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Evaluating the Impact of Institutional Investors on Economic Growth in South-East European Transition Economies

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ABSTRACT

This study examines the impact of institutional investors—pension funds, insurance companies, and mutual funds—on economic growth in South-East European (SEE) transition economies (Albania, North Macedonia, Serbia, Croatia, Slovenia, Romania, Greece, and Bulgaria) from 2012 to 2020. Using panel regression analysis, we assess their relationship with GDP per capita growth while controlling for key macroeconomic and financial factors. The results show that institutional investors do not significantly contribute to economic growth in most SEE economies, except in more financially integrated markets like Croatia and Slovenia. This limited effect likely reflects their small market presence and underdeveloped domestic capital markets. Notably, Gross Fixed Capital Formation exhibits a negative correlation with growth, pointing to inefficiencies in investment allocation, whereas trade in services consistently supports economic expansion. These findings emphasize the need for structural reforms—including capital market deepening, improved corporate governance, and greater institutional investor engagement—to enhance their role in fostering sustainable growth across the region.

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Capital markets; economic growth; fixed effects; institutional investors; insurance companies; mutual funds; panel regression; pension funds; South-East Europe; transition economies

Introduction

The relationship between capital markets and economic growth has garnered significant attention in both historical and contemporary research. Existing literature indicates that capital markets play a crucial role in facilitating additional financing, which contributes to economic growth through various channels, both direct and indirect. Conversely, economic growth often stimulates the development of capital markets, creating a bidirectional influence that largely depends on the specific conditions prevailing in each country.

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Historically, banking institutions have been the dominant players in financial markets. However, over the past two decades, non-banking financial institutions—particularly institutional investors such as pension funds, insurance companies, and investment funds—have gained prominence. Despite a wealth of literature examining the role of institutional investors in capital markets, studies exploring their impact on economic growth remain limited. Notably, Curak, Lončar, and Poposkim (2009) and Haiss and Sümegi (2008) found a positive correlation between institutional investors and capital market development. Moreover, Ruiz (2018) posits that this positive effect extends to economic growth, reflecting the interconnectedness of financial markets and broader economic performance.

Goldsmith (1969) was the pioneer in establishing a positive relationship between GDP per capita and financial development. While the linkage between the banking sector and economic growth has been extensively analyzed (Alam et al. 2021; Jamshidi, Barzani, and Mahdi 2021; Rushchyshyn et al. 2021), the specific influence of institutional investors on economic growth remains underexplored. Addressing questions about whether institutional investors drive stock market development and how they influence economic growth—and in which direction causality flows—has important policy implications, particularly for both developed and developing economies (Muslumov and Aras 2005).

Existing literature has extensively examined the role of institutional investors in advanced economies, where their significant market presence and influence on capital allocation and economic growth are well-documented. However, empirical research on their impact in emerging South-East European (SEE) economies remains scarce, particularly given these nations' underdeveloped financial markets and relatively low institutional investor participation. This gap in the literature likely stems from the assumption that institutional investors in transition economies—with their smaller scale and limited market depth—play a negligible role in economic growth. By focusing on SEE transition economies, this study tests that assumption and provides critical insights into the institutional investor-growth nexus in emerging market contexts, where structural barriers may alter their traditional growth channels.

This study aims to fill this research gap by investigating the extent to which institutional investors contribute to economic growth in South-East European transition economies. Specifically, it examines whether the underdeveloped financial markets and regulatory constraints in these countries limit the effectiveness of institutional investors in fostering economic expansion. The primary research question guiding this analysis is: 'To what extent do institutional investors influence economic growth in South-East European transition economies, and what factors enhance or constrain their impact?' To address this, the study tests the hypothesis that the

limited presence and inefficiencies in financial markets reduce the ability of institutional investors to drive economic growth. By focusing on these economies, this research not only extends the existing literature on financial development and growth but also provides valuable insights for policymakers seeking to enhance the role of institutional investors in capital formation and long-term economic stability. The findings have practical significance for regulatory bodies, financial institutions, and investors interested in emerging markets, as they highlight key areas for policy reform and investment strategies that can unlock the potential of institutional investment in these economies.

The urgency of this investigation is underscored by three critical factors. First, while SEE economies represent important convergence frontiers in Europe, their growth trajectories remain uneven and often constrained by capital allocation inefficiencies. Second, institutional investors' potential to mitigate these inefficiencies—through professional asset management and long-term capital provision—remains underexplored despite ongoing pension and insurance market reforms in the region. Third, the unique institutional architecture of SEE transition economies (characterized by evolving regulatory frameworks, bank-dominated financial systems, and capital market thinness) creates a distinctive laboratory for testing financial development theories. This study's findings will therefore provide timely insights as these economies navigate the dual challenges of financial market modernization and sustainable growth acceleration. By systematically analyzing institutional investors' growth impacts while controlling for structural constraints, we contribute both to academic debates about financial intermediation in transition economies and to policy discussions about optimizing institutional investment frameworks in emerging Europe.

The rest of the paper is organized as follows. Section "Literature review" reviews the literature; Section "Data and methodology" presents the econometric model and data, while Section "Analysis of results and policy implications" discusses the model results and policy implications. Section "Conclusion" concludes.

Literature review

The importance of institutional investors

Institutional investors have become increasingly important participants in financial markets over the last few decades. This rise can be attributed to the expansion of financial sectors relative to GDP and the growing share of institutional investors in total financial claims (Davis 2003). Rubbaniy (2013) emphasizes that the economic conditions and policies of countries significantly influence the investment decisions made by institutional investors.

Institutional investors and economic growth

While numerous studies examine the relationship between financial development and economic growth, empirical research specifically focusing on institutional investors and economic growth is limited and often outdated. Harichandra and Thangavelu (2004) explored the role of pension funds, insurance companies, and investment companies in OECD countries using a dynamic panel VAR approach. Their findings indicate that, at an aggregate level, institutional investors Granger-cause stock market development and economic growth. However, when analyzed separately, market capitalization Granger-causes the development of contractual savings institutions, such as pension funds and insurance companies.

In contrast to the literature on developed economies, which typically examines the aggregate impact of institutional investors on economic growth, much of the research on transition economies has focused on individual types of institutional investors. For example, while, Harichandra and Thangavelu (2004) explored the role of pension funds, insurance companies, and investment companies in OECD countries, finding that institutional investors influence stock market development and economic growth, studies on transition economies are relatively rare, and most focus on specific types of institutional investors. For instance, Kolodiziev et al. (2021) analyzed the impact of pension funds on economic growth in post-socialist countries (Hungary, Slovakia, Slovenia, Poland, and the Czech Republic), finding that investments in deposits have a significant effect, while investments in securities have a smaller impact. Similarly, Luksyte (2013) pointed out that pension funds can affect growth through channels such as improved corporate governance and capital market development.

Our study adds to this limited body of research by examining the collective impact of institutional investors in South-East European transition economies, a region where financial markets are still developing and institutional investors' roles are less prominent. This research not only fills an important gap but also provides insights for policymakers in these countries to enhance the contribution of institutional investors to economic growth.

Pension funds and economic growth

Morina and Grima (2022) analyzed the impact of pension fund assets on economic growth in selected non-OECD countries, considering factors such as gross fixed capital formation, domestic credit to the private sector, inflation, public debt, and population for the period from 2002 to 2018. Their results indicated that pension fund assets positively affect economic growth in non-OECD countries. Similarly, Ertuğrul and Gebeşoğlu (2020)

examined the influence of pension funds on national savings in Turkey, finding a positive relationship.

However, not all studies report positive effects. Sanusi and Kapingura (2021) investigated the impact of pension funds on investment levels and economic growth in South Africa from 1990 (Q1) to 2019 (Q3) using a Bayesian Linear Regression (BLR) model. Their findings suggested that pension funds do not significantly impact investment levels or economic growth. Moreover, Zandberg and Spierdijk (2010) concluded that no direct relationship exists between pension funds and economic growth, noting that many pension funds invest a significant portion of their assets abroad.

The role of insurance companies

Insurance companies also represent a crucial segment of any country's economy. They are categorized into life and non-life insurance, and as financial markets evolve, they expand their range of services for households and companies. Appropriate investment strategies are essential for insurance companies to meet their obligations to policyholders and create value for shareholders while minimizing risk (Coletta and Zinni 2013).

