CORRUPTION AND ECONOMIC GROWTH IN DEVELOPING COUNTRIES

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"There is no distinctly American Criminal class, except Congress."

Mark Twain

Introduction

There are plenty of approaches to the unequal economic growth problem among countries and no doubt it is still an important issue even for developed countries. All countries, whether developed, developing, or least developed, are in various stages of economic growth and executing reforms in the direction of economic growth. Conceptually, there is hardly something new about reforms of economic development. The concept of growth is the same in every country, although strategies and activities differ, whether in the private sector or government as a whole. The most essential question that economists are eager to answer is why some countries still are not growing and some are, and what the reasons are behind of some countries' growing much faster than the others.

The most fundamental theory of economic growth is known as the Neo-classical model, which is was an extension of the Harrod-Domar model. Unlike Harrod-Domar model it includes new term, productivity. The most crucial breakthrough in this field was probably done by neo-classic economist, Robert Solow in 1965. However, the Solow model bases on several weak assumptions such as diminishing marginal productivity closed economy, constant savings fraction and only physical capital is included in the model. Many economists made huge contribution for the improvement of the model. One of the outstanding examples of this is the model executed by Gregory Mankiw, David Romer and David Weil, which contains physical as well as human capital. Model shows an extraordinary description of cross-country data. Despite the fact that the model is constructed from the second order system of differential equations, the model is non-linear. Therefore, the model cannot be explained analytically. Besides, most methods used to solve the equation are very complex and actually cannot be solved. Summing up all economic theories suggest that productivity is achieved from better education, investment in human capital, training people and having better knowledge. Assembling these factors has to boost economic growth much faster.

Yet the puzzling question is still out there: "If we know about what makes countries rich and what makes them poor, why do we have poverty in the world?"[1] My plan is as follows. I will try to explain this phenomenon of unequal economic growth by ethnolinguistic factors, which probably have crucial effect on productivity. I will argue that key factors of economic growth are cultural values of the countries, which determine corruption level. Indeed, I presume that culture is important entry in determining corruption and economic

[1] Douglass C. North, "Why Some Countries Rich and Some Are Poor," *Chicago-Kent Law Review*, Vol. 77 (1999):319, http://lawreview.kentlaw.edu/articles/77-1/NorthFinalPF.pdf.

growth. Therefore, the main purpose of this research is to discuss the scale of corruption, its effect on growth, and some possible solutions.

Theoretical background

Although, there are abundant research focusing on many aspects of productivity, most of them refuse to recognize corruption and the cultural values of the nation as the main factors of productivity, and therefore, of economic development. Obviously, the basic Solow model, published first in 1956 "A Contribution to the Theory of Economic Growth," employs controversial assumptions and serves only as fundamental model of economic growth. Another, one of most well-known researches such as Gregory Mankiw, David Romer, and David Weil suggest, in their research published in 1992 and titled "A Contribution to the Empirics of Economic Growth," that human capital is the key factor which generates new goods and ideas to provide technological progress. Even though, these studies recognize the essential influence of the human factor on productivity, they disregard corruption and culture or at least assume that there are many tiny factors influencing productivity.

On the other hand, several economists acknowledged the importance of corruption to growth. Evidently, one of them admits that "once corruption consequences for growth are recognized, there are unresolved question and some apparent solution to growth."[2] Another interesting approach of economic development is mentioned by Douglass C. North, who clearly states that "We know what makes for rich countries. We know the characterstics of productivity. We even know the kinds of institutions that must be put in place. The rule of law, property rights that provide incentives for people to be productive, and in human capital: all of these necessary."[3] Nevertheless, North completely neglects cultural values of the country as the crucial factor of productivity.

Some other outstanding research was carried out by Robert E. Hall and Charles Jones, who examine culture and language factors` impact on economic growth. Most likely, they have made breakthrough in finding the main factors of economic development and serve as direction point for my research. Hall and Jones state that "capital accumulation, productivity, and therefore output per worker are driven by institutions, government policies, which we call social infrastructure."[4] Afterwards, they go on to express that social infrastructure is an endogenous variable that could be specified by historical location and language determinants. Consequently, the authors conclude that language, country location, the cultural values of the country, actually are important determinants of the economic development.

Despite the fact that it is relevant work for my study; I argue that they were wrong in specifying social infrastructure and government policy quality with determinants such as language and location differences of countries. Hence, I will try to solve endogeneity problem by entering religion as the main determinant of social infrastructure and government policy in contrast with that of Hall and Jones used in their research. For this purpose, I will use fractionalization data of language, religion and ethnicity variables.

Empirical Research

[2] William Easterly, Elusive Quest For Growth: Economists' Adventures and Misadventures in the Tropics (MIT Press 2001), pp. 342.

[3] Douglass C. North, "Why Some Countries Rich and Some Are Poor," *Chicago-Kent Law Review*, Vol. 77 (1999):319, http://lawreview.kentlaw.edu/articles/77-1/NorthFinalPF.pdf.

[4] Robert E. Hall and Charles I. Jones, "Why Do Some Countries Produce So Much More Output Per Worker Than Others?" The Quarterly
Journal of Economics, Vol. 114, No. 1 (Feb., 1999), pp. 83-116.

Although there are many models that consider corruption, government policy and the quality of institutions as important entries of output per capita, a small number of them define government policy as a function of cultural variables. In addition, most research including cultural variables, cannot determine the exact impact of these variables on economic growth. Nevertheless, I support what Hall and Jones suggest in their research, that social infrastructure is the main determinant of output per worker, and, therefore, of economic growth. With this statement, they presume the following structural model may be hypothesized:[5]

$$\log Y/L = \alpha + \beta S + \varepsilon,$$

and

$$S = \gamma + \delta \log Y / L + X\theta + \eta,$$

where S represent social infrastructure and X is a collection of all other variables.

