

**Research Article**

**STUDYING THE WEIGHT IMPORTANCE OF THE GOVERNMENT EFFECTIVENESS AND REGULATORY QUALITY AS COMPONENTS OF GOVERNANCE IN INFLUENCING THE ECONOMIC PERFORMANCE OF DEVELOPING COUNTRIES (COMPARATIVE COMPARISON OF OIL AND NON-OIL DEVELOPING COUNTRIES)**

**REZA RANJPOUR<sup>1\*</sup>, ALIREZA KAZEROONI<sup>2</sup>, MOHAMMAD BAGHER BEHESHTI<sup>3</sup>, ADEL GHORBANI<sup>4</sup>**

<sup>1</sup>Faculty Member and Associate Professor of Economics, Management and Business, University of Tabriz, Iran.

<sup>2</sup>Faculty Member and Professor of Faculty of Economics, Management and Business, University of Tabriz, Iran.

<sup>3</sup>Faculty Member and Professor of Faculty of Economics, Management and Commerce, University of Tabriz, Iran.

<sup>4</sup>PhD Student in Economics, University of Tabriz and Faculty Member of Islamic Azad University, Iran.

\*Email: reza.ranjpour@gmail.com

*Received: 10 Oct 2020 Revised and Accepted: 14 Dec 2020*

**ABSTRACT**

This paper aims to investigate the weighting of government effectiveness and regulatory quality components as components of governance in influencing economic performance in oil and non-oil developing countries. In this article, 78 developing countries have been studied, which have been divided into two groups of oil and non-oil countries based on the UNCTAD (2008) classification. Due to the correlated nature of governance components that are affected by the prevailing conditions in countries, it is not possible to investigate the relative importance of the effect of government effectiveness and regulatory quality components on economic performance through regression methods. Accordingly, in this paper, Johnson's relative importance of technique, which has been done through programming in SPSS environment was used and the weighted importance of these two governance components was estimated in two scales of time and country analysis. The results show that the two components of voice and accountability (VAC) and political stability (PS) have the greatest weight importance among the influential institutional components in the economic growth of developing countries based on the time analysis scale. According to the country analysis scale, government effectiveness (GE) and control of corruption (COC) had the highest weight among institutional components, respectively. The estimation results for oil and non-oil countries show that the two components of corruption control and government effectiveness for non-oil countries and two components of government effectiveness and regulatory quality and corruption control had the most important weight among institutional components in influencing economic performance, respectively.

**Keywords:** Economic Growth, Institutions, Developing Countries, Natural Resource- Dependent Countries, Weight Importance

© 2020 The Authors. Published by Advance Scientific Research. This is an open-access article under the CC BY license (<http://creativecommons.org/licenses/by/4.0/>)  
DOI: <http://dx.doi.org/10.22159/jcr.07.01.01>

**INTRODUCTION**

Governance components are one of the determinants of differences of countries' economic performance therefore, it is necessary to consider institutional reform programs in order to improve governance performance. In this regard, it is important to understand that how governance components and their weight and relative importance can be influential on economic performance. Accordingly, in this paper, the main purpose of identifying the weight importance of each of the governance components in influencing economic performance is to provide a basis for policy-making on institutional reforms in order to improve economic performance.

**Governance Components: Concepts and Principles**

Nelson and Sampat (2001) have proposed three types of governance component functions as variables affecting economic performance. In the first view, the role of governance components in the exchange between economic factors has been considered. In this approach, these components are discovered as the rules of the game that provide confidence in the degree of predictability of the behavior of individuals and companies. Therefore, these components predict the behavior of economic factors and encourage interaction between these factors. The positive effect of governance components on the interaction between economic factors derives from two sources. The first is due to the predictability of the behavior of these factors and the second is due to the formation of appropriate rules related to the punishment of these

factors. According to the findings of Wallis and North (1986), it can be said that transaction costs are significant and tend to increase with the level of development. They found that more than 45 percent of US gross domestic product in the 1970s was absorbed by a sector called the exchange sector. Despite such a level of exchange costs, the role of governance components in economic performance seems to be decisive. These components affect economic performance through two channels. First, they cause profitability by reducing transaction costs. Second, by reducing transaction costs, they lead to the formation of a large volume of profitable exchanges, which, combination of these two factors improve economic performance in the long term. The second approach to institutions is Williamson's view. In this approach, the components of governance are defined as the structure of governance, not the rules of the game. In this approach, issues such as ownership structure, hierarchy, organizational culture and the issue of the agent are emphasized. The main question in this approach is how the governance components enable economic agents to avoid the consequences of the prisoners' dilemma or how they can prevent group activity failures in their repetitive interactions. One of the ways in which these components can answer this question is to create a guarantee through a precise and appropriate definition of property rights (Coase, 1937).