Ojo (2012) analyzed the relationship between economic growth and insurance sector development in Nigeria, employing a fixed-effects model and co-integration analysis for the period from 1985 to 2009. The results indicated that the insurance sector positively affects economic growth. Webb, Grace, and Skipper (2002) studied the effects of the banking sector and insurance on economic growth, concluding that both banking and life insurance significantly influence productivity growth across 55 countries between 1980 and 1996.

Dawd and Benlagha (2023) conducted a panel analysis for the period from 2009 to 2020 and determined that insurance has a positive effect on economic growth in 16 OECD countries. In another study, Sare et al. (2023) investigated the impact of the insurance industry on economic growth, incorporating gross capital formation and inflation as variables. Following this line of research, these same variables will be utilized in this study.

Finally, Pradhan et al. (2015) examined the causality between financial development, economic growth, and insurance market development in 34 OECD countries from 1988 to 2012, revealing a two-way causality in the short term among these variables.

Mutual funds

Mutual funds as an investment vehicle are engaged in the business of investing the pooled capital of investors in various financial instruments, usually securities. Investment funds are considered the smallest among the

other two type of institutional investors. However, on a global level, their assets under management have tripled in the period 2008–2019, reaching more than 42 trillion dollars, while investment funds are also characterized by a diversified asset holdings which takes more than half of all global debt and equity portfolio flows (Kaufmann 2022). Additionally, Sugözü, Yaşar, and Verberi (2023) analyzed the linkage between portfolio investment and economic growth in 18 developed and 27 developing countries. The results showed that in the developing countries, positive association exists between long-term portfolio investment and economic growth. For the developed countries, no relationship was detected between stocks and long-term bond portfolio and economic growth. However, the research that focuses on the relationship between the investment funds and economic growth is scarce. This is mostly because the investment funds are relatively new participants in the financial markets. Their importance has been increasing in the past several years, which creates an opportunity for a more focused analysis in this field.

Concluding remarks of literature review

The role of institutional investors in economic growth can be understood within the broader context of financial development theories, which emphasize the importance of efficient capital allocation in fostering economic expansion. In well-developed financial systems, institutional investors contribute to market stability, liquidity, and corporate governance. However, in transition economies, where financial markets remain underdeveloped, their role is often constrained by weak regulatory frameworks, limited investment opportunities, and structural inefficiencies. Institutional theory highlights the significance of regulatory and legal environments in shaping the effectiveness of financial institutions, suggesting that the institutional context in South-East European economies may influence the extent to which institutional investors contribute to growth. Additionally, insights from transition economics indicate that the gradual development of financial markets and policy reforms play a crucial role in enhancing investment efficiency. By integrating these perspectives, this study provides a more comprehensive understanding of the institutional-growth nexus in the region.

To wrap up, institutional investors have experienced continuous growth in recent years, leading to increased academic interest in the causal relationships[1] between institutional investors and the capital market, as well as between institutional investors and economic growth. While there is substantial research on this topic, it has certain limitations. Firstly, much of the existing literature is not recent, resulting in a time gap. Secondly, the research is often based on a single empirical test, such as panel

analysis or causality test or cointegration test, without incorporating a more comprehensive range of empirical tests to obtain more complex and detailed results, especially for the South-east European countries, including Western Balkan countries. Thirdly, most studies focus on only one type of institutional investor, without considering the collective impact of various types of institutional investors.

Data and methodology

To provide a sound basis for the analysis in this paper, the aforementioned limitations have been taken into account, along with a thorough examination of the methods used in the work of authors who have previously studied this topic, including Webb, Grace, and Skipper (2002), Ruiz (2018), Peleckiene et al. (2019), Kumar, Chandra, and Kumar (2020), Sanusi and Kapingura (2021), Morina and Grima (2022), Dawd and Benlagha (2023) and Sare et al. (2023).

Empirical approach

Panel regression with fixed effects

The main goal of this paper is to assess the impact that the institutional investors have on the economic growth in selected countries: Albania, North Macedonia, Serbia, Croatia, Slovenia, Romania, Greece and Bulgaria. The database is annual and was obtained from the World Bank and the Organization for Economic Cooperation and Development. The period of the analysis is 2012–2020 and the analysis was conducted in E-Views.

Building on the existing literature, particularly the foundational work of Morina and Grima (2022) and Sare et al. (2023), this study employs the following variables: GDP per capita growth (annual %) serves as the dependent variable, while the independent variables include Pension fund assets (PFA) as a % of GDP, Assets of insurance companies (ICA) as a % of GDP, Mutual funds' assets (MFA) as a % of GDP, Gross capital formation (GFCF) as a % of GDP, Inflation (annual %) and Domestic credit to private sector (DCPS) as a % of GDP, Global Policy Uncertainty Index, in terms of Current Price Adjusted GDP and/or in purchasing power parity as well (GPUI-C and GPUI-ppp), Unemployment and Trade in services as % of GDP.

$$GDPCG_{it} = constant + PFA_{it} + ICA_{it} + MFA_{it} + GFCF_{it} + INFL_{it} + DCPS/GDP_{it} + GPUI - C_{it} + GPUI - ppp_{it} + UNEMPL_{it} + TRADE_{it} + \varepsilon_{it} \quad (1)$$

One key step in strengthening statistical power in panel analysis is performing a stationarity test. There are several studies in which panel

analysis has been conducted, and a first step is to test the level of integration of the variables (e.g. Breitung 2000; Harris and Tzavalis 1999; Levin, Lin, and Chu 2002). Specifically, the stationarity test reveals if the series is non-stationary, meaning it lacks a constant mean and variance over time. The hypotheses when conducting this test are the following:

H_0: The time series has a unit root, indicating non-stationarity;

H_1: The time series is stationary, which means it does not have a unit root;

In the stationarity tests, we reject the null hypothesis of a unit root (non-stationarity) when the p-value is below the chosen significance level (1%, 5%, or 10%), indicating the variable is stationary. Conversely, if the p-value exceeds the significance level, we fail to reject the null hypothesis, concluding the variable has a unit root and is non-stationary.

In our dataset, all variables initially showed p-values above all three significance levels. Subsequent testing of their first differences revealed these variables to be integrated of order one [I(1)].[2]

Once the level of integration of the variables has been determined, the next step in panel data analysis is to apply the Hausman test, which determines whether fixed or random effects should be used. The hypotheses for the interpretation of this test are the following:

H_0: The random effects model is appropriate;

H_1: The fixed effects model is appropriate;

Moreover, if the probability is lower than the significance level (1%, 5%, 10%), the null hypothesis is rejected and the analysis should be conducted with fixed effects. If the probability is greater than the significance level (1%, 5%, 10%), the null hypothesis is not rejected and the analysis should be conducted with random effects.

The results showed that the panel regression should be conducted with fixed effects. Specifically, the prob. value of the Chi-squared statistic is equal to zero, indicating that the null hypothesis should be rejected.[3]

The results from the panel regression are presented in Table 1.

Our analysis proceeds in two stages: first, we evaluate the economic significance and growth implications of each control variable that demonstrated statistical significance, then we examine the model's collective explanatory power. The regression analysis reveals that three factors consistently show statistically significant relationships with economic growth across the sample countries: Gross Fixed Capital Formation (GFCF), Unemployment (UNEMPL), and Trade in Services (TRADE).

Analytically, the negative and statistically significant coefficient of Gross Fixed Capital Formation (GFCF) at the 5% and 10% thresholds suggests an unexpected inverse relationship with GDP per capita growth in the

Table 1. The Panel regression results.

CONSTANT	10.2368 (0.3465)
PFA	−0.1703 (0.3227)
ICA	−0.89725 (0.1517)
MFA	0.4606 (0.5507)
GFCF	−0.5104 (0.0419)**
INFL	0.2 (0.3348)
DCPS/GDP	0.0622 (0.3522)
GPUI-C	−0.0088 (0.9349)
GPUI-ppp	−0.01711 (0.8706)
UNEMPL	−0.4296 (0.0785)*
TRADE	0.5569 (0.0002)***
Method	Fixed effects
R^2	0.76

Note: *, **, *** denote significance at 10%, 5% and 1% significance levels respectively

selected South-East European countries. This may indicate that while GFCF typically represents productive investment, it might be functioning suboptimally in these transition economies. Potential explanations could include inefficient allocation of capital, high investment costs, or investments focused on nonproductive sectors that do not directly support economic growth. This result could also suggest that capital formation alone may not be sufficient to drive growth without complementary factors like strong institutional frameworks, advanced infrastructure, and skilled labor.

