interorganizational relationships, and so forth remain unstudied. At the organizational level, relevant researchers have specified the necessity to make a more thorough analysis of the strategic and competitive characteristics of family businesses, as well as the factors that condition them in both financial and economic terms (Scholes et al. 2010). With regard to the analysis of particular strategic dimensions, the empirical research revealed mixed results, with family and nonfamily firms being different on some dimensions (e.g., entrepreneurial activities undertaken, performance, perception of environmental opportunities and threats), but not on others (e.g., strategic orientation, sources of debt financing) (Sharma, 2004). Additionally, some research reveal that the influence of family can have a moderating impact between company strategy and performance (Chrisman et al. 2008). Regarding the necessity of important strategic dimensions investigation, many empirical studies have approved their supporting role in creating better long term competitive positions and better organizational performance. Therefore, it seems as necessary, series of studies and research to be conducted in developing countries in order to verify the need for greater considering of these important dimensions in everyday business processes of the companies.

Hence, the purpose of this study is to investigate some important strategic dimensions that could influence the performance and cause performance differences among the family and nonfamily businesses. External environment of a business, internal environment of a business, the level of organizational knowledge as a main source of competitive advantage, as well as a strategic oriented planning are particularly investigated in this study. The study is concentrated on former socialist countries, particularly those in the region of former Yugoslavian countries, through exploring the case of the Republic of Macedonia. The main objectives of the research are realized through investigation of the main family business aspects in theory; the state and some insights of family business in former socialist countries; the state and some insights of family business in term of crisis and post-crisis period; performance of family business and related strategic dimensions such as: internal environment constrains, external environment constrains, organizational knowledge, as well as a strategic oriented planning.

The provided research of family business could have important practical implications for improving effectiveness, indicating supporting elements and tools for family businesses in general, simultaneously providing guidance and raising awareness of owners-founders of these businesses, on the path of advancing the sophistication of their business processes and transferring the necessary knowledge and competences for next generations to come- successors of these business.

LITERATURE REVIEW

The idea of Family business

Family businesses are the drivers of creating economic development and wealth around the world. The interest towards family business has significantly risen in the last twenty years. The presence of family business is with no doubt significantly. According to some estimations in Family business statistics in Europe, about 70 % to 80% of enterprises are family businesses and they account for about 40 % to 50 % of employment. On the one hand, a large share of European SMEs are family businesses, and some of the largest European companies are also family businesses (Mandl, 2008). The figures for various countries are: France (60%), Germany (60%), the Netherlands (74%), Portugal (70%), Belgium (70%), United Kingdom (70%), Spain (79%), Sweden (79%), Greece (80%), Cyprus (80%), Italy (93%), Australia (75%) and the USA (96%) (van Buuren, 2007). Even though no statistical evidence are complete enough to map the presence of family businesses worldwide, many studies conducted in different countries have confirmed the weight these businesses carry in national economies (Astrachan, Shanker, 2003).

Hence research related to such forms of business has been rising discussions and growing ever since. Initially, it could be stressed that the main challenge of family business research has evolved around setting a clear definition of what can and what cannot be considered as family business. However, a wide range of different definitions have been applied in socio-economic research and also partly in legal regulations. Furthermore official statistical data related to family business has been scarce and is mostly based on estimations. Basically, the aim of family business is set upon meeting some of the needs of family members. Family business could be distinguished from other types of business by the strong influence and presence of the family. This means that setting a wider range of relationships, which could be based on at the same time on professional and private basis creating a specific business situation. In literature, there is no single definition of family business (Astrachan, Shanker, 2003; Chua, 1999; Miller et al., 2007). Chua et al. (1999) detected that family ownership plus significant management involvement by family members, may be sufficient to ensure that the vision of the firm is shaped and pursued by the family. Although ownership, management, and succession

are generally the necessary conditions, a high level of family involvement in ownership and management could be considered as a sufficient condition as well. In some definitions of the family business it is implied that businesses that will be transferred to the next generation in the same family, which will manage and operate it could be indeed considered as family businesses (Ward, 1987). Some authors argue that family businesses are differentiated because of the active involvement of the family in the management and the intention of the members of the family to retain ownership in the enterprise (Schulze et al., 2001). It should be noted that the definition of the concept of family and the extent to which it is expressed in business is a very complex issue, making it impossible to be condensed into a common simplified definition. In their comprehensive analysis of the family business Christman, Chua, and Sharma, found twenty-one different definition in terms of the family business in the survey of more than 250 papers (Sharma et al., 1996). Historically it is considered that the development of the definition for family business took place through three dimensions: ownership, involvement of family members and the transition between generations, as well as the combination of these parameters (Handler, 1989). The broadest definition is that as a family business should be considered any company whose operations are strongly influenced by the relations of one family. This however is too general, opening a lot of questions and potential for raising misunderstandings. There are many dimensions that influence the definition of family businesses.

The reasoning behind the existence of business and family are essentially different. So the primary drive of the family is centered on the development and care of its members, whereas business is oriented toward profit creation and survival evolving around production and distribution of goods and / or services. Family relationships enhances emotional connotations, radically complicating work, especially practices of reviewing employees' performance. Opposing discussions are raised what should be ranked first, the family or business and even more in practice, the resolution of this pressure is difficult and complex. In order to achieve the best performance and long-term success, family businesses need to identify professional management behind the essence of succeeding in certain contexts as well as putting aside sometimes the interests of the family if they have not been set as a priority so far.

Family business in former socialist countries

Former socialist countries in Central and Eastern Europe have gone through a process of change, when they ended the era of private enterprises being banned, by entering a new phase creating opportunities for the reawakening of entrepreneurship and the development family business. Some research suggest that background settings are playing critical roles in defining governance of family business and regulating their performance impacts. However still studies evolving around the topic of family business in former socialist countries are limited. Since former Yugoslavian countries had a closed economy, private business, including family business were restricted mainly to the crafting segment or agriculture. In the early nineties followed by significant political and social changes, most of the Yugoslavian countries, plunged into an open market economy facing the raise and development of private ownership. Accordingly, the presence of small businesses grew, which in particularly is implicated in the segment of family business. In that sense the attractiveness of family business significantly has risen in the last twenty years in all developing countries, simultaneously attracting researchers to consider the research gap in this field. It is obvious that family businesses in developing countries especially those undergoing a crucial systematic change have certain specifics which could differ from the developing world. Additionally family businesses in transition countries are considered to be quite young, not having faced any generational transition yet. Basically this means that most of the family business are still in the hands

of the founding owner and his wife. His children may or may not be involved in the business operations, but are considered to be the only possible successors. The existing body of literature worldwide could offer some guidance in respect to the successful succession execution. Still the influences of the country historical development, could not be diminished and every serious research should take into discussion the various country related aspects, such as social, political and legal factors.

Developing countries have indicated to some instance differences related to the performance of family business, whereas these have not sufficiently been discussed by researchers in this field. Researchers have explored differences among family and non-family business considering different performance measures such as size, age, debt, industry, performance, profitability, job creation, growth, strategies, organizational outcomes, (Westhead, Cowling 1997; Beehr, Drexler, Faulkner 1997, Anderson, Raab 2003, Chrisman, Chua, Litz 2004.). Nevertheless, family businesses have been strongly influenced in their performance by operating in countries with different institutional environments (Steier, 2009). DeDee and Vorhies (1998) asserted that a key difference between small family-owned and nonfamily businesses is that the former tend to be conservative and more risk averse. Which could be one of the key points when discussing family business in transition countries, where mostly the economies have experiences a large scale of uncertainty and major crisis from a social, economic and political point of view. There could be found a few studies related mostly to countries such as Poland, Romania and Slovenia. (Poutziouris et al. 1997; Duh 2003; Dyer, Panicheva Mortensen, 2005) primarily concentrating on the importance, definition and characteristics of family business. Here it could be noted that the number of family enterprises is increasing rapidly in transition countries. Research implies that the problems presented in family enterprises in transition countries have already been dealt with and solved in west European countries; therefore they possess practical experiences and scientifically grounded solutions regarding the problems of family enterprises.