The second approach is based on setting binding governance standards that can alleviate the agent's problem to some extent when the agents act against the interests of their clients. The difference between these two approaches may not seem clear in the conceptual definition of the

governance components. In order to understand the difference between these two approaches, it can be said that the rule of governance approach, which is in fact a set of rules of the game of economic agents in order to avoid the consequences of the prisoners' dilemma and the agent problem, is emphasized when the institutions regulating the rules of the game are insufficient or do not exist. The third approach is presented by Axelrod (1984). In a comprehensive analysis, he discovered how cooperative behaviors can emerge between agents pursuing their own self-interest, especially when there is no central power regulating behavior. Axelrod demonstrates the importance of internalized norms in large groups to encourage collaborative behaviors. In this context, the components of governance can solve the problem of information and the issue of performance bond (sanctions) (Dixit, 2008). In this model, institutions emerge informally from the results of repetitive behaviors of economic agents.

**Governance Criteria:**

Based on the mentioned approaches, two main tasks can be assigned to the governance components: first, on the one hand, they reduce transaction costs and strengthen confidence and predictability, and second, they facilitate coordination between economic agents. Based on these two general functions of institutions, the following four criteria can be considered as quality criteria of institutions.

1. Static efficiency: This criterion shows the capacity of governance in creating adaptation and coordination between motives and stimuli and indicates the capacity of governance in encouraging behaviors in order to reduce social costs.
2. Credibility or legitimacy: Indicates the governance capacity to create valid contracts. In other words, this criterion

indicates the capacity of the government to create defined frameworks in order to issue defined behaviors from economic agents.

3. Security or predictability: when a governor has performed its duties that reduce uncertainty in human interactions. In fact, one of the important tasks of governance is to create confidence and stability in social interactions by reducing exchange costs.
4. Adaptability or dynamic efficiency: This criterion indicates the governance capacity in order to create the ability for expected social changes or at least to create incentives and motives to adapt economic factors to these changes (Alonso and Garcimartin, 2009: 4).

In general, the governance components have two main and general effects on economic performance, which can be expressed as the market-creating effect and the market-deepening effect:

1. Market-creating effect: Market-creating effect includes the area in which these components create and grow markets by encouraging and supporting economic operators to enter profitable economic activities. In fact, it indicates low transaction costs, high volume of economic transactions and high probability of development of economic activities by economic agents in new economic areas and sectors. In general, the development of profitable economic activities improves economic performance. In fact, the components of governance lead to economic growth and development through encouraging trust and economic cooperation in the economic system, developing and increasing the amount of economic contracts and strengthening the incentive for physical and human investments.

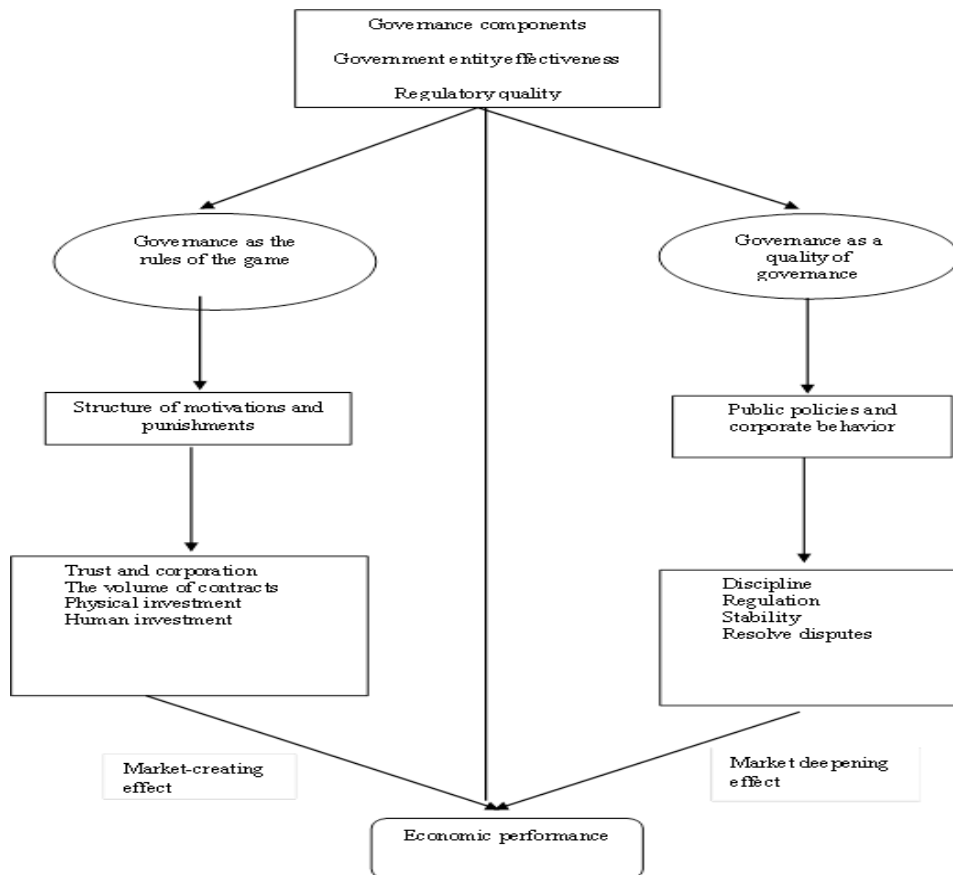


Figure 1. The Process of Governance Components Effect on Economic Performance (Reference: Mehmet (2010: 13))

