



## Recognition of Economic Growth Sources with Institutionalized Economics Approach

Gholamhossein Barekat<sup>1\*</sup>, Ali Moradi<sup>2</sup>

<sup>1</sup>Department of Educational Administration, Ahvaz Branch, Islamic Azad University, Ahvaz, Iran, <sup>2</sup>Department of Educational Administration, Ahvaz Branch, Islamic Azad University, Ahvaz, Iran. \*Email: V\_data@yahoo.com

### ABSTRACT

Nowadays, achievement of high economic growth is the main purpose of all economic firms and is also the focus point of all activities taken to have supervision on economic affairs of developed countries. At the same time, the institutionalized approach has been applied to analyze the nature of poverty and wealth of nations. Some economists believe that institutions play vital role in economic growth of countries, especially developing countries. Institutional environment is one of the most important elements of institutional structure framework forming an economic system. An economic system can be established and continued based on an institutional environment. In fact, institutional environment can provide the play rules for governmental mechanism and also for the market mechanism and can also determine the structure of relations between the government and market in an economic system. In addition to government and market, economic system encompasses also another underlying element called institutional environment. According to relations of institutional indices with other, analysis of separate effect of institutional indicators on economic growth is difficult. Hence, the applied method in this study proposes a set of institutional indicators in frame of institutional environment. This study has applied institutionalized economics approach with the definition of institutional factors of economic freedom, judicial system (JS) and bureaucracy level as institutional environment. Moreover, the study has applied developed criterion of institutional quality and has analyzed the economic performance and has taken descriptive analysis and applied econometrics patterns and panel data. The results obtained from the study show that if the institutional environment shows the expected performance, it can leave positive effects on economic performance. Institutional factor of JS has direct and positive effect on economic growth and the effect of institutional factor of bureaucracy and overall freedom index on economic growth was not confirmed in this study.

**Keywords:** Institutional Environment, Economic Growth, Institutionalized Economics, Institutional Quality, Judicial System, Bureaucracy

**JEL Classifications:** D73, EO2, F43

### 1. INTRODUCTION

Second half of 20<sup>th</sup> century was called as the years of growth and development of new institutionalization thought and the presence of scholars of this field among the winners of Nobel Prize refer to position and importance of this approach in economic literature. The theory introduced by Ronald Coase in the article “nature of the firm,” was aimed at taking step to meet inefficiencies of the conventional neoclassic economy. This is a claim presented also by some theorists in this system (Richter, 1996).

Presentation of Nobel prize in economics to Mirdal, Buchanan James, Simon Kuznets, Coase Ronald, Douglas North and Tyasen Amar; who considered the effect of structural and institutional factors on economic issues, shows the competent academic

position and importance of the theory (Greene, 2008). The modern institutionalized economy is an effort to combine theory of institutes in the economy. Considering role of institutions in economy enables the policy makers and planners to recognize the elements of social system to explore the position of economic components and to make plans to facilitate economic relations and to reduce transaction costs. On the other hand, the main approach of economic development in Iran after the Imposed War has been structural refinement prescribed by international money fund (Heydari et al., 2016). Institutionalized economy, due to its fundamental role for institutional environment, has inspirational inferences to specify the role of government in national economy. The institutionalists consider more roles in the process of development for the government not only in markets failures, but also in field of refinement of economic-social institutions

and mainstreaming (Dadgar, 2014). Williamson has studied the institutionalized economy in 4 levels of social analysis using the new approach. He believes that the difference of the 4 levels can be in the horizon of their change, their priority to each other and ruling theories of each level. The approach can also provide conditions for analysis of role of oil and position of government with more transparency based on institutional structure of Iran's economy and provide political advice to refine the existing status through recognizing that (Williamson, 1991). In the arena of economics, always a rival is observed between two important thinking traditions including neoclassic and institutionalized economy. The thinking dispute has been taken in different levels from the most fundamental levels such as ontological and epistemological foundations to levels such as political inferences. The present study tends to investigate some dimensions and challenges created in these thinking challenges. One of the most important charges of neoclassic fans against old institutionalism is that the thinking tradition has no theory. The charge is presented because the conventional economy tends to introduce itself practical and introduce old institutionalism impractical. The main question is that what is the science in reality? What can be considered as science? Can neoclassic economy be considered as science and ignore the institutional economy? These are the main categories studied in this work. In this study, it has been shown that despite to the claim of neoclassic fans, old institutionalism includes an important core of economic theories and the charge of having no theory is not competent for the paradigm. However, to this end, the limited range of neoclassic on the theory should be extended. One of the sectors developed in line with economic growth and development is financial sector of every economic system. Although various attitudes are presented on causality of the two issues, the direction of causality and type of effectiveness vary depending on form of financial development and different steps of economic growth.