Family business in crisis and post-crisis period

In times of crisis the family and business ties are strengthen with creativity and a sense of challenge towards the crisis (Siakas et al, 2014). Usually, small businesses suffer more than larger businesses in times of economic recession because the former tend to have very limited financial resources. Additionally, small firms are heavily reliant upon bank borrowing, and during a recession, banks tend to exhibit an unwillingness to grant additional loans to small firms (DeDee, Vorhies, 1998). Some authors argue that whether family firms are more capable to survive a recession than nonfamily firms. One of the studies prepared (Braun, Latham 2009) was oriented towards the performance during the 2001 recession in the United States, whereby it was concluded that small family firms were better able to survive a downturn than small nonfamily firms. On the other hand, it has been widely debated that big corporations turn to downsizing and cut offs in hard times and small and medium sized enterprises are often more patient and persistent with their practical day to day operations and ownership structure (Mandl, 2008). According to research carried out in Greece (Vlachakis et al.2008), family business have in-built mechanisms that can operate in crisis periods and thus contribute to meet the needs more effectively compared to non-family business. Such mechanisms could be found in the economic crisis perceived as forced "opportunity". Further the combination of emotion with entrepreneurship brings family members around the common goal and through the effective cooperation of the two separate systems "family" and "business" they create dynamic growth in the middle of the crisis. Another important issue evident is the weight of failure of on the family business leader, being much larger than that of a manager of non-family businesses. Further essential

element contributing in response to the crisis is adopting a lean and flexible budget and in that sense family business being more motivated and devoted.

Performance of family business

Performance has been raising interest when discussing the success of business. The main indicator for distinguishing family business is the presence and sharing of family connections, values, and ethics and behavioral patterns, which more or less are transferred or at least shared at work. Historically, research on family firm performance has tended to focus on a single mostly financial based performance measurement (Westhead, Cowling, 1998). In addition, Westhead and Cowling (1998) also found that various definitions of 'family firm' lead to different results of whether family firms perform better than non-family firms.

More than a decade earlier Demsetz (1983) had proposed that the higher performance of family firms, could be attained to the fact that owners are expected to maximize the value of the firm more than professional managers of nonfamily businesses. In fact Demsetz believed that non-family businesses may implement strategies more appropriate to maximize short-term performance and in this context managers prefer to exploit their own value, in order to receive instant financial gains for themselves, rather than pursuing activities which optimize long-term business performance. Another suggestion is that family businesses do not place high emphasis on short-term sales performance or expanding their workforce because these organizations have objectives other than immediate financial performance (Stoy Hayward, 1989). Differences between family firms and non-family firms exist due to various reasons and are a result of different analytical approaches. Non-family business as an example often generate additional resources, which can be used by managers to overcome the consequences of poor decision making or even out variations in performance (Sharfman, et al.1988).

Daily and Dollinger (1992) found that net profit margins were higher in family-owned and family-managed firms than those of the firms' major competitors. Daily and Dollinger (1993) concluded that family businesses tend to have fewer employees than non-family ones, because many family firms do not seek to increase their employment size other than to implement actions consistent with meeting the needs of employing more family members.

Gimeno et al. (1997) have debated that the survival of the company to a large extent depends upon two dimensions: economic performance and threshold of performance, the latter being understood as 'the level of performance below which the dominant organizational constituents would act to dissolve the company'. Non-economic performance factors influence company objectives and values and could include: maintaining a good work atmosphere and avoiding clashes; providing offspring: work, prestige and social recognition; financial security; a pleasant lifestyle; sense of justice, social development; and etc.

Other research studies have shown that the owners of family businesses reported a desire to pass the business onto the next generation and for these businesses, business stability is just as important as business expansion. Westhead and Cowling (1997), however, were unable to support these studies showing that in the United Kingdom, family firms outperform nonfamily businesses. Even much earlier in their analysis Hay and Morris (1984) propose that for family firms in the United Kingdom, the most important aim is to pass the business onto the next generation. However evidence was presented (Westhead, Cowling 1997) that family and non-family businesses have very similar growth ambitions.

From the more recent research in the last fifteen years, one of the probably most cited are Anderson and Reeb (2003), whereby they indicate family business tendency to outperform nonfamily ones. Their discussion raises also queries whether families have advantages in disciplining and

monitoring managers, extended investment perspectives, and providing specified knowledge, questioning if founding-family presence hinders or facilitates the performance making it an empirical issue (Anderson, Reeb, 2003).

Connected strongly to performance could be emphasized size, revenue change and growth. Growth is a multidimensional issue which can cover various aspects of business performance. In literature growth is considered as a simple “change of the amount” or an improvement on certain aspects in the business. Literature which considers growth in small businesses, mostly relates to empirical research determining the level of growth reached, witnessing the existence of substantial and qualitative difference in respect to the way that business achieve growth (McKelvie, Wiklund 2010). The ability to grow is very often associated with the quality of entrepreneurial tradition and ability to pass it from one generation onto the next one (Lumpkin, Sloat, 2001) which could be especially challenging in family business. Daily, Dollinger (1993) suggested that family managed firms lean towards being smaller, younger, less formalized and growth-oriented, displaying less “entrepreneurial” characteristics. Also McMahon (2003) argues that growth is simply a consequence of the implemented financial decisions and suggests that encouraging comprehensive financial planning expertise, could be contributing in encouraging the growth perspective of family firms. Research presents evidence (Binder, 1994) that non-family business outperformed family businesses considering revenue growth. However, opposite results have also been reported by others with regards to revenue growth and profit growth and some studies conclude that the differences between family business and non-family business are not significant with regards to turnover and profitability (Westhead, Cowling, 1997). From a revenue growth perspective, growth strategies are usually included such as increasing revenues from new markets, new products and new customers or increasing sales to existing customers. Also it is considered that growth orientation within family firms is positively associated with financial performance and influences the overall effectiveness of the organization. (Rutherford, Muse, & Oswald, 2006).

In a variety of analysis there has been fruitful discussions related to the performance of family business. However even some authors (Chrisman et al. 2005) offering an analysis of the relationship between family and performance, suggested at this time that the results in the literature are inconclusive. Therefore we can propose which was already mentioned in some papers such as Kellermanns et al. (2010) which suggested that family firms can have both a positive and negative influence on firm performance.

Important strategic dimensions in family business

The influence of family can have a moderating impact between strategy and performance (Chrisman et al. 2008). The word strategy has been introduced based on the military vocabulary, but in business it is considered to be the “game plan” or the map on how to achieve certain competitive advantage. So it is very closely linked to the long term performance and success of the business. However family business in order to remain successful according to some research efforts (Post, 1993), generate a new strategy for every generation that joins the business.

The family-business literature has not come to a consent on how a family should deal, simultaneously, with the possibly conflicting strategic needs of the family and the business. There have been some suggestions, but no overall consent has been achieved yet. Considering the strategic management perspective family could be simultaneously considered a resource and a limitation. The literature is quiet on the suitable business strategies for different family structures and dynamics, as well as for different business situations (Sharma et al. 1997). However, if participation from non-family members is limited, group thinking could be raised in the strategic process, when dominated by

family members, as non-family members are less committed to strategic decisions (Guth, MacMillan, 1986). At times, research and analysis is enforced discussing strategic aspects in larger family businesses more intense, mostly due to availability of certain information. Furthermore relevant researchers have specified the necessity to make a more thorough analysis of the strategic and competitive characteristics of small and medium family firms, as well as the factors that condition them in both financial and economic terms (Scholes et al.2010).

Internal environment constrains. Internal constrains are founded in the company itself and come as a result of lack of resources, limitations of the capacities in the company, insufficient capabilities, skills and knowledge of employees, constrains related to the organizational culture of the company and etc. Mostly, it could be argued that internal constrains are raised by the lack of resources. Obviously for small businesses and in that sense family business, the environment influences organizational development, but the internal perspective proposes that the entrepreneur assumes a more active than reactive role in the development and success of the venture. The family faces continual changes in the business environment and in internal pressures as people develop (Jaffe, Lane, 2004). Therefore the family must come up with a clear infrastructure to manage the interrelationship of people, business, and investment.

External environment constrains. External constrains for businesses could be attained to some limitations to enter certain markets, low market demand of the product, access to inputs or raw materials, problems with export, legislation for public procurement and etc. (Bartlett, Bukvic, 2001). The environment can with no doubt create numerous constrains for any company, due to size, volume of work and markets they serve facing a significantly higher uncertainty and dependence upon external circumstances. (Fadahunsi, 2012). Family businesses in general are less willing to allocate financial reserves to high-risk activities, such as entering new markets and prefer self-funding over borrowing. In this line, certain authors (Braun, Latham 2009) expressed the view that “the family’s organizational stewardship leading up to the recession provides distinctive performance advantages. Family businesses need to be well aware of the relevant and potential constrains which might occur in their specific and general environment.