2. Market-deepening effect: In fact, this effect implies an improvement in efficiency of existing economic markets which is the result of improving the quality of public and private management as well as ensuring the return of contracts. In other words, governance components reduce the risks of coordination deficit and broker (agent) issue, reduce the effects of external factors and market failure, improve credible policies and reduce macroeconomic instability by improving the quality of governance (Mehmet, 2010: 11-15).

In the mentioned figure, the effect of governance is conceptualized in one aspect as the market creating effect. It is influential by creating new incentives for contracts between economic agents in order to achieve profitable opportunities. The impact of creating a market can be outlined in the following three steps. In the first step, it describes the components of governance, social motivations and the framework of punishments. In other words, these components provide information about the extent to which actions are encouraged or prohibited. Information on the incentives and constraints of contract quantity determines the level of trust, political and economic conflicts, and the level of motivation for physical and human investment. Finally, in the third step, the volume of investments and contracts affect economic performance (Mehmet, 2010: 14).

On the other hand, the effect of governance components on economic performance has been conceptualized as the market-deepening effect. This approach enables economic agents to have more confidence in the efficiency of their economic activities by predicting the governance framework. Market-deepening effect occurs in three steps. In the first step, the quality of governance affects the quality of public policies such as economic regulation and stabilization policies. In the second step, the quality of public and private governance improves the quality of contractual frameworks and corporate governance system in economic interactions between individuals, so that the quality of public policies reduces risk and uncertainty and the quality of contractual frameworks reduces the issue of broker (agent), the lack of coordination, and limits rent-seeking behavior. Finally, in the third step, the quality of regulation and the quality of governance affect economic performance (Mehmet, 2010: 14).

#### **Natural Resources, Governance and Economic Performance:**

Numerous studies have examined the effect of natural resources on economic performance through quality governance channels, so that the overall result of this approach has been that natural resources have a negative effect on the economic performance of countries dependent on natural resources provided that those countries do not have a qualified governor. So the natural resources curse hypothesis is confirmed with this condition. But another approach is that self-reliance on natural resources seriously affects the quality of governance of countries, i.e., the determining factor is dependence on natural resources, not the quality of governance that is itself the result of this dependence. Therefore, dependent processes on natural resources such as oil can affect the quality of governance and are important. Dependence on natural resources from different channels affects the quality of governance, which can be summarized in the following cases:

1. Rent-seeking behaviors and economic corruption: Dependence on natural resources by strengthening rent-seeking activities and economic corruption can cause limitations in the quality of governance. By strengthening financial dependence, the government can also limit transparency and accountability in the system. Numerous empirical studies have confirmed the negative effect of dependence on natural resources on the creation of qualified institutions (Sachs and Warner, 1997; Easterly and Levin, 2003). Cleb (1988) and Olson (1994) have also shown that in these countries the possibility of forming rent-seeking governments and groups with special interests are strengthened and thus the tendency to innovate in dependent countries on natural resources is limited. On the other hand, in these countries, reliance on natural resources while

strengthening economic corruption and inefficiency as institutional components creates makes obstacles to the growth of producing qualified public goods and regulations.

In countries with abundant natural resources, the expected returns on rent-seeking activities and the opportunity cost of such activities are low. As a result, public groups compete with each other to control these resources and related revenues. Since in most countries, the government has natural resources, producers seek to establish close ties with government officials in order to gain credit for their economic activities. Trying to get economic rent can also lead to corruption. Strong competition for owning part of this big cake along with weak institutional constraints in these countries will just lead to increased corruption. This problem is very significant in the Middle East. The formation of political factions, the prevalence of bribery and corruption, and the concentration of power in a particular group and rent-seeking are factors that negatively affect institutional quality (Gylfason, T 2001).

The existence of economic rent makes governments insensitive to financing expenditures as well as to creating strong institutions of rigorous legal reconstruction. Most countries with natural resources do not have a strong bureaucratic system and decision-making in them is weak and is based on revenue or expectation from resources. In such a situation, the ground for more corruption, bribery and crime is provided and the incentive for innovation and creativity will be lost, because economic ethics prefer to take advantage of these weak institutions and earn high economic rents, and get out of a productive activity that may have less revenue.

Various studies have shown that dependence on oil causes political forces to deviate. This dependence leads to the concentration of production in specific geographical areas and the concentration of power will be limited to a few numbers of elites. This issue creates Fisherman market for rent-seeking behaviors, where individuals provide fraudulent money to the authorities and paving the way for lucrative contracts. These revenues can be used to increase bribes and to influence officials and authorities. In such a power structure, the authorities have a safe place in engaging in such rent-seeking actions. Therefore, a vicious cycle of corruption and protection is created. In this structure, power finds a safe margin against media inspections, public accountability, and international economic and political standards.

