Institutions and growth revisited: OLS, 2SLS, G2SLS random effects IV regression and panel fixed (within) IV regression with cross-country data

Josheski, Dushko; Fotov , Risto ; Lazarov, Darko and Koteski , Cane

02. October 2011

Institutions and Growth revisited: OLS, 2SLS, G2SLS Random effects IV regression and Panel Fixed (within) IV regression with cross-country data

Dushko Josheski (dushkojosheski@gmail.com)

Darko Lazarov (darko.lazarov@ugd.edu.mk)

Risto Fotov (risto.fotov@ugd.edu.mk)

Cane Koteski (cane.koteski@ugd.edu.mk)

Abstract

This paper revisits the Institutions and growth models. Econometric techniques have been applied on cross-country data, just to confirm the *apriori* knowledge that Institutions effect on growth is positive and highly statistically significant. This evidence was confirmed by all four models. OLS proved as a better technique for our data than 2SLS, this simply because overidentification test showed that instrument cannot be considered exogenous, also Hausman test showed that OLS is better than 2SLS at 1% and 5% levels of significance. G2SLS estimator and Fixed effects panel estimators just confirmed the results from the OLS and 2SLS. As a proxy variable for institutions we used Rule of law variable, also as instruments were used revolutions and Freedom house rating as well as War casualties variables. Also as conclusion here Trade is insignificant in influence to GDP growth compared with quality of institutions.

Key words: Institutions, Growth, 2SLS, OLS, G2SLS Random effects IV regression and Panel Fixed (within) IV regression, cross-country data, Hausman test, Overidentification test

Literature review of Institution and growth

The growth theory tries to explain the dynamic of growth process and the enormous differences of income per capita and economic performance among countries. From historical perspective, some group of countries have accomplished very high rate of growth and economic performance compared with other countries which face with economic problems (slowly dynamic of growth process). There are many explanations about this fact, basically, three theories analyze the factors which determinate cross-country differences in income levels and growth rate. First, the neoclassical theory of economic growth, based on work of Solow (1956), Lucas (1988), and others, focuses on the inputs of physical and human capital as a main resource of growth process, and late, Romer (1990) focus on technology advances through R&D activities (activities that create new ideas in economy) as a engine of growth. Second, the geographic/location theory explain that the geographic location of country (access to market) and the climate condition are very important for income level and economic performance. The theoretical and empirical research present the strong causality between the geographic location and the income level, the geographic/location theory explain only the income level differences among countries. In other side, the most important question for economist is the engine of growth, and in this direction the growth theory tries to explain the factors which determent the rate of growth. Third, the institutional approach emphasizes the importance of creating an institutional environment and institutions that support and encourage the main foundation of market economy (e.g. protection of property rights, rule of law, enforcement of contracts, and voluntary exchange of market-determined price. Institutions refer to rules, regulations, laws and policies that affect economic incentives such as incentives to invest in technology, physical capital and human capital. In this regard, the good institution framework is necessary for high level investment. Investors do not prefer to risk their capital when the protection of property rights is poorly, there are weak in rule of law and enforcement of contracts, and other illegal activities in market foundation economy. The theoretical explanations for growth that we introduced above are not inconsistent each other and all might play important role, but institutions are the major fundamental cause of economic growth and cross-country differences in economic performance.

The research of our paper focuses on the causality relationship between institutions and growth, and analyzes how quality of institutions influences growth rate. The empirical investigate show the more strong direction of causality of institutional quality to growth than the influence of growth to quality institutions. The explanation of this result is the fact that