The negative and significant impact of unemployment (UNEMPL) at the 10% threshold aligns with expectations. Higher unemployment typically hinders economic growth, as a significant portion of the workforce remains idle, reducing output and overall economic productivity. This result underscores the importance of employment policies and labor market reforms that could address structural unemployment in these countries, potentially fostering more robust economic growth.

The positive and highly significant coefficient of trade in services (TRADE) at the 1% level highlights the vital role of trade in services in these economies. Increased trade in services may indicate a growing integration with global markets, likely spurring productivity gains, technology transfer, and greater economic efficiency. This finding suggests that trade policies aimed at enhancing service exports could be a powerful lever for economic growth in the region, particularly in countries where service sectors are emerging or expanding rapidly.

The R^2 value of 76% suggests that the model has strong explanatory power, capturing a substantial proportion of the variation in GDP per capita growth (Brooks 2019). This high R^2 implies that the selected independent variables provide a relatively comprehensive picture of the factors influencing economic growth in these countries, despite potential limitations. Given the context of transition economies, this result suggests that

institutional investors, coupled with key macroeconomic variables, can offer valuable insights into growth dynamics, although other unobserved factors may also play a role.

In summary, these findings highlight specific areas of focus for policymakers. For instance, measures aimed at improving the efficiency of capital formation, reducing unemployment, and enhancing service sector competitiveness could directly and positively impact economic growth. The significance of trade also underscores the importance of regional and international integration policies, which may further drive economic growth by enhancing productivity and innovation through service trade. Finally, the high explanatory power of the model emphasizes the importance of institutional and macroeconomic factors.

Cointegration testing

To assess whether there is a long-run relationship between variables in a panel data set, we proceed with a Kao Residual Cointegration Test. Specifically, Kao test is cointegration test that is based on the residuals from the panel regression and uses the Augmented Dickey-Fuller (ADF) test to test for cointegration. By examining the stationarity of the residuals from a panel regression model, it determines if there is a long-run equilibrium relationship among the studied variables. The hypotheses are as follows:

H_0: there is no cointegration between the variables

H_1: there is cointegration between the variables

It has to be noted, that unlike the Johansen test which allows for multiple cointegrating vectors, the Kao test assumes at most one cointegrating relationship among the panel variables. It also makes the assumption of cross-sectional independence, which can be relaxed through the use of additional test statistics. The Kao test is particularly useful when working with panel data, as it can help identify long-run relationships that may not be evident from analyzing individual time series alone (Kao 1999) (Table 2).

The results of the cointegration test reveal a p-value below the 5% significance level, leading to the rejection of the null hypothesis and confirm a long-run relationship between the variables (i.e., cointegration exists).

While this finding suggests that the variables move together over the long term, indicating potential underlying equilibrium relationships, the panel regression model in this study does not specifically adjust for this

Table 2. The Cointegration results.

Kao Residual Cointegration Test	t-Statistic	Prob.
ADF	−5.026291	0.0000

cointegration. However, the presence of cointegration in this model, with all variables in levels, adds certain depth to the analysis by confirming that there is a long-term equilibrium relationship among the variables. This suggests that despite short-term fluctuations, the variables tend to move together over time, reflecting interconnected trends in economic growth and institutional investment indicators across the selected countries.

It has to be added though, since the model is specified without explicit adjustment for cointegration, it captures only the short-term deviations. While this setup offers valuable insights into the existing linkages, future research incorporating an error correction mechanism or other dynamic panel data techniques, to capture more accurately both the short-term dynamics and long-term responses of economic growth to changes in institutional investment, would add value.

In line with this, we have used first differencing in a Fixed Effects (FE) Panel OLS model. Given this transformation, heteroskedasticity and serial correlation are unlikely to be present; having formally tested for heteroskedasticity, and specifically by employing the Panel Cross-section Heteroskedasticity LR Test there is no Heteroskedasticity (the prob. value of the statistic is 0.6717; see Appendix). Additionally, to assess cross-sectional dependence, Pesaran's CD Test and the Breusch-Pagan LM Test are applied and no statistically significant cross-sectional dependence is found. Specifically Pesaran's CD value is 0.7019 and the prob. of it is 0.4827, meaning that the null hypothesis should not be rejected (for more details see Appendix).

Limitations of the study

The main limitation in this paper is the time period covered (2012–2020). Because of the small period covered, long-term trends cannot be detected. The main reason why this period was used for the analysis was the availability of data for these transition economies. Additionally, the study focuses on specific group of countries which provides more generalized understanding of the institutional-growth nexus.

Future research could benefit from an extended time frame to capture long-term trends and dynamics. Moreover, incorporating additional variables such as financial market depth, political stability, and broader institutional quality could provide a deeper insight into the factors that shape the relationship between institutional investors and economic growth.

Analysis of results and policy implications

Analysis and interpretation of results

Before we proceed to the analysis of the main findings, it has to be highlighted that, indicatively, Ali (2015) underscores that economic growth is

often driven by Gross Capital Formation, with several studies (e.g., Uneze 2013) supporting a positive impact of Gross Fixed Capital Formation (GFCF) on economic growth. However, the results of this paper reveal a negative effect of GFCF on economic growth in the selected countries, suggesting that investments in fixed assets may not be yielding the expected returns. This rather unexpected outcome could be due to inefficient investment, where capital is not generating satisfactory returns. Given that these countries are classified as developing or transition economies, their economic environments are often marked by volatility and political instability, which may inhibit the potential of GFCF to foster growth. Additionally, the negative association observed could be attributed to the relatively short time span of this study (2012–2020). GFCF might take longer to impact growth positively, meaning that extending the time horizon might yield results more consistent with existing literature and could capture long-term effects. These findings call for further research.

Regarding unemployment, numerous studies have analyzed its relationship with economic growth by examining labor market dynamics, policy implications, and Okun's Law (e.g., Mohamed and Abdi 2024). In alignment with Abdul-Khaliq, Soufan, and Shihab (2014) and Akeju and Olanipekun (2014), this paper finds a negative impact of unemployment on economic growth. Since unemployment presents a significant challenge, reducing it requires a multifaceted approach. Solutions could include targeted training programs for skill development, support for entrepreneurship, economic diversification to create more jobs, and initiatives to promote employment in various sectors.

Furthermore, the results of this paper indicate a significant positive effect of trade in services on economic growth, suggesting that the service sector could be a key driver of employment in these countries. This finding aligns with Mtar and Belazreg (2021), who analyzed trade openness and economic growth in eleven European countries from 2001 to 2016 using a panel-VAR approach, finding a unidirectional relationship from trade to economic growth. Thus, enhanced trade, particularly in services, may contribute to economic expansion and reduced unemployment, reinforcing the importance of policies that support trade as a means of fostering economic resilience and job creation.

Moreover, our findings indicate that the institutional investor proxy variables exert no statistically significant positive effect on economic growth. These results align with existing empirical evidence, particularly Altiparmakov and Nedeljković's (2016) study, which found no significant relationship between pension fund privatization and economic growth in Latin America and Eastern Europe. Similar conclusions emerge from Sanusi and Kapingura's (2021) analysis of South Africa, where they employed a BLR model with time series data (1990–2019) on GDP, pension fund

assets, and gross fixed capital formation. Their results likewise demonstrated negligible effects of pension funds on economic growth.

Our null results join a broader empirical consensus questioning institutional investors' growth impacts. While Hu (2012) found modest pension fund effects in developed markets, Zandberg and Spierdijk (2010) and Altiparmakov and Nedeljković (2018) report null findings across OECD and transition economies. For insurance markets, our neutral results contrast with Phutkaradze's (2014) negative estimates, collectively suggesting these relationships are highly context-dependent.