Despite their wealth, oil-rich countries suffer greatly from what economists call poverty of policy ("You So" Economist; 6/25/2005, Vol. 375 Issue 8432, p50-50). It is observed that reliance on natural resources based on rent-seeking behaviors affects the quality of institutions.

2. Tax system: Adequate tax system is another factor that determines the quality of governance. Such a system not only strengthens the ability to provide qualified institutions, but also improves transparency and accountability in the system by consolidating social contracts and strengthening the government's dependence on citizens, thereby paving the way for the creation of institutional quality. In the absence of such a tax mechanism, such as the provision of government revenue through non-tax channels such as natural resources, such a possibility does not exist (Tilly, 1992; Moore, 2002).

3. Financial independence of government: Financial independence of the government is another factor that affects the quality of government institutions. In the theory of oil dictatorship, Katozian deals with the role of oil in modulating and forming the mechanism and framework of the game between economic stakeholders. This theory emphasizes that for oil-rich countries, oil revenues become a rich and independent source of income for which the government does not need to rely on domestic instruments of production, so that when these revenues increase, the government's unusual economic and political independence which is provided by productive forces and social classes will help the government in flexibility in payments, because these resources are not tax money that the government should be responsible about them. Furthermore, to the extent that oil revenues make the government independent of the means of domestic

production and social classes, in many cases these classes themselves become dependent on the government. In fact, government expenditures, as a result of economic and political power it tends to maintain, affects the fate of social classes. Such a framework limits the institutional quality to create a suitable environment for development (Katozian, 1987).

**METHOD OF ESTIMATING THE WEIGHT IMPORTANCE OF INSTITUTIONAL COMPONENTS**

Johnson's relative importance technique has been used to examine the weight significance of the effect of each of these institutional components on economic growth. Due to the correlated nature of these components and the fact that these components are affected by the dominant conditions in different countries, accordingly, they will be closely related. Based on this, Johnson's technique of relative importance will be the accepted method for examining the relative weight of this component in influencing economic growth. This technique is used when different components of a variable have interconnection with each other (Johnson and Lebreton, 2004). In this method, orthogonal variables are used to examine the relative importance. Therefore, the first step in implementing this method is to obtain variables that are highly related to these components but there should not be any interconnections between these variables (orthogonal variables). The process for obtaining orthogonal variables is as follows. If the vector of the dependent variable is  $1 \times n$  and is denoted by Y, and the matrix of the independent variables is  $n \times p$  and s denoted by X, and all variables are standardized. Then X matrix can be written using the singular value decomposition as follows. Equation (6)

$$X = p\Delta Q'$$

Where P is the vector of eigenvalues of  $XX^t$ , Q is the eigenvalue of  $X^t X$  and  $\Delta$  is the diameter matrix containing singular values of X. Johnson shows that under these conditions the orthogonal matrix for matrix X can be obtained as follows. Equation (7)

$$Z = pQ'$$

After obtaining the values of the matrix Z, the values of  $\beta_K$  (regression coefficients y on Z) and  $\lambda_{JK}$  (regression coefficients of  $X_j$  on  $Z_K$ ) can be calculated and finally the weight of each variable can be calculated for determining the dependent variable using the following formula. Equation (8)

$$\epsilon_1 = \lambda_{11}^2 \beta_1^2 + \lambda_{12}^2 \beta_2^2 + \lambda_{13}^2 \beta_3^2$$

In this study, 6 variables ( $X_1, X_2, \dots, X_6$ ) have been considered as governance components. This method can be implemented in MATLAB software. Furthermore, a program has been prepared by Johnson himself that can be used in SPSS environment which has been used in this research.

**Conceptual and Operational Definition of Variables**

The World Bank Index on Governance Components is the most reliable information base in this regard which was measured first by Kaufmann et al. (2009) in 1996 and calculated annually from 2002 until now. These indicators are based on subjective data and information obtained from several non-governmental organizations. In

each of these indicators, countries are given a score in the range of -2.5 to 2.5, and the country with the highest score has a better position in the study index. Data on governance components, including 6 variables of corruption control, rule of law, quality of law, political stability, accountability, and the right to object and effectiveness of government institutions, are based on data from the WGI index which provided by the World Bank and has been collected during the period of 2002 to 2014.

**Voice and Accountability (VAC):** Reflects citizens' perceptions about their participation in the election of their government, as well as freedom of expression, freedom of associations and free media.

**Political Stability and Absence of Violence/ Terrorism (PS):** This indicator also shows the possibility of political instability and violence.

**Government Effectiveness (GE):** Reflects citizens' perceptions of the quality of public services, the quality of civil services and their degree of independence from political pressures, the quality of implementing government policy, and the government's commitment to such policies.