Knowledge. The importance of knowledge-based resources has been well documented in the literature (Wiklund, Shepherd 2003). Firm success often relies upon the firm’s ability to accumulate knowledge and process it, in order to enable organizational learning (Cohen, Sproul, 1991). Every company in today’s modern world considers knowledge as a very valuable asset so according to Bell 1973, knowledge could be considered as a set of organized statements of facts or ideas, presenting a reasoned judgment or an experimental result, which is transferred to others through some communication medium in some systematic form. In this context we can summarize that knowledge is information of which a person, organization or other entity is aware and able to use it. In addition, family shareholders often have accumulated extensive knowledge from their long experience of the business because they have been in contact with the operation from their early childhood (Westhead, Howorth, 2006). This means that familiarity enables to be better informed about the firm than managers in nonfamily businesses, many of whom often remain with a firm for just a few years. This accumulated knowledge is extremely useful when managers need to implement changes in order to survive a recession (Chaston, 2002).

Planning. Studies show that good planning is a key to the success of family firms (Aram, Cowen, 1990). However family firms view strategic planning as time-consuming and unnecessary, instead preferring to focus on the day-to-day operation of the business (Ward, 1987). Further family firms very often avoid strategic planning due to leaders feeling that it restricts their discretion or it will force them to deal with sensitive matters like succession (Schulze et al., 2001). Regarding strategic planning, many family firms refuse to plan for the future, relying instead on previously successful strategies that make them susceptible to groupthink and strategic simplicity (Ling,

Kellermans, 2010). Still strategic planning may be a valuable tool for achieving good agency since it “promotes the alignment of attitudes toward growth opportunities and risk by forcing agents to define the firm’s mission and values, promotes consensus by requiring that agents from different levels in the hierarchy agree on goals and strategies, and imposes discipline by insisting that these objectives guide day-to-day activities” (Schulze et al., 2001). Some authors consider that agency costs can impact firm’s performance and survival, therefore supporters of agency theory argue that family firms should employ formalized governance mechanisms like strategic planning, human resource management, pay incentives, and the participation of advisors in decision-making (Chrisman et al., 2004). In this context it could be argued that strategic planning is ineffective governance mechanism helping limiting agency costs in family business and so contributing to their performance (Schulze et al., 2001).

Conceptual framework, model, hypotheses and research question/s

The conceptual framework of the research is based on theoretical knowledge that explores organizational differences using the effect of important strategic dimensions in companies. The research utilizes this knowledge to develop a model and to formulate the research questions, related to how the priorities of family and nonfamily businesses lead to differences in important strategic dimensions that affect their performance.

As mentioned in the introduction, the main idea for this research rises from the gap in the literature resulting due to limited interest of family business research on the organizational level. Topics such as organizational vision and culture development, marketing strategies used, human resource practices, interorganizational relationships, and so forth are somewhat unstudied. At the organizational level, relevant researchers have specified the necessity to make a more thorough analysis of the strategic and competitive characteristics of family firms, as well as the factors that condition them in both financial and economic terms (Scholes et al.2010). With regard to the analysis of particular strategic dimensions, the empirical research revealed mixed results, with family and nonfamily firms being different on some dimensions (e.g., entrepreneurial activities undertaken, performance, perception of environmental opportunities and threats) but not on others (e.g., strategic orientation, sources of debt financing) (Sharma, 2004).

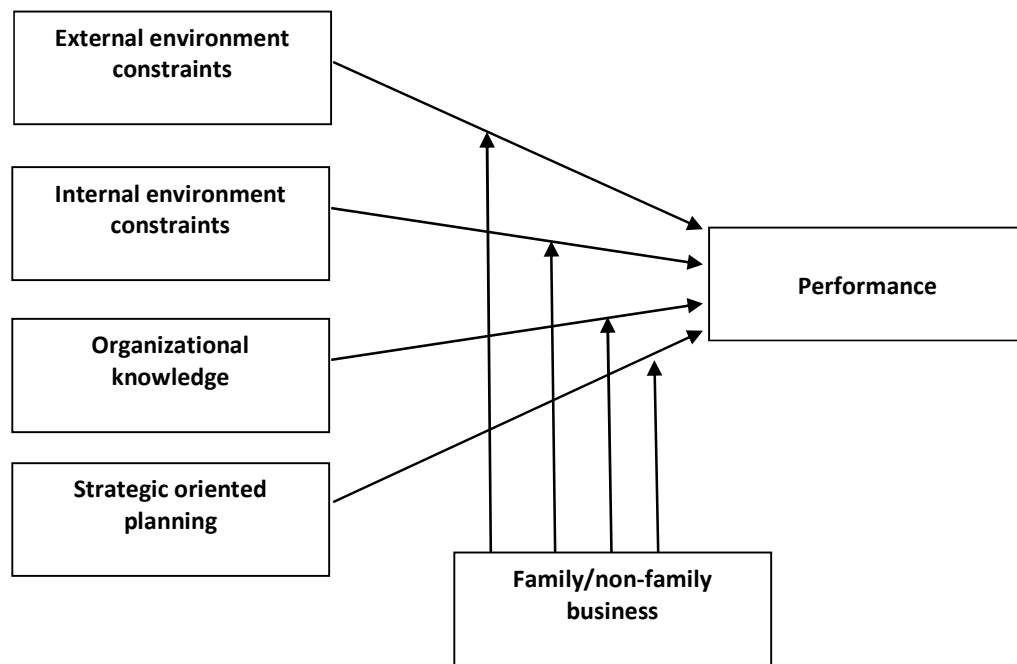
Among different strategic dimensions explored in the theory on family business and presented in the literature review, we narrow our focus on four strategic dimensions: external environment constrains, internal environment constrains, the level of organizational knowledge as a main source of competitive advantage, as well as the level of strategic oriented planning. The external environment constrains considers the main external aspects of companies mainly related to law enforcement, policies, general market conditions, fluctuations related to supply and demand and etc. Internal environment constrains is mainly attained to the internal resources of the company, managing cash flow, human resource management, daily operations and etc. The level of knowledge is very close related to internal resources of the company and also acquiring specific knowledge and skills. The process of strategic planning is explored considering the level of strategic planning executed and how much emphasize and focus is set in family business.

In order to design the particular model for examining the selected strategic dimensions among family and non-family business in relationships to performance, the research uses the conceptual framework of research which reveal that the influence of family can have a moderating impact between strategy and performance (Chrisman et al.2008). Thus, we search for differences between family and non-family business by examining the relationship of strategic dimensions and performance, as well as a moderating effect on this relationship of type of the business (family vs. non-family business).

The general hypothesis of the research is that there are differences in performance in terms of important strategic dimensions between family and non-family businesses. Particular, the hypothesis is in the following format: As a result of moderating effect of family/non-family business, the relationship between the important strategic dimensions and performance, will be stronger in family businesses than in non-family businesses.

The research model used within this research is presented in figure one, using family/non-family businesses as a main moderator considering the four main variables.

Figure 1. Research model



In this line, the proposed model should raise additional discussion and offer new value for further research by answering some main questions. The main hypothesis will be examined in more thoroughly, by answering the following questions:

1. Does the type of a business (family/non-family) affect the relationship between external constraints and performance?
2. Does the type of a business (family/non-family) affect the relationship between internal constraints and performance?
3. Does the type of a business (family/non-family) affect the relationship between the organizational knowledge and performance?
4. Does the type of a business (family/non-family) affect the relationship between strategic oriented planning and performance?

DATA AND METHODOLOGY

The sample and data gathering

Small and medium sized enterprises in the Republic of Macedonia, defined according to the criteria of Article 470 of the Company Law, constitutes the population of this study. This population has been chosen due to the fact that the family business sector, same as in the Europe, as well as in the Republic of Macedonia, is dominated by SME's. 326 questionnaires were collected, which represents 20% of the total questionnaires randomly sent out to different companies. It could be noted that a large number of questionnaires were submitted and the overall response rate could be considered as low. After performing data screening on the total sample only 305 subject remained, whereas 11 were banned due to technical dimensions or insufficient information. The questionnaire was prepared and tested on a small number of business and feedback was received in order to improve and clarify some dimensions of potential respondents, and consequently valuable changes have been made. The relatively low response rate reflects also the attitude of small companies in relation to providing information, which are mainly closed in sharing company information to the outside. The questionnaire was distributed in the period between 13.05.2014 and 19.07.2014, among companies on the whole territory of the Republic of Macedonia. The approach of distributing the questionnaire implied several ways: handing printed questionnaires in person to randomly selected companies; submitting the questionnaire in an online soft copy by email, as well as uploading the questionnaire in electronic format on-line application which can be directly filled in. The questionnaire contains 26 questions, where 9 are placed on the Likert scale with 5 positions - 1 indicating the lowest level, and 5 - the highest level of occurrence. The remaining questions are multiple choice including several alternatives, respondents were asked to choose the best suited option according to their perception. Whether a particular business is going to be classified as "family" or "non-family" was left to the judgment of the person answering the questionnaire, which is very common, considering the extensive literature of defining family business. Of the received 305 business responses in the sample 207 (67.86%) are family business, whereas 98 (32.13%) are non-family business. The diversity of companies is proved by various industries and geographic regions present, the different number of employees and different years of existence of the business, as well as the appropriate participation of these businesses into the sample provides its representativeness.