These findings underscore the importance of institutional and regulatory conditions in mediating institutional investors' impact on growth. Meźnarić and Meźnarić (2024) emphasize that pension funds require appropriate regulatory frameworks to effectively contribute to economic growth. A critical factor in this equation is infrastructure investment—a channel through which pension funds may amplify their growth effects. Carlo et al. (2023) demonstrate that larger pension funds exhibit greater propensity to allocate assets toward infrastructure projects. Given the well-established growth-multiplier effects of infrastructure investment (Cockburn Duclos, and Tiberti 2013), the limited growth impact of pension funds in SEE transition economies may partly reflect their underdeveloped infrastructure investment channels. This suggests that regulatory reforms encouraging infrastructure allocations could enhance pension funds' growth contributions in these markets.

As demonstrated by Cockburn, Duclos, and Tiberti (2013), a robust positive relationship exists between infrastructure development and economic growth. Hence, if the pension funds in these countries focus more on investing their assets in infrastructure projects it may be expected that their impact will be more significant for the economic growth.

Considering that institutional investors showed no effect on economic growth in this research, one possible explanation is that their assets represent a very small percentage of GDP in these countries. The limited scale of these investments may restrict their ability to drive significant economic expansion. Furthermore, the regulatory and market conditions in these economies may not yet be conducive to maximizing the potential impact of institutional investors on growth.

To proceed, Figure 1 presents the assets of pension funds as a percentage of GDP for the following countries: Albania, N. Macedonia, Serbia, Croatia, Slovenia, Romania, Greece, and Bulgaria. In Albania, the lowest participation of pension fund assets in GDP can be observed. In Serbia and Greece, the situation is similar, with asset participation not exceeding 1%. In Romania, although the share was 1.7% in 2012, it has steadily increased over the years, reaching 7.4% in 2020. In Slovenia, only a slight increase can be detected for the period 2012–2020. The pension fund assets in N.

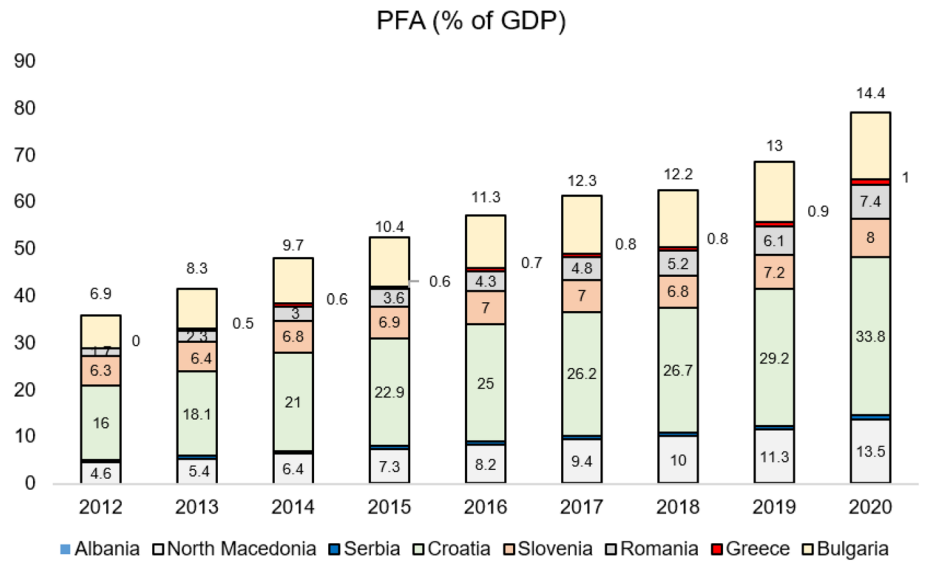

Figure 1. Pension funds' assets as percentage of GDP.
Source: World Bank database 2024a.

Macedonia and Bulgaria follow a similar pattern, with a continuous increase over the studied years. Croatia stands out, with pension funds holding the highest proportion of GDP compared to the other countries.

From this Figure, it can be concluded that pension funds do not constitute a significant share of GDP in most of these economies. The limited scale of pension fund assets may explain their lack of impact on economic growth. However, as stated, Croatia appears to be an exception, despite demographic changes negatively affecting the sustainability of its pension system. The country underwent a major pension reform in 1998, aligning with EU reform trends. Nonetheless, to sustain a higher proportion of GDP, further policy improvements are required (Barbača and Seric 2024). Additionally, the variation in pension fund participation across these countries highlights structural differences in financial market maturity, regulatory environments, and savings behavior. These disparities suggest that policy interventions should be tailored to each country's specific financial and institutional framework to enhance the role of pension funds in economic growth.

Regarding the participation of the insurance companies for the economic growth in the studied countries, the results showed no significant effect. Figure 2 presents the assets of the insurance companies as a percentage of GDP. Only the Slovenian insurance companies take the highest percentage in the GDP, followed by Croatia. For the rest of the countries although a slight increase can be detected, the participation of the insurance companies in each country separately is very low.

Our findings on the relationship between insurance companies and economic growth align with those of Ward and Zurbruegg (2000). Although

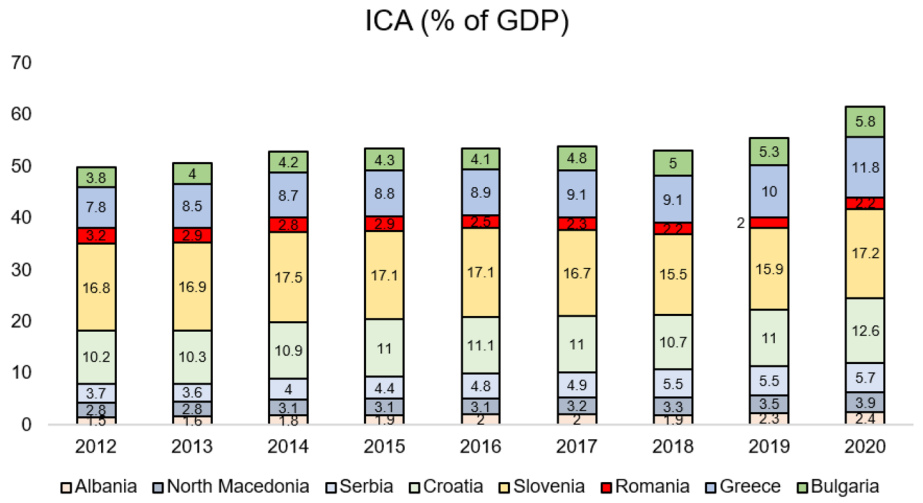

Figure 2. Insurance companies assets as percentage of GDP.
Source: World Bank database 2024b.

their study is dated, their analysis of a long-term period (1961–1991) revealed no significant link between insurance markets and economic growth in the UK and the USA—a result that remains noteworthy. Additionally, Zouhaier (2014) having analyzed the effect of the insurance companies on economic growth in 23 OECD countries for the period 1990–2011, found that the insurance sector negatively affects the economic growth.

While the prevailing literature consistently demonstrates a positive relationship between insurance sector development and economic growth (Arena, 2008; Ćurak, Lončar, and Poposkim 2009), our analysis reveals no statistically significant effect in South-East European transition economies. This apparent contradiction may be attributed to three key factors: the constrained 2012–2020 study period may be insufficient to capture long-term growth effects; data limitations inherent to these developing financial markets could compromise measurement accuracy; and our chosen control variables may not adequately represent insurance sector dynamics. Future research could address these limitations by employing more nuanced proxies for insurance sector development, such as net written premiums (Ching et al. 2010), real insurance premiums (Ward and Zurbruegg 2000), or insurance penetration rates (Kjosevski 2011) – all of which may better capture the sector's role in transition economies. Nevertheless, as Chang et al. (2014) caution, the insurance-growth nexus remains highly context-dependent, with institutional and macroeconomic conditions potentially moderating these relationships in ways that require deeper exploration across different economic environments.