**Rule of Law (ROL):** Shows citizens' perceptions of the degree of trust in community law, especially the quality of contract enforcement, property rights, the police and the courts, as well as the likelihood of crime and violence.

**Regulatory Quality (RQ):** Shows citizens' perceptions of the government's ability to formulate and implement right policies and regulations that strengthen private sector development.

**Control of Corruption (COC):** Reflects citizens' perceptions of the extent to which public power is used for personal gain at the micro and macro levels, as well as the conquest of government by a range of elites and private interests.

For the economic performance variable, real per capita income growth in countries is considered, and PWT data for the period of 2002 to 2014 have been calculated.

**Comparing the Situation of Iran in Institutional Components with the Study Three Groups of Countries**

A study of the average governance components statistics for three groups of developing countries, non-oil developing countries and oil developing countries shows that oil developing countries in both indicators of government effectiveness and regulatory quality are in a worse position than the other two groups.

**Table 1. Comparing the Institutional Components Average in Three Groups of Study Countries with Iran**

	Regulatory quality	Government effectiveness
All developing countries	-0.314	-0.33665
Non-oil developing countries	-0.23182	-0.3089
Oil developing countries	-0.39618	-0.36439
Iran	-1.47076	-0.53537

The situation of Iran in these two components in comparison with the three groups of countries under study shows that the average of both components during the period of 2002 to 2014 is in a worse situation.

**Comparing the Situation of Iran in the Regulatory Quality Component among Oil Developing Countries**

The study of the average of regulatory quality component as another component of governance shows that Iran is ranked as 17th among 17 oil developing countries, which does not show a good situation. After Iran, Venezuela and Sudan are ranked as 16th and 15th, respectively.

Also among the study countries, Qatar, Bahrain and the UAE had the best performance and ranked first to third, respectively.

- **Comparing the Situation of Iran in the Government Effectiveness Component among Oil Developing Countries**

Comparing the average of government effectiveness index among oil developing countries shows that Iran is ranked as eighth among the 17 countries. Meanwhile, the UAE, Brunei and Qatar had the best performance and ranked first to third. Also, Congo, Angola and Sudan ranked 15th to 17th and did not have a good performance in this index.

**Table 2. The Situation and Rank of Regulatory Quality Components and Government Effectiveness on Oil Developing Countries**

Oil-producing countries	Regulatory quality		Government effectiveness	
	Value	Rank	Value	Rank
Algeria	-0.87	10.00	-0.54	9.00
Angola	-1.12	13.00	-1.16	15.00
Bahrain	0.72	2.00	0.50	4.00
Brunei	1.04	1.00	0.81	2.00
Congo	-1.22	14.00	-1.23	16.00
Ecuador	-0.97	12.00	-0.75	11.00
Gabon	-0.49	8.00	-0.74	10.00
Iran	-1.47	17.00	-0.54	8.00
Kuwait	0.20	6.00	0.07	6.00
Nigeria	-0.88	11.00	-1.03	13.00

<b>Diameter</b>	0.47	5.00	0.71	3.00
<b>Saudi Arabia</b>	0.07	7.00	-0.14	7.00
<b>Sudan</b>	-1.34	15.00	-1.31	17.00
<b>Trinidad and Tobago</b>	0.52	4.00	0.30	5.00
<b>Emirates</b>	0.69	3.00	0.95	1.00
<b>Venezuela</b>	-1.34	16.00	-1.07	14.00
<b>Yemen</b>	-0.74	9.00	-1.01	12.00

Source: research findings

**Estimating Weighting Coefficients of Governance Components in Influencing Economic Performance:**

As it was mentioned, Johnson's weight importance technique has been used to identify the weight importance of each of the governance components. This method is effective when the aim is to investigate the relative importance of the components of a concept (in this research, the institutional components are considered) that have a high correlation and interconnection. The results show that the correlation coefficients between the components of governance affect the economic growth of oil producing and non-oil producing countries. These correlations were significant in many cases at the level of 1% confidence. In order to estimate the weight coefficients of these components, two scales of time and country analysis have been considered.

- **Correlation between Governance Components in Three Groups of Studied Countries**

Studying correlation (interconnection) tables between governance components in three groups of developing countries shows a significant correlation between these components.