The most underlying questions in field of social sciences are associated with the effect of factors of intercultural disputes in economic growth and development. Why some countries are poorer than others? Why some countries achieve economic growth and some others not? To what extent the questions can be answered? What can be taken to achieve economic growth and to promote living standards at the society?

There is close relation between economic growth and ability of the society to increase human resource, physical resource and to promote technology of the relation. At such environment, technology has been created in wide range. Technological disputes refer to not only disputes in existing techniques for companies, but also disputes in manufacturing organizations. This shows that some countries have the ability to utilize their resources effectively and usefully.

In early 20<sup>th</sup> century, analysis of the impact of economic performance gained attention of a group of economists. Works of Weblan, Cammons and Michel gained attention of many people and the attitudes of the group, called institutionalism school, was developed rapidly during the years of two decades (1920 and 1930) at the USA. However, with the advent of big stagnation

in the interval between two wars and rise of Keynesian theories after World War II and increased influence of mathematics in economics; the attitudes of institutionalists were conducted to margins. With the advent of the crisis of decreased production at the world, as a result of drought in Africa and rise of oil price in 1970s decade, demand management policies lost their effectiveness (North and Thomas, 1973).

Moreover, economic growth in 1960 was continuing along with rapid growth of government in all countries of the world. Large executive systems in many countries fallen in corruption and flexibility and imposed heavy financial load on financial foundation of countries, especially developing countries. All of the said factors questioned the accuracy of Keynesian theories. Such conditions could provide conditions for advent of new institutionalism school. The attitude of institutionalists over the decades gained attention of economists of different countries increasingly and gained competent position in the economic investigations.

Therefore, the present study has applied institutional economy approach with the definition of institutional factors of economic freedom (EF), judicial system (JS) and bureaucracy level as institutional environment. Also, the study has applied developed criterion of institutional quality (IQ) to analyze economic performance and to present descriptive analysis of econometrics patterns of panel data.

## 2. THEORETICAL FOUNDATIONS AND RESEARCH BACKGROUND

Undoubtedly, introducing the term “institution” and its derivatives to terminology of economics is taken by Weblan. The reality is that since the time of advent of institutionalized economy to the date, various definitions have been presented for the term “institution” and relevant concepts. The difference is particularly obvious between two old and new institutionalism schools. Weblan believes that institutions are those fixed thinking habits, which are common among people. Also, he mentions in a similar expression that institutes are the outgrowth of habit mentions that social concepts can be core of social institutes. Institutes are nothing other than thinking habits publically accepted as directing norms “behavior and conduct.” Has also emphasized institute and relevant concepts in different way and in his definition for the institute. He has defined institute as a collective action in line with controlling, liberating and extending individual action. In view of Cammons, the forms of institute include unorganized traditions and organized formations. In addition to the mentioned definitions, the term “institute” comes with the name of Douglas North. North has defined institutions as follows: Institutions are playing rules at the society; i.e., they are rules codified by human forming their interactions. As a result, institutes can structure the hidden incentives in human transactions; whether the transactions are political, economic or social. According to North, institutes are combined of nonofficial limitations (like fines, sanctions, customs and traditions and code of conduct) and official laws like Constitution, regulations and ownership rights. In view of

North, institutes have been created over the history to provide order and to reduce unreliability in transactions. In addition to introduce economic incentive structure, they conduct them towards economic changes towards growth or stagnation (North, 1981).

North believes that creation of institutes with human thought; limitations on human behaviors and effectiveness through incentives are 3 underlying specifications in regard with definition of institution. Economists have emphasized inputs, outputs and functions of centralized production to analyze the process of economic growth and have encountered firms as “Black Box.” In these investigations, they have less emphasized structural determinant factor of existence of firms, boundaries and their performance. The black box was opened by Williamson based on the work of “Coase ” (1937) and other individuals in 1970s decade and the firms were considered as an important institute and again the study of nature and role of institutes in the process of economic growth and development was changed into an active field of research. Theoretical foundation of institutionalized economy has taken benefit of reliable institutional indices such as legal and political indicators in addition to underlying variables in growth literature such as investment, education, population combination, inflation rate and per capita income to analyze effect of performance of institutes on economic growth.