Figure 3 exhibits the assets as a percentage of GDP of the mutual funds in Albania, N. Macedonia, Serbia, Croatia, Slovenia, Romania, Greece and

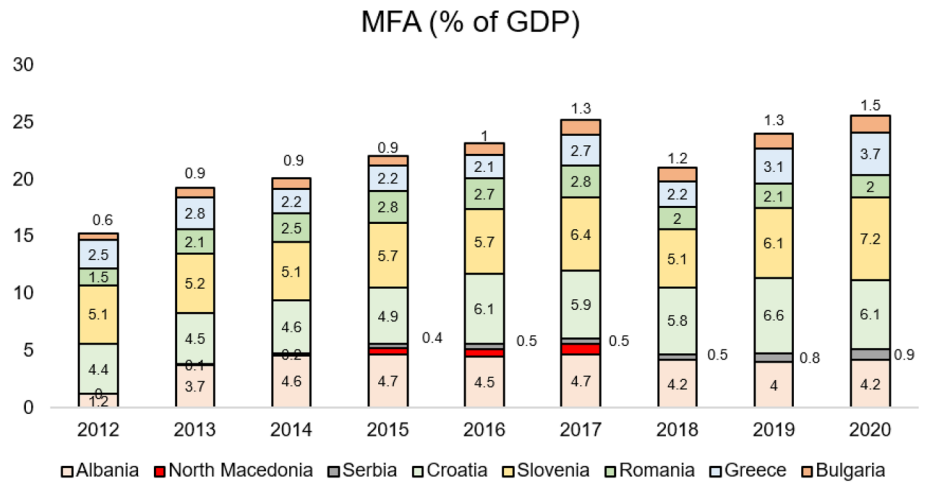

Figure 3. Mutual funds' assets as % of GDP.
Source: World Bank database 2024c.

Bulgaria. Compared to the pension funds and the insurance companies, the participation of the mutual funds in the GDP of these countries is much lower. In the period 2012–2017 an overall increase for each country can be observed. In 2018 there is a decline with an increasing trend until 2020. Given the relatively low contribution of mutual funds to GDP, we find no significant effect on economic growth. Each country has its own unique economic conditions, and it is recommended that a separate analysis should be conducted for each country to better understand the role of this investment vehicle.

Overall, the findings reveal that the variables representing institutional investors—pension funds, insurance companies, and mutual funds—do not positively impact economic growth in the selected countries. This suggests that the contributions of institutional investors in these economies are relatively limited, aligning with the expectation that pension funds, a prominent type of institutional investor, do not constitute a substantial portion of GDP in most of these nations. Croatia is a notable exception, where pension funds play a slightly larger role. However, demographic shifts in Croatia have posed challenges to the sustainability of its pension system, likely reducing the potential positive impact of pension funds on growth.

Among institutional investors, only Slovenian insurance companies hold a significant share of GDP, followed closely by those in Croatia, indicating a stronger presence in these two economies. Nonetheless, their impact on economic growth remains limited, likely due to external factors such as market maturity and economic volatility. Mutual funds, by comparison, contribute an even smaller percentage of GDP, suggesting that their economic influence in these countries is marginal.

As stated several authors analyzed the impact that institutional investors have on the economic growth. Some of them found positive effect (Hu 2012), while some found no effect at all (Altiparmakov and Nedelkjović 2018;; Phutkaradze 2014; Sanusi and Kapingura 2021; Zandberg and Spierdijk 2010). Main reasons for the different impact can be due to the maturity of the financial markets, economic stability and investment opportunities. Regulatory frameworks are also very important, because the countries that have stronger regulatory investor protections can obtain a greater benefit from the presence of institutional investors.

Regarding pension funds, Croatia maintains a higher share of these assets relative to GDP than other transition economies. This can be attributed to the recent pension system reforms that aligned the Croatian with the EU standards. Other explanations why the findings in this paper differ from previous studies may be due to the investment allocation patterns. In the developed economies, institutional investors prefer to invest in long-term assets, such as infrastructure, which has positive effect on economic growth (Cockburn et al. 2013). Political uncertainty and higher market volatility usually prevents these investors to invest in infrastructure in the transition economies.

These findings directly address the research questions and objectives outlined in the introduction, specifically the inquiry into whether institutional investors significantly influence economic growth in these transition economies. While capital market development driven by institutional investors may bolster economic resilience over time, the limited role they currently play implies that further growth and reforms in these financial sectors are needed for institutional investors to significantly contribute to economic expansion.

Policy implications

In this context, it is worth repeating that most previous studies have focused on the role of institutional investors in more developed economies, where their presence is significantly larger, and financial markets are well-established. In contrast, empirical research on their impact in emerging South-East European economies remains scarce. One possible reason for the lack of a significant positive effect of institutional investors on economic growth in these countries is the underdevelopment of their financial markets, which limits the ability of institutional investors to efficiently allocate capital. Additionally, regulatory barriers and structural inefficiencies may hinder their role in fostering economic expansion.

These findings highlight critical areas for policymakers to address. Strengthening capital formation mechanisms, reducing unemployment, and enhancing the competitiveness of the service sector could create a more

conducive environment for institutional investors to contribute to growth. Furthermore, the importance of trade underscores the need for policies that promote regional and international economic integration, facilitating productivity gains and innovation through service trade. Finally, the high explanatory power of the model reinforces the significance of institutional and macroeconomic factors in shaping economic outcomes, emphasizing the need for targeted reforms that support financial market development and investment efficiency (Ertuğrul and Gebeşoğlu 2020; Sanusi and Kapingura 2021).

To enhance the role of institutional investors in South-East European transition economies, targeted financial market reforms are essential. Strengthening regulatory frameworks to improve investor protection, increase market transparency, and reduce bureaucratic inefficiencies can foster greater institutional participation. Additionally, developing more diversified financial instruments, such as infrastructure bonds and pension fund investment schemes, could provide institutional investors with viable long-term investment opportunities (Kolodiziev et al. 2021). Encouraging cross-border financial integration within the region can also help expand investment opportunities and attract foreign institutional capital (Golitsis et al. 2021, 2025; Yovchev et al. 2024). Furthermore, implementing policies that enhance financial literacy and trust in institutional investment vehicles may incentivize greater domestic participation, ultimately contributing to more effective capital allocation and economic growth.

Future research can build upon these findings by further examining the mechanisms through which institutional investors influence economic growth in transition economies (Luksyte 2013). Given the structural differences between South-East European economies and more developed financial systems, future studies could explore the impact of specific regulatory reforms, investment policies, and financial market integration on institutional investor effectiveness. Additionally, a more granular approach—such as sectoral analysis of institutional investments or the role of alternative investment vehicles—could provide deeper insights into optimizing capital allocation. Expanding the dataset to include longer time horizons or incorporating firm-level data could further enhance the understanding of institutional investors' contributions to economic development. Ultimately, this study serves as a foundation for future research on strengthening financial markets in transition economies and designing policy interventions that enhance the role of institutional investors in fostering sustainable economic growth.

Conclusion

This paper aimed to examine the impact of institutional investors—pension funds, insurance companies, and mutual funds—on economic growth in

selected South-East European countries, with a focus on capital market development. The existing literature predominantly concentrates on capital market development, often overlooking the broader implications of institutional investors on economic growth, especially in emerging economies. By addressing this gap, our study contributes to a deeper understanding of the institutional-growth nexus in transition economies, an area that has been underexplored.

Institutional investors, as long-term participants in financial markets, play an increasingly important role in fostering capital market development and economic growth. However, their impact largely depends on the maturity and functionality of the financial markets as well as the overall economic development of the country. In many economies, banks have traditionally been the dominant financial intermediaries. Yet, as the global financial gap has proven too large for banks to bridge alone, the potential of institutional investors has gained recognition, prompting studies on their role in economic growth. Despite this growing interest, much of the literature remains limited by the time period and the countries covered.

This paper sought to address this gap by focusing on Albania, North Macedonia, Serbia, Croatia, Slovenia, Romania, Greece, and Bulgaria, which have often been neglected in such analyses. Due to data availability constraints, the study focused on the period 2012–2020. While pension funds, insurance companies, and investment funds remain relatively small players in these markets, their role is expected to grow over time.

Of the three institutional investors, pension funds are the largest and their influence is expected to increase as they continue to focus on long-term investments. However, in countries with underdeveloped capital markets, such as those examined in this paper, no significant direct effect on economic growth was detected during the observed period.

Insurance companies are more sensitive to macroeconomic changes due to the nature of their investment strategies, which are influenced by various factors including financial literacy, regulatory environments, and market development. Moreover, investment companies, though growing in importance globally, remain relatively minor players in the financial markets of the countries studied. Research on their impact on capital markets and economic growth is limited, which further underscores the need for further exploration in this area.