**Table 3. Correlation between Governance Components for Oil-producing Developing Countries**

		Control of corruption	Rule of law	Regulatory quality	Government effectiveness	Political stability	Voice and accountability
<b>Control of corruption</b>	Pearson Correlation	1	.930**	.850**	.923**	.798**	.258**
	Sig. (2-tailed)		.000	.000	.000	.000	.004
	N	126	126	126	126	126	126
<b>Rule of law</b>	Pearson Correlation	.930**	1	.889**	.915**	.844**	.203*
	Sig. (2-tailed)	.000		.000	.000	.000	.022
	N	126	126	126	126	126	126
<b>Regulatory quality</b>	Pearson Correlation	.850**	.889**	1	.907**	.682**	.463**
	Sig. (2-tailed)	.000	.000		.000	.000	.000
	N	126	126	126	126	126	126
<b>Government effectiveness</b>	Pearson Correlation	.923**	.915**	.907**	1	.772**	.384**
	Sig. (2-tailed)	.000	.000	.000		.000	.000
	N	126	126	126	126	126	126
<b>Political stability</b>	Pearson Correlation	.798**	.844**	.682**	.772**	1	.093
	Sig. (2-tailed)	.000	.000	.000	.000		.300
	N	126	126	126	126	126	126
<b>Voice and accountability</b>	Pearson Correlation	.258**	.203*	.463**	.384**	.093	1
	Sig. (2-tailed)	.004	.022	.000	.000	.300	
	N	126	126	126	126	126	126

**Table 4. Correlation between Governance Components for Developing Countries**

		Control of corruption	Rule of law	Regulatory quality	Government effectiveness	Political stability	Voice and accountability
<b>Control of corruption</b>	Pearson Correlation	1	.897**	.762**	.871**	.696**	.509**
	Sig. (2-tailed)		.000	.000	.000	.000	.000

	N	1022	1022	1022	1022	1022	1022
Rule of law	Pearson Correlation	.897**	1	.861**	.916**	.686**	.546**
	Sig. (2-tailed)	.000		.000	.000	.000	.000
	N	1022	1022	1022	1022	1022	1022
Regulatory quality	Pearson Correlation	.762**	.861**	1	.872**	.554**	.674**
	Sig. (2-tailed)	.000	.000		.000	.000	.000
	N	1022	1022	1022	1022	1022	1022
Government effectiveness	Pearson Correlation	.871**	.916**	.872**	1	.655**	.578**
	Sig. (2-tailed)	.000	.000	.000		.000	.000
	N	1022	1022	1022	1022	1022	1022
Political stability	Pearson Correlation	.696**	.686**	.554**	.655**	1	.382**
	Sig. (2-tailed)	.000	.000	.000	.000		.000
	N	1022	1022	1022	1022	1022	1022
Voice and accountability	Pearson Correlation	.509**	.546**	.674**	.578**	.382**	1
	Sig. (2-tailed)	.000	.000	.000	.000	.000	
	N	1022	1022	1022	1022	1022	1022

Table 5. Correlation between Governance Components in Non-oil Developing Countries

		Control of corruption	Rule of law	Regulatory quality	Government effectiveness	Political stability	Voice and accountability
Control of corruption	Pearson Correlation	1	.876**	.726**	.858**	.660**	.627**
	Sig. (2-tailed)		.000	.000	.000	.000	.000
	N	533	533	533	533	533	533
Rule of law	Pearson Correlation	.876**	1	.841**	.916**	.643**	.652**
	Sig. (2-tailed)	.000		.000	.000	.000	.000
	N	533	533	533	533	533	533
Regulatory quality	Pearson Correlation	.726**	.841**	1	.857**	.499**	.748**
	Sig. (2-tailed)	.000	.000		.000	.000	.000
	N	533	533	533	533	533	533
Government effectiveness	Pearson Correlation	.858**	.916**	.857**	1	.600**	.651**
	Sig. (2-tailed)	.000	.000	.000		.000	.000
	N	533	533	533	533	533	533
Political stability	Pearson Correlation	.660**	.643**	.499**	.600**	1	.409**
	Sig. (2-tailed)	.000	.000	.000	.000		.000
	N	533	533	533	533	533	533
Voice and accountability	Pearson Correlation	.627**	.652**	.748**	.651**	.409**	1
	Sig. (2-tailed)	.000	.000	.000	.000	.000	
	N	533	533	533	533	533	533

• **Estimation of Weight Performance of Regulatory Quality and Government Effectiveness Components based on Time Scale:**

In estimating weighting coefficients based on time scale, the emphasis is on the time parameter, i.e., for each year the same coefficients are estimated for all countries so that these same coefficients change over

time. The results of estimating coefficients based on time scale for all developing countries and oil and non-oil developing countries based on Johnson's technique of relative importance are shown in the following tables.

Table 6. Weighting Coefficients of Regulatory Quality and Government Effectiveness Components on Economic Performance based on Johnson Technique (Time Scale/ Percentage)

	Non-oil developing countries		All developing countries		Oil-producing developing countries	
	Regulatory quality	Government effectiveness	Regulatory quality	Government effectiveness	Regulatory quality	Government effectiveness
2002	23.9	9.3	33.7	16.6	15.0	19.4
2003	28.3	9.2	14.9	28.3	21.7	17.3
2004	24.5	8.0	27.2	20.2	3.7	1.7
2005	29.1	9.3	26.5	20.8	16.9	9.4
2006	20.1	6.4	30.0	19.2	5.9	4.4
2007	24.5	7.7	30.5	18.9	9.9	7.1
2008	26.2	8.4	29.7	16.6	28.0	10.2
2009	8.5	4.5	30.7	17.1	24.7	20.9