Data analysis method

To answer the research questions, we ran a moderator hierarchical multiple regressions of business performance on the most important strategic dimensions: external constraints, internal constraints, organizational knowledge, and strategic oriented planning, moderated by family/non-family business. A moderator analysis is used to determine whether the relationship between the two variables depends on (is moderated by) the value of a third variable. One analytical method that can be used to determine if a moderator effect exists is to use an interaction term in a multiple regression analysis. Such a term can be created by multiplying the independent and moderator variables together. This is then added to the regression model to predict the dependent variable. An additional reason for the application of this method is that hierarchical regression allows adding independent variables into the regression equation in an order chosen by the researcher. This presents numerous advantages, such as allowing control of the effects of the covariates on the results and taking into account of the possible causal effects of the independent variables, when predicting a dependent variable. After the creation of both dummy variables, family and non-family business, the next phase

is creation of the interaction terms for each of these dummy variables; that is, an interaction term that is the product of each of the independent variables and each dummy variable. This requires creation of eight interaction terms (two for each in independent variables): external constraints x family business, external constraints x non-family business, internal constraints x family business, internal constraints x non-family business, organizational knowledge x family business, organizational knowledge x non-family business, planning x family business, and planning x non-family business. The final model is divided in three blocks. In the first block are placed the general demographic characteristics: size, age and industry. These variables are considered as control variables, which at a large scale should determine the behavior of the rest of the variables within the model. In the second block, external constraints, internal constraints, organizational knowledge, and strategic oriented planning, as well as the direct influence of family/non-family business on performance are placed, whereas in the third block the interaction terms of independent and moderator variables is added. The third block allows to see if adding this interaction terms to the existing regression model (i.e., the model that contains only the independent and dummy variables) improves the prediction of performance, i.e. this allows to determine whether the interaction term is statistically significant.

Operationalization of variables

Dependent variable

Performance. Performance as a variable is determined by the average of the values provided by a Likert scale from 1 to 5 considering seven aspects of growth. Respondents needed within this variable to provide information related to some growth aspects of the business including indicators such as: income, market share, quantity of products and services, the production capacity, the product and service portfolio and number of employees. In this context 1 determines the lowest scale and 5 the highest scale of performance

Independent variables

External environment constrains. External constraints are included as continuous variables that may have value in the range of 1 to 5, so again the Likert Scale is used, 1 being the lowest level 5 the highest level of occurrence. This variable designates more features related to external environment, which may occur in the form of constraints. Finally from the values attained to seven constrains (lack of employees, fluctuations of demand, financing, legislation, political situation, growth of input prices, growth of competition) an average value is calculated which is used in further analysis.

Internal environment constrains. Similar to external constraints, internal constrains are also continuous variables that have values in the interval from 1 to 5, 1 representing the lowest and 5 the highest value. An average value is calculated considering 6 items related to internal constraints. The resources in the enterprise largely determine the internal opportunities and constraints of small enterprises.

Strategic oriented planning. The planning is evaluated according to the Likert scale from 1 to 5 (1 being the lowest intensity 5 the highest). The variable is presented as a continuous one calculated by the grades received for the various statements. The various statements receive their mark which will result in a final average grade used in further analysis.

Organizational knowledge. The level of knowledge is assessed using again the Likert scale from 1 to 5, measuring the intensity of total knowledge considering general, specific and unique knowledge. Again 1 is marking the lowest and 5 the highest level, but the average is considered for further analysis.

Moderator variable

Family/non-family business. Whether a particular business is classified as “family” or “non-family” was left upon the judgment of the person answering the questionnaire, which is very common, considering the extensive literature of defining family business.

Control variables

Business size (number of employees). Related to size of the business it can be measured in different ways and therefore it could differ in various studies, however mostly businesses discuss the number of employees. In our research due to the question set in the questionnaire respondents had to state the exact number of employees. This caused large variations and the standard deviation was unusually high, so values had to be logarithmically transformed in order to be normalized for further use.

Business age. Usually the maturity of the business is expressed by the age, which of course is expressed by the number of years of existence. Therefore in our analysis respondents needed to provide the number of years the business exists presented as a continuous variable. It is very similar the previously mentioned, so this variable is logarithmically transformed as well.

Industry. Related to the industry most research evolves around categorizing the business in different groups. This research very similar provides five options where each business needs to choose from in order to determine where it belongs to. The respondents have been asked to choose from the following options: production, services, trade, construction and other option not stated within the questionnaire.

RESULTS AND ANALYSIS

Moderation multiple regression analysis was used to identify the predictors of performance in family and non-family business. The assumptions of linearity, independence of errors, homoscedasticity, unusual points and normality of residuals were met.

As presented in Table 1, Model 1 includes only the control variables. Model 2 adds the external constraints, internal constraints, organizational knowledge, and strategic oriented planning, and Model 3 adds the interaction terms of each of dependent variables and the moderator variable (family business/non-family business) used to test our hypotheses. The regression models are all significant, the model 1 at the .05 level, model 2 and model 3 at the .001 level. The R^2 change is significant at the .05 level only for the Model 2. Overall, the full regression model explains a substantial amount of the variance in our dependent variable, performance ($R^2 = .414$, adjusted $R^2 = .384$).

Table 1. Results from moderation regression analysis

VARIABLE	Model 1		Model 2		Model 3	
	B	Sig.	B	Sig.	B	Sig.
STEP 1						
Size	0,198	0,002***	0,181	0,000***	0,190	0,000***
Age	(0,081)	0,291	(0,121)	0,054*	(0,129)	0,043**
Industry 1	(0,072)	0,807	(0,075)	0,748	(0,116)	0,624
Industry 2	(0,018)	0,948	(0,015)	0,948	(0,056)	0,803
Industry 3	(0,209)	0,471	(0,149)	0,518	(0,199)	0,395
STEP 2						
External constrains			0,075	0,323	0,019	0,875
Internal constrains			0,221	0,001***	0,296	0,012**
Knowledge			0,183	0,001***	0,066	0,499
Planning			0,363	0,000***	0,434	0,000***
Family/Non- family			0,077	0,453	0,082	0,420
STEP 3						
External constrains *family business					0,087	0,577
Internal constrains *family business					(0,117)	0,418
Organizational knowledge *family business					0,171	0,147
Planning *family business					(0,106)	0,438
R ²	,042		,408		,414	
F-statistics block	2,489**		19,067***		13,727***	
Change in R ²	,042		,365		,006	
F change	2,489**		34,179***		,728	

Model 1 shows that the only control variable with a significant influence on performance is size and that relationship was positive. Something unusual is noticed in this model: age of the business does not significantly predict performance, whereas in the next two models it is arise as significant predictor of performance with negative relationship. This often could be explained with the effect of multicollinearity among the independent variables. Nevertheless, multticollearity was tested as one of the assumption in moderation regression, and in this line didn't indicate significant collinearity, therefore business age remains a vital part of the model as an important predictor of the dependent variable.

In Model 2, the results show that besides, the business size and business age, furthermore internal constraints, organizational knowledge, and strategic oriented planning have a significant positive relationship with performance ($p < .01$). As in the case of business age in Model 1, in this model the organizational knowledge loses the power for prediction of performance in the next model (Model 3). This again could be explained with the effect of multicollinearity among the independent

variables. Though, multicollinearity was tested and in this line didn't indicate significant collinearity, therefore organizational remains a vital part of the model as an important predictor of the dependent variable.

The external constraints are not a significant predictor. Although, our hypotheses are concerned only with the moderating influences of family involvement, we included the family influence variable in this model for completeness because family influence may directly affect performance. However, the coefficient for the family influence variable was not significant, indicating that performance was not significantly different for the family and nonfamily firms in our sample.

As shown in Model 3, there was no significant interaction effect between each of the four independent variables: external constraints, internal constraints, organizational knowledge, strategic oriented planning and family influence. This means that there are no statistical significant differences between family and non-family business in the influence of each of the four independent variables on performance.