David (1999) has presented 3 steps in development theories: Step 1 (1950–1960): In this step, effectiveness of interference of states is emphasized. This step was under impact of ideas called as “theory of good development” by Krugman (1999). In this attitude, accumulation of investment can be the unmediated cause of development and interferences of the government to create and accumulate investment can be the main reason for development. Step 2 (1970–1980): In this step, there was increasing belief in power of free market and some reactions were taken against interfering policies of the state. Step 3 (1990 to the date): The increasing emphasis is on importance of institutional design. In this step, reaction is against neoliberalism method.

Heydari et al. (2016) conducted a study on institutional role of oil in Iran’s economy and presented pathology of Iran’s economy in view of institutionalized economics and determined the inferences of this approach for institutional refinements in Iran’s economy. This study used 4-level model of Williamson to analyze the role of oil in Iran’s economy in the rent pollution and fall of IQ. Based on the myopia phenomenon, development of nonofficial economics, outsourcing productive investments, extended bureaucracy and lack of transparent ownership rights; some suggestions have been provided to make arrangement of the responsible government and to guarantee the ownership rights of economic brokers to pave the way to achieve Islamic-Iranian pattern of achievement and realization of ideals of constitution and goals of development perspective document of Islamic Republic of Iran. The results showed that the required precondition for advancement in Iran’s rent economics before everything can be elimination of oil’s rent through changing its institutional position. This can be achieved through codifying general policies of article 45 of the constitution.

Nayeb presented an image of New Institutionalism Explainable Model and showed different dimensions of the theoretical system in explanation of economic phenomena. Accordingly, this study has emphasized 3 important aspects in each theoretical system including analysis unit, explanation manner and judgment basis. Also, it was claimed that the new institutionalism theoretical system in these fields has considerable efficiencies compared to competing theories like neoclassic and new institutionalism. The objectivity ability of analysis unit and coping it with outside realities, ability to express causality in economic performance based on principles of deductive logic and testability of theories in order of objectivity result can be referred in this field.

The institutional studies conducted showed that lots of institutions and required institutional factors are not available in developing countries and or they are inefficient if they are available. Hence, it is competent to conduct studies in this field for careful analysis of institutional environment in these countries and determining required institutes to improve the most underlying factor of economic growth in view of new institutionalism economy (NIE) (Williamson, 1996).

North (1990) has analyzed the inefficient institutes at the developing countries as follows: Institutes at developing countries support redistributive activities more than productive activities; monopolized activities more than competitive conditions and opportunity destruction activities more than opportunity making activities.

North (1990) mentions that over the last years, the issue of development of institutes has been highlighted widely and continues that, if a country is under development process, this is because existing institutes at such country make a weak foundation against stimulants promoting growth.

Mentions that in new institutional economy, despite to neoclassic economy, no fixed institutional framework is assumed, but also they behave explicitly on the main subject and estimate any kind of institutional arrangement and inference for economic behavior.

Nicholas Stern, the senior economist and the First Deputy Economist of World Bank Development, mentions that at the end of 1990, many countries took measure in field of market reform and against it was found that market reform can be growth engine; although it was found at the same time that if healthy institutes and efficient government don’t support the reforms, the reforms may be stopped or failed. Hence, the focus point is now the relation between institutes and the market.

### 3. RESEARCH METHOD

The present study is a library research, which used NIE approach in addition to historical analysis of research variables to test the hypothesis “institutional environment has positive effect on economic growth.” In majority of studies in relevant field, alternative indices have been applied as a representative of institutional environment and each index has covered several subsets and replacements for different dimensions of institutional environment.

In this study, for data analysis and testing hypothesis based on collected data, descriptive-analytical method has been used and to estimate econometrics model, panel data or pool data has been used. The method has some advantages; for example, time series and sectional data, which ignore heterogeneity, encounter risk of achievement of biased results. In as study, Baltagi found that panel data method has the ability to consider stationary variables against time and place; although time series and sectional data lack such capability. Hence, an advantage of panel data is that can provide adjustable estimations. Moreover, it can provide more information, more variance, less linearity, higher degree of freedom and higher efficiency and can show dynamicity of adjustments in better way. Sectional distributions, which seem almost fixed, don't show multilateral variances; although the variances can be studied by panel data in better way. Panel data method is more capable to detect and measure the effects, which can't be easily predicted in sectional or time series studies. The method allows making and examining more complicated behavior compared to sectional or time series data.