<b>2010</b>	27.1	8.7	30.8	17.7	10.3	9.5
<b>2011</b>	29.5	11.	32.3	16.7	14.3	15.1
<b>2012</b>	18.3	6.4	32.0	16.5	8.4	14.0
<b>2013</b>	20.0	6.9	32.3	15.9	7.1	9.7
<b>2014</b>	20.7	7.3	32.1	16.9	10.8	23.8
<b>mean</b>	23.1	7.9	29.4	18.6	13.6	12.5

Source: research findings

The results show that for non-oil developing countries, on average, the component of regulatory quality has the highest weight among the three groups of countries and in the component of government effectiveness, the group of developing countries has the highest weight factor among the influential components of governance on economic performance.

Comparison of the average weighting coefficients of influential governance components on economic performance during the study

period and based on time scale shows that for all developing and non-oil developing countries, government institutions have the highest weighting coefficients and two-components of political stability and regulatory quality ranked as second for these countries, respectively. While for oil-producing developing countries, regulatory quality (29%) and corruption control (25%) had the highest weight coefficients among the governance components in influencing economic performance. The results are presented in Table (7).

**Table 7. The Average Weight Importance of Influential Governance Components on Economic Performance based on Relative Importance Technique (Time Scale)**

Coefficients based on time scale	Control of corruption	Rule of law	Regulatory quality	Government effectiveness	Political stability	Voice and accountability
<b>Developing countries</b>	11.2	10.45385	13.59231	12.5	18.16154	34.08462
<b>Non-oil developing countries</b>	5.923077	6.923077	23.13077	8	5.576923	50.46154
<b>Oil-producing developing countries</b>	25.60769	20.69231	29.43846	18.56923	3.130769	2.561538

Source: research findings

• **Estimation of Weight Importance Coefficients based on Country Scale**

In estimating coefficients based on countries for each country, a separate weight coefficient is calculated during the study period. This estimate is due to the emphasis on the characteristics of each country and given that the governance components are directly affected by the characteristics of countries will have a higher credit compared to the

time estimations. The results of estimating weight coefficients for non-oil developing countries are presented in Tables (4-6). The study of the average weight coefficients of institutional components of non-oil developing countries shows that the components of corruption control (21%), effectiveness of government (19%) and rule of law (17%) have the highest weight coefficients among the governance components affecting the economic performance of non-oil developing countries.

**Table 8. The Average Weight Coefficients of Influential Governance Components on Economic Performance based on Country Scale**

Coefficients based on time scale	Control of corruption	Rule of law	Regulatory quality	Government effectiveness	Political stability	Voice and accountability
<b>Developing countries</b>	19.56871	16.70762	17.5366	19.96095	15.45174	10.7852
<b>Non-oil developing countries</b>	21.04918	17.4623	15.39672	19.09836	14.1623	12.84098
<b>Oil-producing developing countries</b>	18.08824	15.95294	19.67647	20.82353	16.74118	8.729412

Source: research findings

**Table 9. The Weight Importance of Governance Components in Influencing the Economic Performance of Non-oil Developing Countries based on Johnson Technique (Scale of Countries)**

Coefficients based on countries	Control of corruption	Rule of law	Regulatory quality	Government effectiveness	Political stability	Voice and accountability	Coefficients based on countries	Control of corruption	Rule of law	Regulatory quality	Government effectiveness	Political stability	Voice and accountability
<b>Argentina</b>	19.2	13.4	23.7	18.3	20.6	4.8	Malawi	28.9	31.6	4.6	12.6	10.8	11.5
<b>Bangladesh</b>	7.1	25.0	37.3	10.3	14.8	5.6	Malaysia	6.5	12.6	15.1	24.7	29.8	11.4
<b>Barbados</b>	15.1	11.4	21.9	34.4	4.5	12.9	Finance	18.0	14.3	1.4	14.4	34.0	18.0
<b>Benin</b>	6.6	28.1	12.2	48.0	4.1	1.1	Mauritius	9.9	46.3	10.4	14.4	9.9	9.1
<b>Bolivia</b>	43.4	7.3	15.9	4.7	7.1	21.5	Mexico	.7	20.3	2.4	3.3	7.7	65.7
<b>Botswana</b>	16.4	11.8	22.2	38.1	9.1	2.4	Morocco	11.2	36.4	28.8	4.6	10.0	9.1