Besides, multiple moderation regression analysis conducted for all independent variables, also simple moderation analysis for each of the independent variables was conducted for the purpose of this research, in order the determined results to be confirmed, or any different relationship to be identified.

One of the methods for simple moderation analysis is analysis of simple regression slopes. There are two simple regression slopes which need to be considered: (1) the relationship between one of the independent variables and performance for family business; and (2) the relationship between one of the independent variables and performance for non-family business. The two major objectives of this type of follow up analysis are to describe the relationship (i.e., the regression equations) for each group and to determine whether the relationships are statistically significant.

Unlike the multiple moderation regression analysis, the simple slopes analysis revealed that there was a statistically significant positive linear relationship between performance and external barriers at family business, as well as at non-family business. This means there is statistically significant differences between family and non-family business in the influence of external barriers on performance.

Figure 2. Moderation effect of family/non- family business

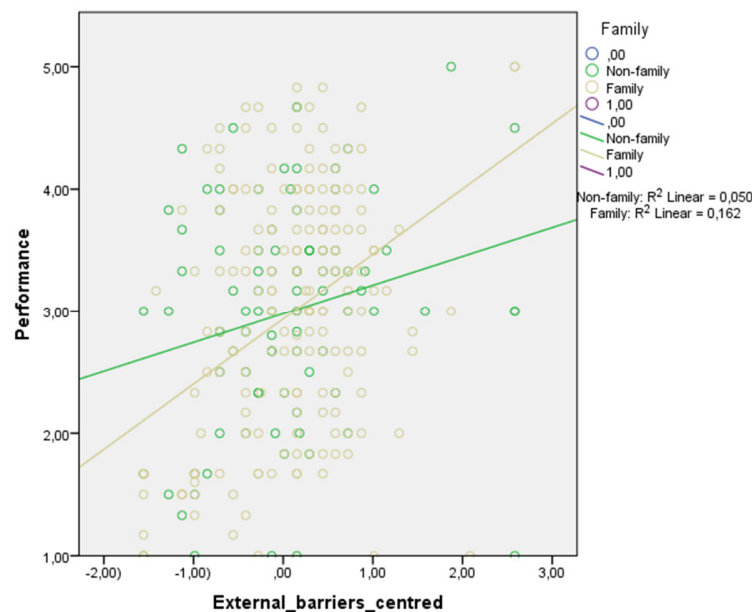


Figure 2 shows that performance of non-family firms increases only slightly as the external barriers increase, while performance of family business decreases more dramatically. This suggests that external barriers of family firms are different in some material way from those of non-family firms.

CONCLUSIONS

In this study, we argued that the important strategic dimensions differ between family and non-family businesses. We also argued that family influence will moderate the relationship between important strategic dimensions and performance, or in other words, the performance of family and non-family firms should be different even when both practice similar strategic dimensions.

Systematically we can divide the conclusions in three parts, according to the three types of variables examined in the research. Regarding the control variables, i.e. demography of the investigated family and non-family businesses, although they are were not our primary interest of research, we can conclude that business size and business age are significant predictors of performance, but with slight explanation of the total variation of performance. This gave us reason to continue with the research, and to search for other, more important variables. The second set of variables, i.e. the important strategic dimensions show positive relationship with performance. This means that external environment constrains, internal environment constraints, organizational knowledge, and strategic oriented planning have a significant positive relationship with performance. Interesting moment is that research discovered positive relationship between external environment constrains and performance, as well as internal environment constrains and performance. This could be argued with the positive values and attitudes towards the uncertainty and limitations of owners and primarily entrepreneurs of more successful family and non-family businesses, i.e. businesses with better performance. Also, it could be argued that owners and entrepreneurs of more successful family and non-family businesses are more aware for external and internal environment constrains, as well as the necessity for continuing improvement of internal business practices according to external threats and opportunities, which is very important in terms of recovery in post-crisis period.

The third set of variables, i.e. the important strategic dimensions strengthened with the family influence on performance show that there was no significant interaction effect between each of the four independent variables and performance: external environment constraints and family influence, internal environment constraints and family influence, organizational knowledge and family influence, strategic oriented planning and family influence on performance. This means that there are no statistical significant differences between family and non-family business in the influence of each of the four independent variables on performance. Unlike the multiple moderation regression analysis, the simple slopes analysis revealed statistical significant differences between family and non-family business concerning the influence of external environment constrains on performance. This reveals one more very interesting fact in terms of the post-crisis period and the role of family business in encouragement of entrepreneurship, and that is the positive perception toward uncertainty and risk, as well as readiness of these businesses, even in such circumstances to fight for competitiveness and success.

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ASPECTS OF JOB SATISFACTION FOR NURSES OF ALBANIAN PUBLIC AND PRIVATE HOSPITALS

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ABSTRACT

Job satisfaction and employees' motivation are key elements used by successful executives of wellknown manufacturing and service organizations, public or private, to encourage their employees to work better in order to have higher performance, and to serve customers better, by increasing in this manner the objective of effectiveness and efficiency. Even at hospitals, public or private, the aspects that should be considered are job satisfaction, motivation factors and dissatisfiers for the employees in order to motivate and satisfy their needs considering the specific sector they serve on, and the great impact they have on the patients' health caring. In Albania as a developing country, like many neighboring and other countries in the world, there are efforts by executives of hospital centers to better understand and motivate their staff. Public hospital centers staff in Albania, especially nurses as front line employees finds it difficult to meet the patients' needs if their personal needs are not fulfilled, and sometimes they neglect their work, so these employees need to be motivated to increase their productivity and performance at work. Even in the private hospitals, nurses are satisfied regarding some elements, but dissatisfied from others. Therefore, both hospital centers in Albania must improve themselves in some aspects. In this paper, through the use of literature, the questionnaires and interviews directed mainly to the nurses working in Albanian public and private hospitals, the focus is to show how they perceive job satisfaction, motivation factors and dissatisfiers associated with their workplace, and to make relevant analysis, so to judge and discuss about the problems encountered in public hospitals compared to private ones, and by giving proper solutions. The perception of nurses regarding motivation factors that bring job satisfaction will be analyzed, such as work itself, recognition, responsibility, achievement, advancement, and also regarding their perception of factors as monetary reward, working conditions, relations with supervisors, coworkers, subordinates and company policies.

Keywords: Job Satisfaction, Herzberg factors, Hospitals

JEL classification codes: D23, M12

INTRODUCTION

Job satisfaction and employees' motivation are key elements used by successful executives of wellknown manufacturing and service organizations, public or private, to be competitive against competitors by using their entire skills. In Albania as a developing country, like some of the

neighboring and many countries in the world, efforts are being made by executives of hospital centers to better understand and motivate their employees. The largest group of health professionals around the globe is represented by nurses (Bureau of Labor Statistics, 2010). The healthcare workplace needs work readiness and motivation from its nurses, and also a partnership between nursing education and the workplace (Banks, Z. M. & Bailey, J. H., 2010). It should be done efforts to improve nursing working conditions because they're critical to retaining nurses in the system and attracting newcomers to nurses' profession (Laschinger, et. al, 2003b).

Health system in Albania in the first post-communism years was followed by mass emigration of doctors and nurses, small budgets, lack of drugs in hospitals, very low salaries for employees, etc. But also the health system has evolved after years of crisis, where the primary service institutions had as its mission the protection of health in accordance with the objectives of World Health Organization: 'Health for all'. The health system in Albania has undergone many partial interventions after 1992 when the political system changed. Reform undertaken during 2007 in the primary system was more complex and more influential in the health system for its own dimensions: organizational, financial and legal. There has been a restructuring of these institutions, creating more appropriate institutions, improving service quality, and by establishing private sector. Nurses are the employees of the health system that have suffered more after 1990, especially those in public hospitals, where they worked in bad conditions and with very low salaries. Even now, the current government wants to test nurses working at Albanian hospitals, and there is currently a debate about this among nurses and Ministry of Health of Albania, which according to nurses they have been tested once at university, and the money that will be spent by government on testing, can be better spent on higher salaries and training.

Public hospital centers staff in Albania, especially nurses as front line staff find it difficult to meet the patients' needs if their personal needs are not fulfilled, and sometimes they neglect their work, so these employees' needs should be satisfied and motivated in order to increase their productivity and performance at work. Even in the private hospitals, nurses are satisfied regarding some elements, but suffer from others aspects. Hospital centers in Albania must improve themselves in some aspects to better motivate and satisfy their staff needs (nurses, etc), which ultimately will contribute at better service for patients. Through this study, the contribution and impact of authors is sensitive regarding the analysis and discussion related to job satisfaction and motivation of the nurses working at hospital centers in Albania, increasing the awareness and consciousness of hospital administrations and the Ministry of Health of Albania to improve and to do more regarding motivating employees in hospitals, especially nurses.