One of the main problems with non-empirical studies is the bias caused by excluded or non-estimated variables in the investigations and negligence of dynamicity of variables or their variance over the time as a factor affecting regression analyses in different fields of science. Using sectional-time series panel data over the years has led to formation of efficient estimations in the regression analysis of different fields of science, especially socioeconomic sciences. With the promotion of using the data and possibility of using different estimation methods and data analysis, some barriers for authors such as lack of statistics and data can be removed and the conditions can be provided to conduct applied studies needed in different fields of science. In this study, to test the research hypotheses, the published data of the said variables in 2010–2015 have been used.

Statistical population in this study consists of 5 countries including Iran, Malaysia, India, Mexico and Brazil. In the analysis of the per capita national income, it could be observed that during the study time, Iran has possessed lowest per capital income level after India. The dependent variable in this study is economic growth in studied population. In table 1, average economic growth in different countries is presented during 2000–2015. As it is observed, geometric average of economic growth of India is in highest level and it is in lowest level for Brazil (Table 1).

### 3.1. Research Model

In this section, the best is used in this field, in which the principle of lack of explanatory variables is also observed and the explanation ability of model is not also declined. In this section, Carlsson and Lundstrom (2002) model and the dynamic panel data model of Weinhold (1999) have been used as basis model. The Weinhold model includes two sections: The first section in his view is the

growth of last period and the second section includes other factors. The model is presented as:

$$g_{it} = \alpha_0 + \alpha_1 g_{it-1} + \sum_{j=1}^n \beta_j A_{jit} + \varepsilon_{it} \quad (1)$$

Where; research variables include respectively  $g_{it}$ : Growth of i country in year t;  $g_{it-1}$  is growth of country i in year (t-1) and  $A_{jit}$  refers to other factors.

Moreover, Carlsson and Lundstrom conducted a study under the title of "EF and growth: Analysis of the effects" and studied the effect of EF on growth in 74 countries in 1975–95 using the following model:

$$g_{it} = \alpha_0 + \alpha_1 INV_{it} + \sum_{j=1}^7 \beta_j EF_{jit} + \varepsilon_{it} \quad (2)$$

Where;  $g_{it}$  refers to the growth of country i in year t;  $INV_{it}$  refers to the level of investment of country i in year t and  $EF_{jit}$  refers to component j of EF index of country i in year t. It should be mentioned that EF index used in this study includes these items: (1) State size, (2) market structure, (3) freedom of using credits, (4) monetary policy and stability of prices, (5) freedom of trading with foreign states, (6) freedom of transaction in capital market, and (7) legal structure.

The econometrics approach to role of institutes in economic growth is widely observed in recent literature of institutional economy. Glaeser and Kohlhase. (2004) have evaluated all studied in this field in frame of different models. Their axial question is that can institutes be the cause of growth? To answer the question, the scholars have compared two attitudes (institutional and development) and have obtained the bilateral relation between growth and institutes.

With inspiration of theoretical framework of the studies conducted in this field, the basic model of research is introduced as:

$$GR_{it} = a + \beta_1 I_{it} + \beta_2 L_{it} + \sum_{j=1}^5 \beta_j EF_{jit} + u_{it} \quad (3)$$

Where;  $GR_{it}$  refers to growth of country i in year t;  $I_{it}$  refers to investment of country i in year t;  $L_{it}$  refers to employment index (employment to population ratio) and  $EF_{jit}$  refers to component j of EF index of country i in year t. It should be mentioned that the EF index used in this study includes following items: (1) JS, (2) bureaucracy, (3) business environment.

In rest of the paper, after presentation of theoretical framework, model econometrics and relevant tests of model estimation and testing research hypotheses are presented.

## 4. RESULTS

Using the above mentioned econometrics framework, empirical analysis of each test to examine research hypothesis is presented.

### 4.1. Testing Stationary of Variables

The above mentioned test on the variables used in this study has been used to test the existence or lack of existence of unit root

**Table 1: Average economic growth in selected countries (2000–2015)**

Iran	Malaysia	India	Brazil	Mexico
5.6	7.5	7.7	4.1	4.9

Source: Estimations of author based on international database

**Table 2: Results of unit root tests of research variables**

Description Variable	LLC		IPS		ADF-FISHER		PP-FISHER	
	Statistics	Possibility	Statistics	Possibility	Statistics	Possibility	Statistics	Possibility
GR	-25.5	001.0	-58.0	+69.0	8.18	012.0	27	0012.0
I	-65.6	001.0	-68.0	32.0	45.19	125.0	1.22	12.0
L	-1.12	001.0	-75.2	035.0	05.29	0358.0	45.19	036.0
FR	-102.8	001.0	-24.2	112.0	6.22	104.0	35.32	102.0
JS	-58.2	008.0	-32.0	299.0	87.12	16.0	2.12	35.0
GE	-15.16	001.0	-88.3	015.0	23.33	002.0	02.18	288.0
RQ	-19.28	001.0	-05.5	120.0	05.66	003.0	1.20	065.0