This research provides an overview of the relationship between institutional investors and economic growth in selected transition countries and offers a foundation for future studies. Future research could extend the analysis to a longer time frame and a broader set of countries to deepen the understanding of how institutional investors can contribute to economic growth in developing and emerging economies.

Notes

1. In economics, "causality" refers to the directional, chronological relationship between variables, where one variable precedes and influences the other (Brooks 2019). This is distinct from mere correlation, which does not imply that one variable causes changes in the other. Establishing causal relationships allows economists to better understand, explain and potentially intervene in economic processes, though determining true causality can be challenging.
2. Results are available on Appendix.
3. Results are available on Appendix.

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Appendix

Unit Root results for GDPCG

Panel unit root test: Summary
Series: GDPCG
Sample: 2012 2020
Exogenous variables: Individual effects
User-specified lags: 1
Newey-West automatic bandwidth selection and Bartlett kernel
Balanced observations for each test

Method	Statistic	Prob.**	Cross-sections	Obs
Null: Unit root (assumes common unit root process)				
Levin, Lin & Chu t*	3.57567	0.9998	8	56
Null: Unit root (assumes individual unit root process)				
Im, Pesaran and Shin W-stat	0.13859	0.5551	8	56
ADF – Fisher Chi-square	12.3224	0.7215	8	56
PP – Fisher Chi-square	14.2476	0.5803	8	64

** Probabilities for Fisher tests are computed using an asymptotic Chi.
-square distribution. All other tests assume asymptotic normality.

Unit Root results for PFA

Panel unit root test: Summary
Series: PFA
Sample: 2012 2020
Exogenous variables: Individual effects
User-specified lags: 1
Newey-West automatic bandwidth selection and Bartlett kernel
Balanced observations for each test

Method	Statistic	Prob.**	Cross-sections	Obs
Null: Unit root (assumes common unit root process)				
Levin, Lin & Chu t*	2.52590	0.9942	8	56
Null: Unit root (assumes individual unit root process)				
Im, Pesaran and Shin W-stat	3.00928	0.9987	8	56
ADF - Fisher Chi-square	4.45980	0.9979	8	56
PP - Fisher Chi-square	16.7273	0.4034	8	64

** Probabilities for Fisher tests are computed using an asymptotic Chi.
-square distribution. All other tests assume asymptotic normality.

Unit Root results for ICA

Panel unit root test: Summary
Series: ICA
Sample: 2012 2020
Exogenous variables: Individual effects
User-specified lags: 1
Newey-West automatic bandwidth selection and Bartlett kernel
Balanced observations for each test

Method	Statistic	Prob.**	Cross-sections	Obs
Null: Unit root (assumes common unit root process)				
Levin, Lin & Chu t*	1.30393	0.9039	8	56
Null: Unit root (assumes individual unit root process)				
Im, Pesaran and Shin W-stat	2.93742	0.9983	8	56
ADF - Fisher Chi-square	5.21099	0.9946	8	56
PP - Fisher Chi-square	3.94757	0.9990	8	64

** Probabilities for Fisher tests are computed using an asymptotic Chi. -square distribution. All other tests assume asymptotic normality.

Unit Root results for MFA

Panel unit root test: Summary
Series: MFA
Sample: 2012 2020
Exogenous variables: Individual effects
User-specified lags: 1
Newey-West automatic bandwidth selection and Bartlett kernel

Method	Statistic	Prob.**	Cross-sections	Obs
Null: Unit root (assumes common unit root process)				
Levin, Lin & Chu t*	0.87044	0.8080	7	48
Null: Unit root (assumes individual unit root process)				
Im, Pesaran and Shin W-stat	1.36550	0.9140	7	48
ADF - Fisher Chi-square	5.82061	0.9708	7	48
PP - Fisher Chi-square	20.8165	0.1064	7	55

** Probabilities for Fisher tests are computed using an asymptotic Chi. -square distribution. All other tests assume asymptotic normality.

Unit root results for GFCF

Panel unit root test: Summary
Series: GFCF
Sample: 2012 2020
Exogenous variables: Individual effects
User-specified lags: 1
Newey-West automatic bandwidth selection and Bartlett kernel

Method	Statistic	Prob.**	Cross-sections	Obs
Null: Unit root (assumes common unit root process)				
Levin, Lin & Chu t*	−2.65080	0.0040	8	54
Null: Unit root (assumes individual unit root process)				
Im, Pesaran and Shin W-stat	0.19686	0.5780	8	54
ADF - Fisher Chi-square	13.6313	0.6262	8	54
PP - Fisher Chi-square	12.4480	0.7126	8	62

** Probabilities for Fisher tests are computed using an asymptotic Chi. -square distribution. All other tests assume asymptotic normality.

Unit root results for INFL

Panel unit root test: Summary
Series: INFL
Sample: 2012 2020
Exogenous variables: Individual effects
User-specified lags: 1
Newey-West automatic bandwidth selection and Bartlett kernel
Balanced observations for each test

Method	Statistic	Prob.**	Cross-sections	Obs
Null: Unit root (assumes common unit root process)				
Levin, Lin & Chu t*	−10.7169	0.0000	8	56
Null: Unit root (assumes individual unit root process)				
Im, Pesaran and Shin W-stat	−4.02891	0.0000	8	56
ADF - Fisher Chi-square	49.9568	0.0000	8	56
PP - Fisher Chi-square	31.1059	0.0130	8	64

** Probabilities for Fisher tests are computed using an asymptotic Chi.
-square distribution. All other tests assume asymptotic normality.

Unit root results for DCPS/GDP

Panel unit root test: Summary
Series: DCPS_GDP
Sample: 2012 2020
Exogenous variables: Individual effects
User-specified lags: 1
Newey-West automatic bandwidth selection and Bartlett kernel
Balanced observations for each test

Method	Statistic	Prob.**	Cross-sections	Obs
Null: Unit root (assumes common unit root process)				
Levin, Lin & Chu t*	−7.19241	0.0000	8	56
Null: Unit root (assumes individual unit root process)				
Im, Pesaran and Shin W-stat	−1.60684	0.0540	8	56
ADF – Fisher Chi-square	33.2720	0.0068	8	56
PP – Fisher Chi-square	34.2881	0.0050	8	64

** Probabilities for Fisher tests are computed using an asymptotic Chi.
-square distribution. All other tests assume asymptotic normality.

Unit Root results for GPUIC-C

Panel unit root test: Summary
Series: GPUI_C
Sample: 2012 2020
Exogenous variables: Individual effects
User-specified lags: 1
Newey-West automatic bandwidth selection and Bartlett kernel
Balanced observations for each test

Method	Statistic	Prob.**	Cross-sections	Obs
Null: Unit root (assumes common unit root process)				
Levin, Lin & Chu t*	7.79434	1.0000	8	56
Null: Unit root (assumes individual unit root process)				
Im, Pesaran and Shin W-stat	3.84972	0.9999	8	56
ADF – Fisher Chi-square	0.54417	1.0000	8	56
PP – Fisher Chi-square	0.00874	1.0000	8	64

** Probabilities for Fisher tests are computed using an asymptotic Chi.
-square distribution. All other tests assume asymptotic normality.

Unit Root results for GPUI-ppp

Panel unit root test: Summary

Series: GPUI_PPP
Sample: 2012 2020
Exogenous variables: Individual effects
User-specified lags: 1
Newey-West automatic bandwidth selection and Bartlett kernel
Balanced observations for each test

Method	Statistic	Prob.**	Cross-sections	Obs
Null: Unit root (assumes common unit root process)				
Levin, Lin & Chu t*	7.06826	1.0000	8	56
Null: Unit root (assumes individual unit root process)				
Im, Pesaran and Shin W-stat	3.84111	0.9999	8	56
ADF – Fisher Chi-square	0.54866	1.0000	8	56
PP – Fisher Chi-square	0.01249	1.0000	8	64

** Probabilities for Fisher tests are computed using an asymptotic Chi.
-square distribution. All other tests assume asymptotic normality.