LITERATURE REVIEW

Motivation in work and job satisfaction are related with each other. Motivation in the work is very important, which can be defined as individual's intensity, direction and persistence of efforts of individuals toward attaining goals (Robbins, 2001). In the medical sector as a service organization, its importance is given the fact that the nurses needs of hospital centers should be more satisfied and motivated because of the people they serve and patients' life caring. Nursing is focused on the care of individuals, families, and communities, so they may attain, maintain, or recover optimal health and quality of life of individuals (Snodgrass, 2004). Motivation affects job satisfaction at work, as the extent to positive orientation an employee expresses towards his/her job (Smith, 1969). Job satisfaction is a positive emotional state resulting from the appraisal of individual's job or job experiences (Lambrou, Kontodimopoulos, and Niakas, 2010). It is difficult for the hospital centers

staff to meet the patients' needs if their personal needs are not fulfilled (Linn, et. al, 1985; Ovretveit, 1990).

Job satisfaction, job happiness, satisfaction with salary and promotion, institution, and educational background are some significant factors affecting nurses' intention to quit their job (Tzeng, 2002). Job satisfaction has great impact for the employees and for the company/organization because when workers are dissatisfied, this brings the exhibition of behaviors such as rebellion, absenteeism and attitude affecting their performance, which leads to loss of efficiency and effectiveness in the organization, but if they're satisfied workers, they give their best to the benefit of the organization (Bolman & Deal, 2008). The dissatisfaction of employees leads to harmful effects for the institution and for the worker, reflecting on health issues for the employee and the company, low productivity, extra spending on recruitment, selection, training, and training of new professionals, among others (Somense & Duran, 2013). Some important predictors of job satisfaction for nurses are pay, autonomy, and professional status (Kovner, et.al, 1994).

Related to the motivation factors of the employees, is used by many authors the Herzberg's motivation - hygiene theory, also known as the two - factor theory, which has a practical approach toward motivating employees. Based in this theory, intrinsic and extrinsic factors enable individuals to satisfy their personal needs and experience job satisfaction in a work environment (Ball, 2003). Motivation factors such as achievement, work itself, responsibility, advancement, and recognition affected positive job attitudes, meanwhile hygiene factors (dissatisfiers) as working conditions, pay, relations with supervisors, company policies, and relations with subordinates or coworkers, affected negative job attitudes (Herzberg, F., 1966; Herzberg, F., 1987). Motivation factors help to increase job satisfaction and to improve the performance of the organization (Herzberg et. al., 1959). Poor hygiene factors can increase employees' levels of dissatisfaction (Lephalala, et.al, 2008). The experience of an employee working in an office or any job toward his/her tasks, as well as the workday will be totally differently if the attitudes toward the job are good or if they are bad (Herzberg, Mausner, and Snyderman; 1999).

The focus of this paper, through the use of literature, the questionnaires and interviews directed mainly to the nurses working in Albanian public and private hospitals (mainly at public University Hospital Center 'Mother Theresa', and private hospital centers in Tirana), is to show how they perceive job satisfaction, motivation factors and dissatisfiers associated with their workplace, and making relevant analysis. It will be analyzed the perception of nurses regarding factors considered as motivators that bring job satisfaction, such as work itself, recognition, responsibility, achievement, advancement, and also regarding their perception of factors as monetary reward, working conditions, relations with supervisors, coworkers, subordinates and company policies. Nurses are taken into account considering them as front line workers, so the focus is to see and analyze what motivates nurses to work better and effectively, and to better serve their patients. At the end of the material, conclusions and suggestions are made regarding this issue.

RESEARCH METHODOLOGY

In this study, the methodology used consists mainly in qualitative methods, combined with quantitative research methods. Primary sources are used like interviews, questionnaires distributed to the nurses working in Albanian public and private hospitals (mainly at public University Hospital Center 'Mother Theresa', and private hospital centers in Tirana such as American Hospital, Hygeia Hospital, etc), and secondary sources (literature that exists regarding this managerial approach). Survey by choice has been used where the selection is random probability sample. One hundred and

fifty questionnaires have been completed (104 for the public part and 46 for private one) filled by nurses working in Albanian public and private hospitals.

The data was computed by a statistical program, and was proceeded with the descriptive analysis to analyze the statistical indicators for different variables such as means, standard deviations, etc, for each Herzberg factor (Trochim, 2006). The questionnaires were designed in the form of statements and evaluated with the Likert scale from 1 'not at all' to 5 'great extent' (Vagias, 2006).

MOTIVATION FACTORS AND DISSATISFIERS FOR NURSES WORKING AT ALBANIAN PUBLIC AND PRIVATE HOSPITAL CENTERS

In this section, through the analysis of questionnaires and interviews directed mainly to nurses working at Albanian public and private hospital centers, Herzberg factors (motivation ones and dissatisfiers) are enlisted for nurses working in these institutions. Through the use of a statistical program is proceeded with the descriptive analysis to analyze the statistical indicators for different variables.

Motivation factors and dissatisfiers for nurses working at Albanian public hospital centers

Motivation factors and dissatisfiers for nurses working at Albanian public hospital centers (mainly at public University Hospital Center 'Mother Theresa'), with the mean (μ), standard deviations (σ) and coefficients of variation (CV), are shown in Table no.1. In the questionnaires directed to the nurses there are used Likert scale questions: 1 (not at all) to 5 (a great extent).

Table 1: Motivation factors and dissatisfiers for nurses working at Albanian public hospital centers

No.	Hygiene Factors (Dissatisfiers)	μ	σ	$CV=\sigma/\mu$
1	Very good interpersonal relationships with subordinates	3.19	0.40	0.13
2	High job security (secure employment)	3.14	0.91	0.29
3	Proper supervision by superior levels at the hospital	3.10	0.54	0.17
4	Very good interpersonal relationships with colleagues	3.00	0.63	0.21
5	Very good interpersonal relationships with supervisors	2.62	0.50	0.19
6	Proper management (administration) of the hospital	2.48	0.60	0.24
7	Proper salary in this hospital	1.76	0.77	0.44
8	Very good working conditions in this hospital	1.62	0.50	0.31
9	Proper policy followed by the hospital (organization)	1.57	0.51	0.32
No.	Motivation Factors	μ	σ	$CV=\sigma/\mu$
10	Wide recognition (good name) of work in this hospital	3.48	1.25	0.36
11	Very good and motivating work itself in this hospital	3.10	1.48	0.48
12	Possibility over time of advancement (progress) in this hospital (by being educated, by gaining experience, etc.)	2.90	1.41	0.49
13	Possibility and proper responsibility (taking over of duties) in the hospital	2.33	0.58	0.25
14	Stimulation or promotion by the hospital (organization) of the employees' achievements	2.24	0.77	0.34

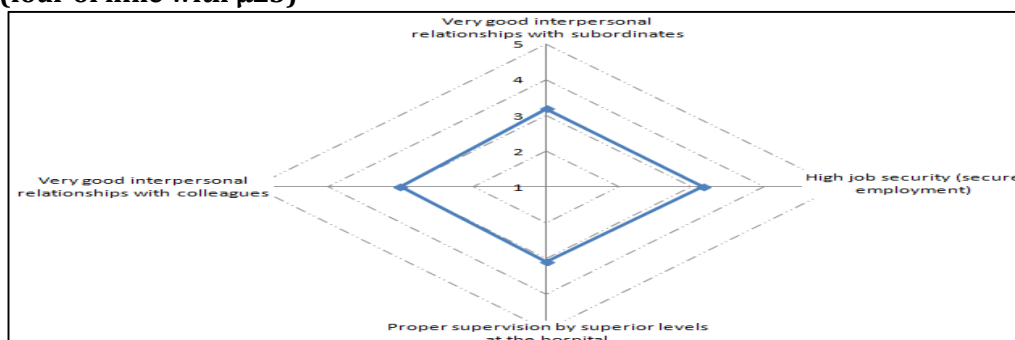
Source: Authors (2015)

Related to nurses working at Albanian public hospital centers, of the fourteen factors, hygiene and motivators, none has $\mu \geq 4$.