Source: Author's estimations. JS: Judicial system

and the test results are presented in Table 2. The decision making criterion for reliability of variables is ADF unit root test and LLC test. ADF test analyzes independent unit root for panel data among sections and LLC test analyzes common unit root among panel data (Table 2).

As it was observed, the  $H_0$  based on existence of unit root (non-stationary of variables) is rejected for all research variables in LLC test. The results obtained from using ADF test showed that economic growth (GR), JS efficiency and business freedom variables are not stationary and  $H_0$  based on existence of unit root on these variables is confirmed.

#### 4.2. Variable Co-integration Test Due to Examined Models

As some variables have been non-stationary and have become stationary with one differentiation; the co-integration of model variables should be analyzed at the first to test fitness of model. To this end, co-integration test in panel data has been used (Table 3).

This test analyzes the existence of convergence between variables and provides the possibility of long-term correlation between research variables. For empirical test of variable co-integration, Kao test has been used. Clearly,  $H_0$  based on no co-integration of variables (GR, I, L, FR) has been confirmed and has been rejected in other studied models. Also, the long-term correlation between research variables has been confirmed.

#### 4.3. Model Estimation

The prediction can be presented on the effect of institutional environment on economic growth that institutional factors are significant in explanation of economic growth difference among selected countries.

##### 4.3.1. Analysis of the impact of institutional environment on economic growth

In regard with analysis of the impact of institutional environment on economic growth, following models have been used.

##### 4.3.1.1. Analysis of the impact of EF index on GR

Here, the direct impact of EF (Kin's EF index) on economic growth (GR) is examined.

According to Table 3, GR and EF variables are not co-integrated; i.e. the long-term correlation between the two variables in selected countries is not confirmed. Hence, Model No.1 is not fit.

**Table 3: Results of Kao co-integration test**

Variable	probability level	Test statistic	Result
GR, I, L, FR	0.28	0.22	Accept the hypothesis $H_0$
GR, I, L, JS, GE	0.012	2.08	Reject the hypothesis $H_0$
GR, I, L, JS, RQ	0.034	-1.75	Reject the hypothesis $H_0$

Source: Author's estimations. JS: Judicial system

$$\text{Model 1 } GR_{it} = a + \beta_1 I_{it} + \beta_2 L_{it} + \beta_3 FR_{it} + u_{it}$$

##### 4.3.1.2. Analysis of the impact of JS and bureaucracy level in economic growth (GR)

In model No.2, the impact of JS and bureaucracy level on economic growth is examined. Two variables of employment to population ratio and formation of fixed investment as a percentage of GNP have been respectively considered as an estimation of inputs of workforce and investment.

$$\text{Model 2 } GR_{it} = a + \beta_1 I_{it} + \beta_2 L_{it} + \beta_3 JS_{it} + \beta_4 GE_{it} + u_{it}$$

In order to test the impact of bureaucracy on economic growth, in addition to GE index, the RQ index has been also used as an index of measurement of bureaucracy level and is illustrated in model 3.

$$\text{Model 3 } GR_{it} = a + \beta_1 I_{it} + \beta_2 L_{it} + \beta_3 JS_{it} + \beta_4 RQ_{it} + u_{it}$$

To determine type of model used in relevant model data, F-Limer test has been used. According to the model fitness tests on models 2 and 3, F-Limer test is calculated as follows (Table 4).

As  $H_0$  on the above presented models is confirmed, estimation of both models using panel data has been confirmed.

The direct impact of bureaucracy on economic growth has been also rejected in this model. The variable removal test was also applied on bureaucracy variable and was along with reduction of R2 explanatory ability. In other words, although the impact of institutional aspect of bureaucracy on economic growth has not been confirmed statistically, removal of the variable is not also significant statistically (Table 5).