Unit root results for UNEMPL

Panel unit root test: Summary
Series: UNEMPL
Sample: 2012 2020
Exogenous variables: Individual effects
User-specified lags: 1
Newey-West automatic bandwidth selection and Bartlett kernel
Balanced observations for each test

Method	Statistic	Prob.**	Cross-sections	Obs
Null: Unit root (assumes common unit root process)				
Levin, Lin & Chu t*	−3.62650	0.0001	8	56
Null: Unit root (assumes individual unit root process)				
Im, Pesaran and Shin W-stat	−0.58666	0.2787	8	56
ADF - Fisher Chi-square	24.8359	0.0728	8	56
PP - Fisher Chi-square	9.11290	0.9087	8	64

** Probabilities for Fisher tests are computed using an asymptotic Chi.
-square distribution. All other tests assume asymptotic normality.

Unit root results for TRADE

Panel unit root test: Summary
Series: TRADE
Sample: 2012 2020
Exogenous variables: Individual effects
User-specified lags: 1
Newey-West automatic bandwidth selection and Bartlett kernel
Balanced observations for each test

Method	Statistic	Prob.**	Cross-sections	Obs
Null: Unit root (assumes common unit root process)				
Levin, Lin & Chu t*	−1.75273	0.0398	8	56
Null: Unit root (assumes individual unit root process)				
Im, Pesaran and Shin W-stat	−0.56873	0.2848	8	56
ADF - Fisher Chi-square	18.0340	0.3219	8	56
PP - Fisher Chi-square	16.1039	0.4457	8	64

** Probabilities for Fisher tests are computed using an asymptotic Chi.
-square distribution. All other tests assume asymptotic normality.

Hausman Test
Correlated Random Effects - Hausman Test
Equation: Untitled
Test cross-section random effects

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	40.647951	7	0.0000
Pesaran CD (Residual Cross-Section Dependence Test)			

Residual Cross-Section Dependence Test
Null hypothesis: No cross-section dependence (correlation) in residuals
Equation: Untitled
Periods included: 8
Cross-sections included: 8
Total panel (unbalanced) observations: 58
Test employs centered correlations computed from pairwise samples

Test	Statistic	d.f.	Prob.
Breusch-Pagan LM	43.5879	28	0.0305
Pesaran scaled LM	2.0830		0.0372
Bias-corrected scaled LM	1.5116		0.1306
Pesaran CD	0.7019		0.4827

Panel Cross-section Heteroskedasticity LR Test
Equation: UNTITLED
Specification: GDPCG1 PFA1 MFA1 GPUI _C GPUI_PPP1 UNEMPL11 GFCF1 DCPS_GDP1 TRADE1 UNEMPL1 GFCF1 ICA1 C
Null hypothesis: Residuals are homoskedastic

	Value	df	Probability
Likelihood ratio	5.7810	8	0.6717
LR test summary:			
	Value	df	
Restricted LogL	−155.5137021411405	56	
Unrestricted LogL	−152.6231860885335	56	

Volume 31, Number 4 2025

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The ***Journal of East-West Business*** is international in scope and treats business issues from comparative, cross-cultural, and cross-national perspectives. The journal features an Editorial Advisory Board that represents the Russian Federation, Eastern/Central European, and Baltic states in this new business arena. The journal covers an enormous gamut of inquiry, including:

- privatization of state enterprises
- management training and development
- foreign direct investment
- entrepreneurship and small business development
- joint ventures and strategic alliances
- telecommunications in Central Europe
- case studies
- transformation to the free-market economy system
- enhancement of distribution

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- management of technology transfer and reverse technology transfer
- export/import and trade development
- free trade and industrial growth
- market research in Central and Eastern Europe and the Commonwealth of Independent States
- international licensing/franchising
- development of tourism in Central and Eastern Europe and the Commonwealth of Independent States
- capital financing and budgeting
- other emerging topics of critical concern to countries in this area

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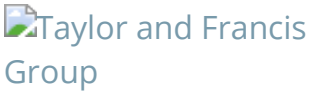

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Publisher

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10669868, 15286959

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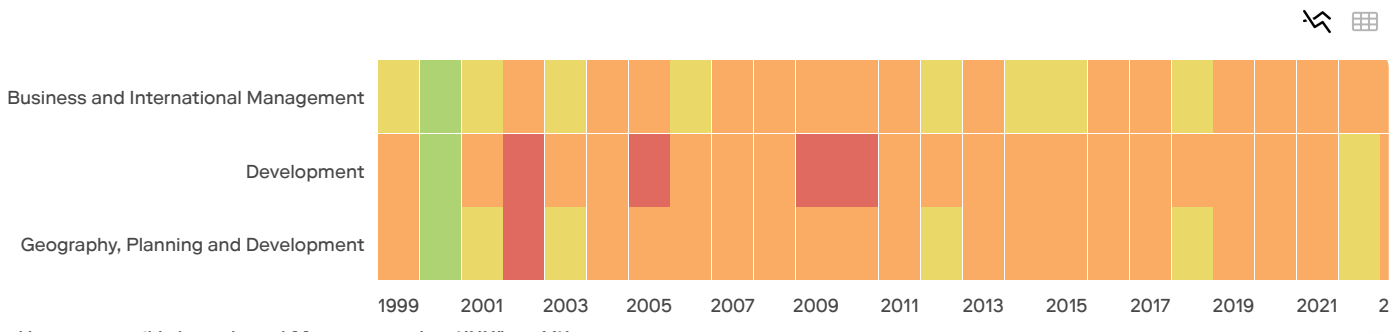

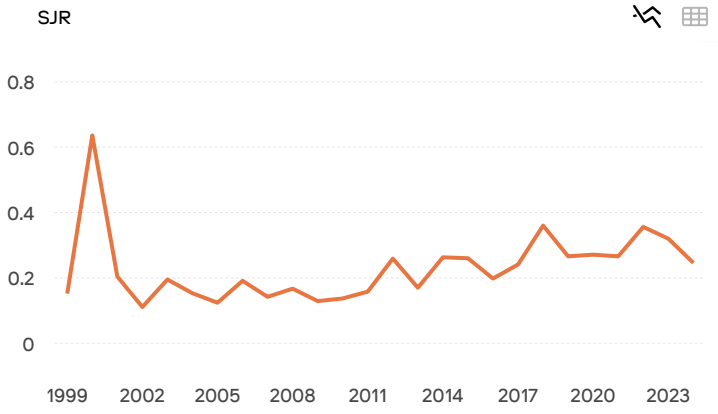

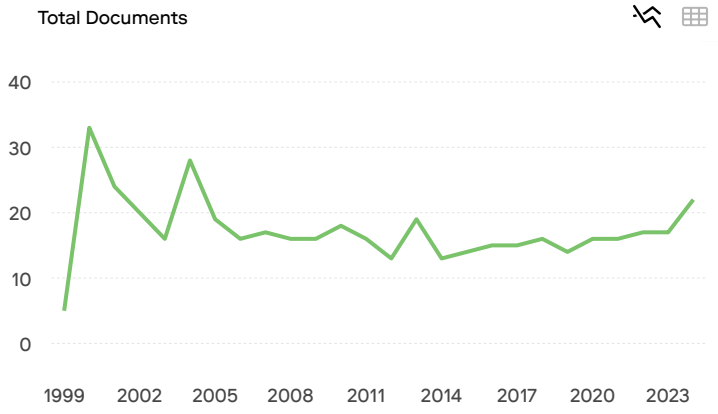

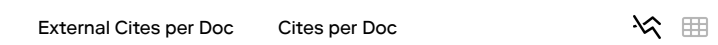

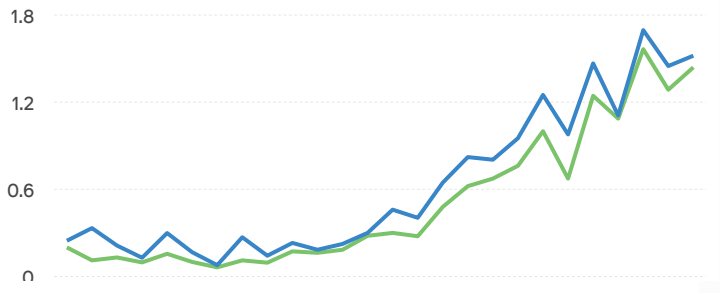

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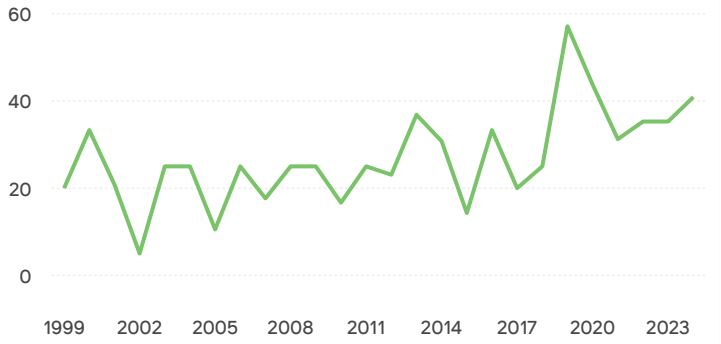