Regarding hygiene factors, nurses estimated four factors with $\mu \geq 3$ (see figure no.1):

- very good interpersonal relationships with subordinates (for those who have) ($\mu=3.19$, $\sigma=0.40$);
- high job security ($\mu=3.14$, $\sigma=0.91$);
- proper supervision by superior levels at the hospital ($\mu=3.10$, $\sigma=0.54$); and
- very good interpersonal relationships with colleagues ($\mu=3.00$, $\sigma=0.63$).

Figure 1: Dissatisfiers for nurses working at Albanian public hospital centers (four of nine with $\mu \geq 3$)

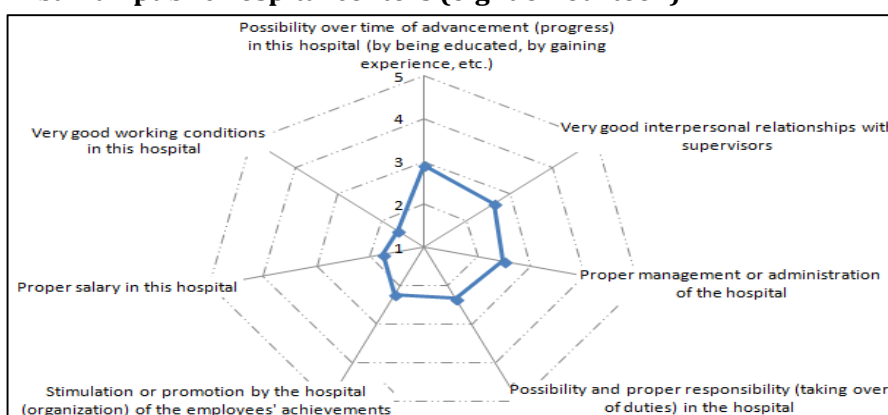


Source: Analysis of Authors (2015)

Related to *motivation factors*, two factors resulted with $\mu \geq 3$ according to nurses working at Albanian public hospital centers, respectively: wide recognition (good name) of work in this hospital ($\mu=3.48$, $\sigma=1.25$); and very good and motivating work itself in this hospital ($\mu=3.1$, $\sigma=1.48$).

Regarding *hygiene factors and motivators* with $\mu < 3$ for nurses working at public hospitals there are eight of fourteen (they are presented by factor with $\mu=2.9$, and continuing in descending order): possibility over time of advancement in this hospital; very good interpersonal relationships with supervisors; proper administration of the hospital; possibility and proper responsibility in the hospital; stimulation by the hospital of the employees' achievements; proper salary in this hospital; very good working conditions in this hospital; and proper policy followed by the hospital (see Figure no.2).

Figure 2: Motivation and hygiene factors with $\mu < 3$ for nurses working at Albanian public hospital centers (eight of fourteen)



Source: Analysis of Authors (2015)

Motivation factors and dissatisfiers for nurses working at Albanian private hospital centers

The same questions were directed to nurses working at Albanian private hospital centers. Meanwhile, the motivation factors and dissatisfiers for them, with the mean (μ), standard deviations (σ), and coefficients of variation (CV), are shown in Table no.2.

Table 2: Motivation factors and dissatisfiers for nurses working at Albanian private hospital centers

No.	Dissatisfiers	μ	σ	$CV=\sigma/\mu$
1	Very good working conditions in this hospital	4.05	0.67	0.17
2	Very good interpersonal relationships with colleagues	3.76	0.89	0.24
3	High job security (secure employment)	3.52	0.98	0.28
4	Very good interpersonal relationships with subordinates	3.48	0.84	0.24
5	Proper supervision by superior levels at the hospital	3.43	0.87	0.25
6	Proper policy followed by the hospital (organization)	3.33	0.66	0.20
7	Proper management (administration) of the hospital	3.10	0.54	0.17
8	Very good interpersonal relationships with supervisors	2.95	1.16	0.39
9	Proper salary in this hospital	2.62	0.97	0.37
No.	Motivation Factors	μ	σ	$CV=\sigma/\mu$
10	Wide recognition (good name) of work in this hospital	3.62	0.86	0.24
11	Possibility and proper responsibility (taking over of duties) in the hospital	3.38	0.86	0.26
12	Very good and motivating work itself in this hospital	3.33	0.91	0.27
13	Possibility over time of advancement (progress) in this hospital (by being educated, by gaining experience, etc.)	3.24	1.00	0.31
14	Stimulation or promotion by the hospital (organization) of the employees' achievements	2.86	1.06	0.37

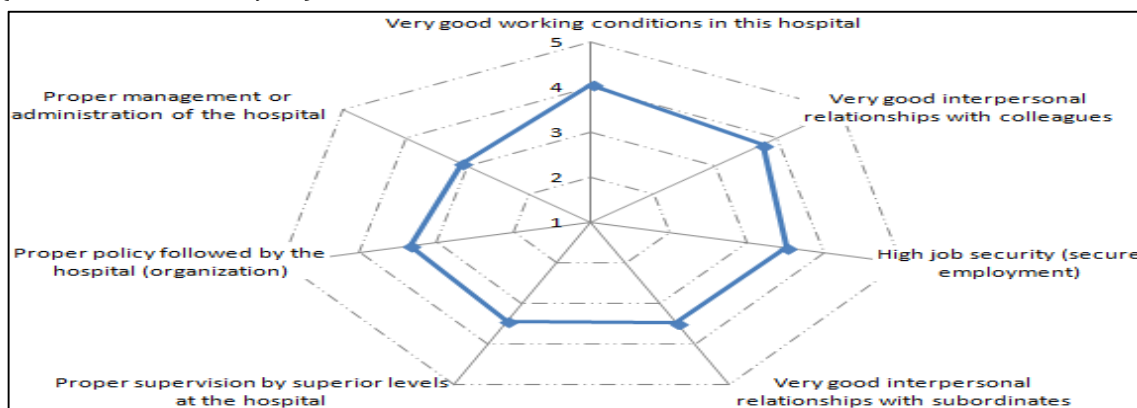
Source: Authors (2015)

Related to nurses working at Albanian private hospital centers, based in their perceptions, of the fourteen factors (hygiene and motivators), hygiene factor: very good working conditions in this hospital, has the highest average, $\mu=4.05$.

Regarding hygiene factors, nurses working at Albanian private hospitals estimated seven factors with $\mu \geq 3$ (see Figure no.3), respectively:

- very good working conditions in this hospital ($\mu=4.05$, $\sigma=0.67$);
- very good interpersonal relationships with colleagues ($\mu=3.76$, $\sigma=0.89$);
- high job security ($\mu=3.52$, $\sigma=0.98$);
- very good interpersonal relationships with subordinates (for those who have) ($\mu=3.48$, $\sigma=0.84$); proper supervision by superior levels at the hospital ($\mu=3.43$, $\sigma=0.87$);
- proper policy followed by the hospital ($\mu = 3.33$, $\sigma=0.66$); and
- proper management of the hospital ($\mu=3.10$, $\sigma=0.54$).

Figure 3: Dissatisfiers for nurses working at Albanian private hospital centers (seven of nine with $\mu \geq 3$)

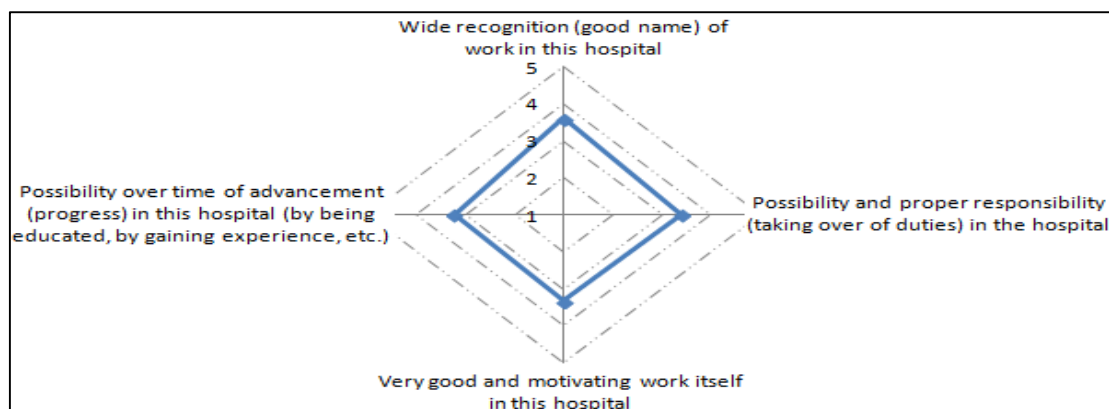


Source: Analysis of Authors (2015)

Related to *motivation factors*, according to nurses working at Albanian private hospital centers, four of five factors are with $\mu \geq 3$ (see Figure no.4):

- wide recognition of work in this hospital ($\mu=3.62$);
- possibility and proper responsibility in the hospital ($\mu=3.38$);
- very good and motivating work itself in this hospital ($\mu=3.33$); and
- the possibility over time of advancement in this hospital ($\mu=3.24$).