## 5. CONCLUSION

In this study, to test research hypotheses, published data of the said variables in 2010–2015 have been used. Using time series-sectional panel data over the years has led to formation

**Table 4: Results of homogeneity test of model 2**

Model No.	F table	Computational F	Results
2	1.52	0.6	Accept the hypothesis $H_0$
3	1.88	0.88	Reject the hypothesis $H_0$

Source: Research estimations

**Table 5: Estimated models of research using pool data technique**

Estimated models	$R^{2ADJUSTED}$	DW	F
$GR_{it} = -25 + 0.32I_{it} + 0.26L_{it} + 1.11JS_{it} - 0.48GE_{it}$	0.23	2	8.2
T: (-2.33) (2.12) (2.56) (1.45) (-0.48)			
$GR_{it} = -31.7 + 0.35I_{it} + 0.38L_{it} + 0.98JS_{it} - 1.1RQ_{it}$	0.23	1.99	9.8
T: (-2.1) (3.4) (2.3) (2.2) (-1.5)			

Source: Research estimations

of more efficient estimations in regression analysis method of different fields of science, especially socioeconomic sciences. To test the impact of institutional environment on economic growth and to test the impact of institutional dimensions on economic growth, 4 econometrics models have been used. The results obtained from empirical analysis confirmed the direct impact of JS on economic growth in positive direction. In other words, the more the system efficiency is increased, the more it can increase economic growth with the mechanism of direct impact on economic growth.

Moreover, the results obtained from empirical analysis rejected direct impact (whether positive or negative) of bureaucracy in frame of governance efficiency on economic growth. For more reliability, another alternative index for bureaucracy under the title of regulation quality was entered to the model and again the impact was not observed. Finally, the results obtained from empirical analysis showed lack no co-integration of GR and EF variables. Hence, empirical analysis of the study rejected the impact (positive or negative) of EF on GR in studied countries.

The method applied in this study has proposed a series of institutional indices in frame of institutional environment. In this study, in addition to test secondary hypotheses, to achieve research objective (analysis of the impact of variables including EF, bureaucracy and JS on economic growth), as some factors can affect performance of firms and can't be changed by managers

and owners of firms and are presented under the title of business environment in economic literature; the business environment includes a reflection of JS indices and bureaucracy. What is presented under the title of "gray business space" in economic and managerial literature of Iran can affect performance of manufacturing firms, workforce, investors, production process and economic growth. Therefore, it could be found that institutional environment can have positive effects on economic performance if it acts based on expectations. Institutional factor of JS has positive and direct impact on economic growth and the impact of institutional factor of bureaucracy and EF index on economic growth was not confirmed in this study.

## REFERENCES

- Carlsson, F., Lundstrom, S. (2002), Economic Freedom and Growth: Decomposing the Effect. Working Paper in Economics, No. 33, Department of Economics, Goteborg University. p335-344.
- Coase, R.H. (1937), The nature of the firm *economica*. New Series, 4(16), 386-405.
- Dadgar, Y. (2014), The impact of property rights and contracting institutions on economic growth. *Macro Strategic Policies*, 2(7), 1-2.
- David, A. (1999), The New York Times. New series. 5 (17), 248-259.
- Glaeser, E., Kohlhase, J.E. (2004), *The Economics of Welfare*. London: Macmillan.
- Greene, W.H. (2008), *Econometric Analysis V*. 6<sup>th</sup> ed. New Jersey, Upper Saddle River: Pearson International.
- Heydari, J., Conor, L., David A.L., Darren, J.W. (2016), Bayesian hierarchical modelling for inferring genetic interactions in yeast. *The Journal of the Royal Statistical Society, Series C Applied Statistics*, 65(3), 367-393.
- Krugman, P. (1999), *The Lever of Riches*. Oxford: Oxford University Press.
- North, D., Thomas, R.P. (1973), *The Rise of the Western World: A New Economic History*. Cambridge, Cambridge University Press.
- North, D.C. (1981), *Structure and Change in Economic History*. New York: W. W. Norton & Co.
- North, D.C. (1990), *Institutions, Institutional Change and Economic Performance*. Cambridge: Cambridge University Press.
- Richter, R. (1996), Bridging old and new institutional economics: Gustav Schmoller, the leader of the younger German historical school, seen with neoinstitutionalists, eyes. *Journal of Institutional and Theoretical Economics*, 152, 576-92.
- Weinhold, D. (1999), *Dynamic Fixed Effects Model For Heterogeneous Panel Data*. London: London School of Economics.
- Williamson, O.E. (1991), Comparative economic organization: The analysis of discrete structural alternatives. *Administrative Science Quarterly*, 36(2), 269-296.
- Williamson, O.E. (1996), *Institutions, Institutional Change and Economic Performance*. Cambridge: Cambridge University Press.