Several features of this structural model deserve comment. Obviously, the social infrastructure has a feedback effect problem. Second, social infrastructure determinants such as language and location variables have an impact on output per worker only through social infrastructure. Determinants of social infrastructure are valid instruments for economic growth. Subsequently, in order to escape the endogeneity problem the authors employed a very powerful instrumental variable method, which most econometricians would suggest to implement. Therefore, regressing social infrastructure on variables such as language and location index data, Hall and Jones successfully created the so-called "new cleaned up" social infrastructure variable, which does not have the causality problems discussed above. Besides, applying an instrumental variable in the model creates an opportunity to avoid measurement error trouble. Thus, the authors find a solution for both problems at once and powerfully detect the crucial influence of social infrastructure or government policy on output per worker, and, hence, on economic growth.

This instrumental variable method in explaining the differences in economies will serve as a starting point to my research, except that I argue that instrumental variables such as language and location index of various countries have been chosen wrong. Instead of the variables in question, I will try to construct the structural model with new instrumental variables of cultural or ethnolinguistic fractionalization variables: religion, ethnicity and language fractionalization data. The data most frequently exploited in the literature was composed in the Soviet Union in 1960 on the basis of most primary sources and published in the *Atlas Narodov Mira* in 1964.[6] Evidently it is a daunting question how to use the variables in the structural model. The method mostly used in literature, known as the Hirfendahl index of ethnolinguistic group shares, can be engaged.[7] Afterwards, the ethnolinguistic fractionalization index is computed as one minus the Hirfendahl index.

After constructing ethnolinguistic fractionalization index variables, I employed these variables in a structural model as instrumental variables. Eventually, when I possess the new cleaned up social infrastructure variable, as Hall and Jones have done except using other instrumental variables, I analyzed the effect of social infrastructure, government policy and corruption on output per capita, and, hence, the economic growth and development of the countries.

[5] Ibid., 99.

[6] *Atlas Narodov Mira*. (1964). Moscow: Miklukho-Maklai Ethnological Institute at the Department of Geodesy and Carthography of the State Geological Committee of the Soviet Union.

[7] Mauro Paolo, "Corruption and Growth," *The Quarterly Journal of Economics*, Vol. 110, No. 3.(1995), pp. 681-712.

I attained results by simple regression model, however besides regression analysis I tried to exploit cluster analysis, factor and discriminant analysis, method of principal components, which are powerful in explaining different aspects of relationship of variables in question. One of the important issues in implementing ethnolinguistic fractionalization index data is its change over time and possible causality problem. Therefore, the results gained from the structural model could be biased and, consequently, be wrong. For example, based the history of some countries, economists have determined that output per capita could have an impact on these variables, which in turn implies that endogeneity problem exists. Nevertheless, I am going to ignore the problem based on research of some economists.[8] The results will be compared to that of what Hall and Jones had in their paper. If results are sufficient and complete, I will use them to analyze these fractionalization index effects on output per capita through government policy and corruption.

The objective of conducting the research is to obtain instrumental variables for social infrastructure, government policy and corruption. The most efficient structural model constructed by economists seems to be unreliable and incompetent because of failure of choosing right instrumental variables. Obviously, language and location fractionalization indexes could be essential instrumental variables as most economists admit, although the models employing variables in question do not construct solution to poverty problem. Therefore, I suggest that instead of employing merely language and location variables, ethnolinguistic index variables such as religion, ethnicity and language fractionalization index must be exercised as instrumental variables. Meanwhile, it would be crucially important to solve the identity problem in analytical form. In this case, it would be possible to investigate the solution by the methods of differential real analysis, to find intervals of marginal diminishing production function.

Conclusion

Summing up, this paper seeks to achieve several goals. I employed a new instrumental variables, taking into account not only language but also other clean up variables such as ethnolinguistic variables. Empirical analysis suggests that success in increasing income per capita is driven by ethnolinguistic, religious affiliation and social infrastructure variables (corruption). The other goal was to show that new instrumental variables direct us to considerably different results. Third, I come to conclusion that corruption and government policy effects on output per capita, consequently on economic development of different countries.

References

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[8] Alberta Alesina and Arnaud Devleeschauwer, eds., "Fractionalization," *Journal of Economic Growth*, No. 8 (2003), pp. 194.

5. Robert E. Hall and Charles I. Jones, "Why Do Some Countries Produce So Much More Output Per Worker Than Others?" *The Quarterly Journal of Economics*, Vol. 114, No. 1 (Feb., 1999).
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Резюме

Подводя итоги, этой страницы нужно отметить некоторые достижения. Я примненил новую полезные параметры учитывая не только язык но и тому же другие четкие параметры как этнолингвистические параметры. Эмпиричсский анализ советует что успех растущего дохода на душу населения.

Özet

Deneysel analize göre kişi başına düşen milli hasıla etnolinguistik, din ve sosyal yapı değişkenleri ile yakından ilişkilidir.

Түйін

Бұл мақаланың түйіні бойынша біз кейбір жетістіктерге қол жеткізе білдік. Тіл бірліктерін ғана емес сонымен қатар этнолингвистикалық тіл бірліктерін қатар қолдана білдік. Эмпирикалық анализдер нәтижесі кірістің өсімділігін халық санымен байланыстырылады.

Ердің елге бағасы қаны бір болуда емес, жаны бір болуда: қуаныш- қайғысы ортақ болуда.Ердің бағасы елге еткен еңбегінің зор яки кішілігінде емес, ел деген жүрегінің таза болуында: тілегінің елмен ортақ болуында: ер өмірінің өрі мен көрі ел өмірінің өрі-көрімен бір болуында

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