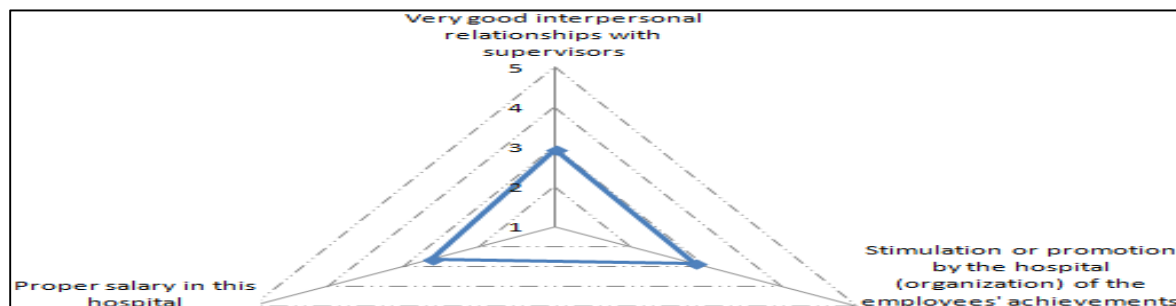
Figure 4: Motivation factors for nurses working at Albanian private hospital centers (four of five with $\mu \geq 3$)



Source: Analysis of Authors (2015)

Regarding *hygiene factors and motivators* with $\mu < 3$ for nurses working at private hospitals there are three of fourteen (there're presented by factor with $\mu=2.95$, and continuing in descending order): very good interpersonal relationships with supervisors; promotion by the hospital of the employees' achievements; and proper salary in this hospital (see Figure no.5).

Figure 5: Motivation and hygiene factors with $\mu < 3$ for nurses working at Albanian private hospital centers (three of fourteen)

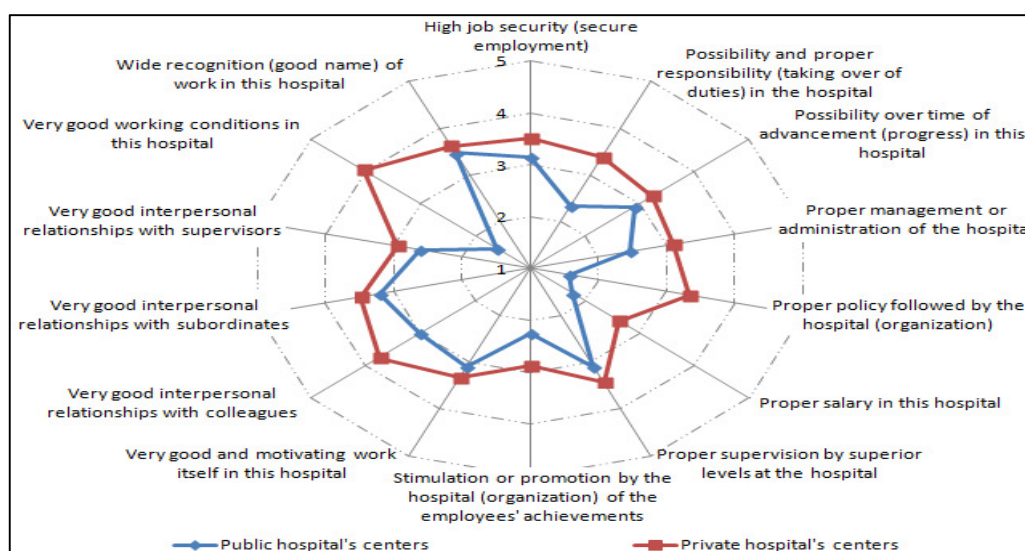


Source: Analysis of Authors (2015)

DISCUSSION, IMPLICATIONS AND FINDINGS

The contribution of authors is sensitive considering the specific of the medical sector, and regarding the analysis and discussion related to job satisfaction and motivation of the nurses working at hospital centers in Albania. In this paper, the perceptions of motivation factors and dissatisfiers (hygiene factors) are studied for nurses working at Albanian public and private hospital centers. To have a better picture regarding this issue and to make comparative analysis between motivation and hygiene factors for nurses (based in their perception) working at Albanian public and private hospital centers, we summarize in the same figure (see figure no.6) these factors as below.

Figure no.6: Motivation factors and dissatisfiers for nurses working at Albanian public and private hospital centers in a comparative viewpoint



Source: Analysis of Authors (2015)

By analyzing hygiene and motivation factors as Herzberg factors, directed to nurses working at Albanian public and private hospital centers, we conclude that:

For nurses working at public hospital centers:

Regarding nurses working at public hospital centers, of the fourteen hygiene and motivation factors, none has $\mu \geq 4$. Related to hygiene factors, nurses evaluated four factors with $\mu \geq 3$: very good interpersonal relationships with subordinates; high secure employment; proper supervision by superior levels at the hospital; and very good interpersonal relationships with colleagues. Related to motivation factors, two factors resulted with $\mu \geq 3$, respectively: good name of work in this hospital; and very good and motivating work itself in this hospital.

In terms of hygiene and motivation factors, eight of fourteen resulted with $\mu < 3$: possibility over time of progress in this hospital; very good interpersonal relationships with supervisors; proper administration of the hospital; possibility and proper responsibility in the hospital; stimulation by the hospital of the employees' achievements; proper salary in this hospital; very good working conditions in this hospital; and proper policy followed by the hospital.

For nurses working at private hospital centers:

Of the fourteen factors (hygiene and motivation ones), hygiene factor: very good working conditions in this hospital, has the highest average, $\mu = 4.05$. Regarding hygiene factors, seven factors resulted with $\mu \geq 3$, respectively: very good working conditions in this hospital; very good interpersonal relationships with colleagues; high secure employment; very good interpersonal relationships with subordinates; proper supervision by superior levels at the hospital; proper policy followed by the hospital; and proper management of the hospital. Related to motivation factors, four of five factors are with $\mu \geq 3$: good name of work in this hospital; possibility and proper responsibility in the hospital; very good and motivating work itself in this hospital; and possibility over time of progress in this hospital.

In terms of hygiene and motivation factors, three of fourteen resulted with $\mu < 3$: very good interpersonal relationships with supervisors; stimulation by the hospital of the employees' achievements; and proper salary in this hospital.

As a result, the nurses react in different ways to the same Herzberg factors, motivation ones and dissatisfiers, by the fact of full-time employing in a public or private hospital center, meaning different working conditions, different organization policies, different factors, etc. The situation does not look good for them (as perceived by them) in public hospital centers (only six from fourteen factors with $\mu \geq 3$), while at the private hospitals, the situation looks somewhat better (see the figure no.6 above) for them where eleven factors have $\mu \geq 3$ (as perceived by them).

SOME CONCLUSIONS AND RECOMMENDATIONS

From the analysis and discussion made above, at public and private hospital centers (hospitals), it is suggested for hospital's administrations, to put more emphasis on such *basic factors* (more on factors with $\mu < 3$) such as: improving the salary or monetary reward system; finding ways to improve interpersonal relationships of subordinates with supervisors through trainings, etc, and *regarding motivation factors*, to find ways to better stimulate or promote the employees' achievements.

Also, at public hospital centers it is suggested for hospital's administrations, to put emphasis on such *basic factors* (more on factors with $\mu < 3$) such as: finding ways of improving working conditions; changing the management (administration) techniques and following the proper policy; and *regarding motivation factors*, to create the employees the possibility of advancement over time and taking over responsibilities by being educated, by gaining experience, etc.

Besides the above, the Ministry of Health of Albania should allocate more funds to the state hospitals in order to increase the salaries of employees (especially for nurses as front line employees) to better motivate them, and regarding reconstruction of hospital buildings, adapting new technology at hospital centers, by improving facilities at the hospitals, so all of these elements/factors can converge into a better service for patients.

Improvement of the above factors by the respective administrations of the Albanian hospital centers, should initially affect the fulfillment of the basic needs of nurses related to the monetary reward, working conditions, etc., which then will increase their motivation by giving them work motivation, responsibility, advancement, thus affecting the creation of a motivated and effective workforce, better service to patients, by making continuous improvements, resulting in this manner in a better name, better management and financial situation for the respective hospital centers.

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