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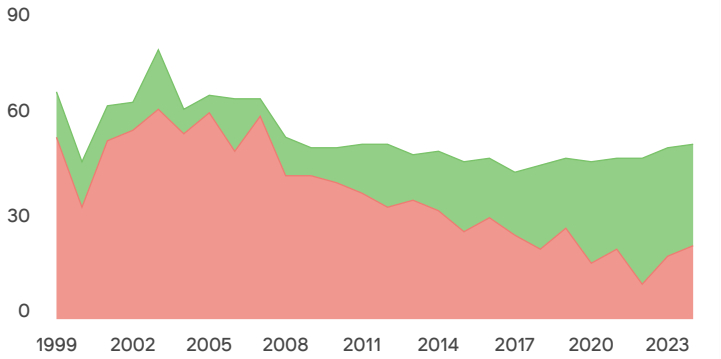

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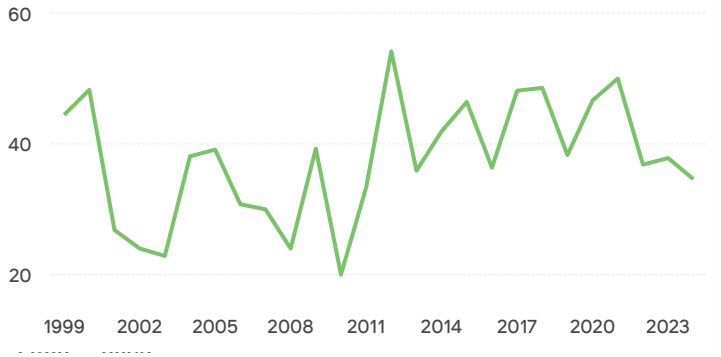

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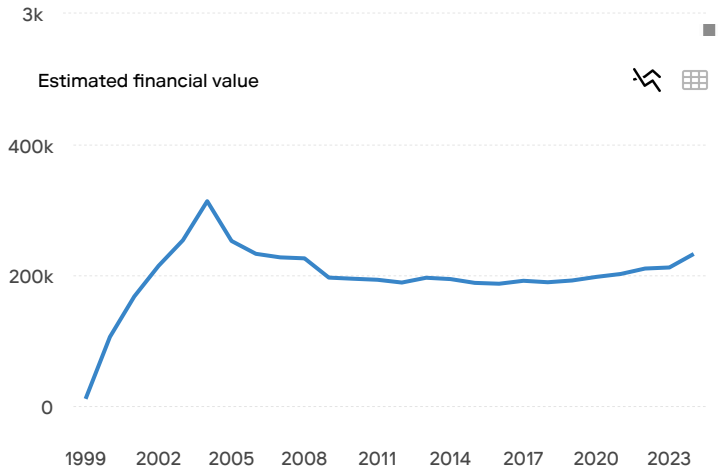
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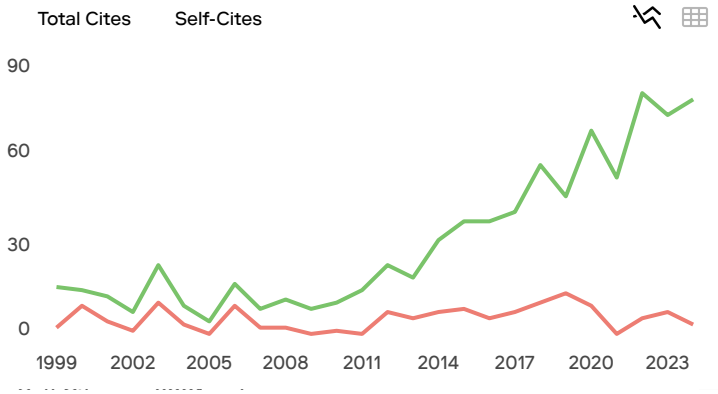
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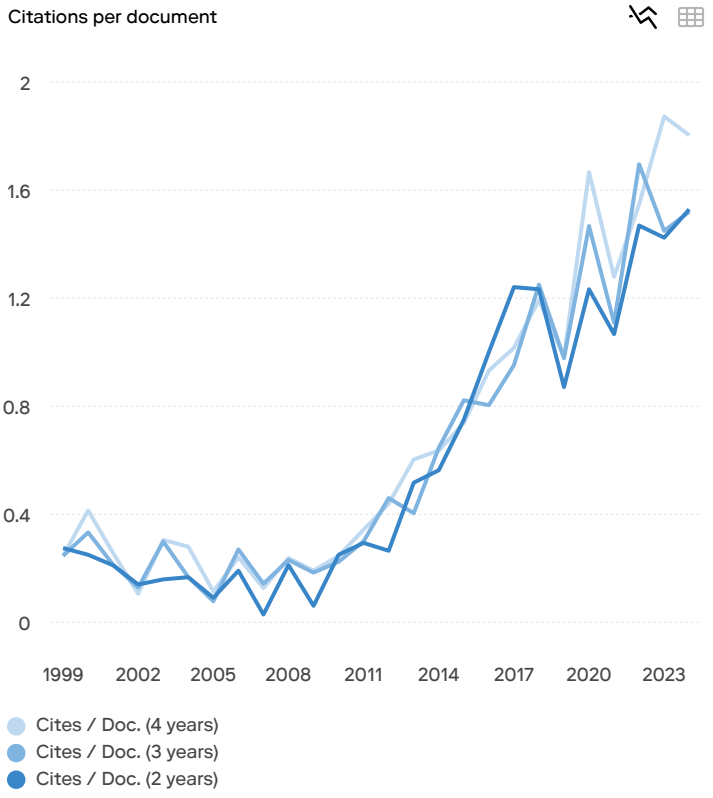
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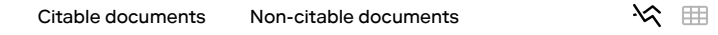
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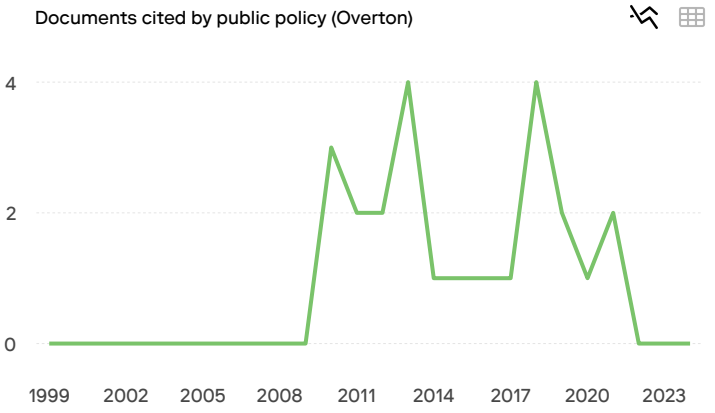

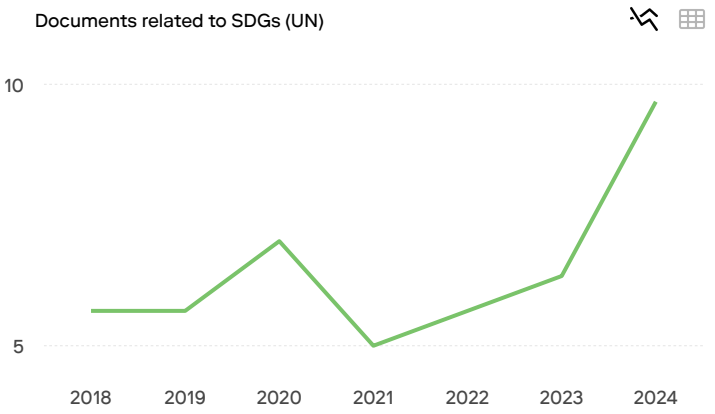

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