Brazil	42.6	4.1	16.7	22.4	13.2	1.0	Mozambique	19.0	26.8	1.8	26.7	23.0	2.8
Burkina Faso	8.0	7.8	14.4	13.8	49.3	6.7	Namibia	7.8	11.1	10.7	18.0	5.2	47.2
Burundi	27.2	13.5	17.1	17.8	6.9	17.4	Nepal	27.7	37.3	6.4	15.2	4.2	9.3
Cameroon	2.4	40.4	15.9	3.3	13.0	25.0	Nicaragua	48.7	1.4	4.0	15.2	27.3	3.5
South Africa	4.6	54.7	21.9	8.1	3.6	7.0	Nigeria	28.3	2.7	3.1	13.7	48.2	3.9
Chile	6.4	12.3	20.7	8.2	6.8	45.6	Pakistan	19.4	2.6	42.8	3.8	5.8	25.6
China	30.1	30.2	9.3	6.0	3.6	20.8	Panama	.5	6.3	1.3	4.1	87.7	.1
Colombia	21.6	23.9	11.6	25.1	11.6	6.2	Paraguay	3.3	13.7	8.1	49.4	21.7	3.9
Egypt	15.5	8.4	48.8	14.7	7.5	5.0	Peru	29.9	14.1	12.3	6.6	6.4	30.7
El Salvador	44.2	14.6	8.2	22.7	8.2	2.1	Philippines	12.8	4.8	10.5	55.9	10.4	5.6
Gambia	6.7	12.5	2.7	28.3	9.1	40.7	Russia	12.5	32.6	7.2	26.1	11.5	10.1
Qena	24.2	7.3	14.0	6.3	36.8	11.4	Rwanda	8.0	7.8	5.0	9.3	18.8	51.1
Guatemala	22.1	10.7	42.0	5.3	18.0	1.9	Senegal	8.5	10.6	3.5	53.8	15.4	8.1
Haiti	27.4	26.2	11.6	17.8	12.7	4.3	Sierra Leone	23.4	26.2	10.9	19.5	16.5	3.5
Honduras	37.2	19.7	3.9	19.5	9.7	9.8	South Africa	30.3	6.9	29.2	17.1	9.5	7.0
Hungary	28.2	11.7	13.2	16.7	20.8	9.3	Trinidad and Tobago	38.3	10.7	22.4	18.4	8.5	1.6
India	4.5	11.7	30.8	51.3	1.2	.6	Togo	18.1	6.4	3.4	42.7	2.1	27.3
Indonesia	40.3	11.8	14.1	9.8	16.9	7.2	Tunisia	5.2	27.8	30.8	9.0	12.5	14.8
Jamaica	10.0	44.5	5.8	1.5	14.0	24.2	Turkey	6.9	3.4	9.8	13.7	18.9	47.2
Jordan	25.1	7.1	28.2	28.5	6.2	5.0	Uganda	33.5	3.3	9.0	44.7	5.8	3.8
Kazakhstan	27.1	16.4	31.9	15.0	.4	9.2	Uruguay	51.1	4.1	18.6	6.9	10.7	8.7
Kenya	13.6	17.7	34.4	26.1	2.5	5.6	Vietnam	70.4	5.4	5.4	1.7	6.9	10.1
Kyrgyzstan	22.4	23.6	30.9	5.2	16.3	1.6	Zambia	4.1	68.5	2.8	17.4	2.6	4.6
Liberia	45.1	14.3	9.0	20.2	9.6	1.9	Zimbabwe	31.6	12.3	6.2	28.0	13.5	8.4
Madagascar	25.2	14.8	21.0	26.7	10.5	1.8							

Resource: research findings

The study of the average weight coefficients of governance components affecting the economic performance of oil developing countries shows that the components of government effectiveness

(20.8%), regulatory quality (19.7%) and control of corruption (18.1%) have the highest coefficients, respectively.

**Table 10. The Weight Importance of Institutional Components in Influencing the Economic Growth of Oil-Producing Developing Countries based on Johnson Technique (Countries Scale)**

Coefficients based on countries	Control of corruption	Rule of law	Regulatory quality	Government effectiveness	Political stability	Voice and accountability	Coefficients based on countries	Control of corruption	Rule of law	Regulatory quality	Government effectiveness	Political stability	Voice and accountability
Nigeria	6.7	25.0	14.4	16.5	29.5	8.0	Algeria	16.5	5.9	23.9	38.9	13.3	1.5
Qatar	12.3	19.4	22.0	25.5	15.5	5.3	Angola	14.9	10.8	20.2	24.2	24.6	5.2
Saudi Arabia	42.8	17.1	1.4	29.1	5.5	4.1	Bahrain	5.2	24.7	7.8	45.8	14.0	2.6
Sudan	13.1	18.5	24.7	9.8	12.5	21.5	Brunei	8.9	6.4	16.1	41.9	13.4	13.4
Trinidad and Tobago	14.3	10.6	31.8	4.2	16.5	22.6	Congo	31.2	25.6	14.7	6.5	20.0	1.9
Emirates	18.7	9.7	6.4	34.0	5.1	26.1	Ecuador	5.3	26.5	43.3	12.6	8.0	4.4
Venezuela	30.2	19.6	14.3	12.4	10.0	13.5	Gabon	9.9	6.0	27.1	10.2	43.8	3.0
Yemen	17.0	4.7	10.7	31.8	33.4	2.4	Iran	41.6	25.4	11.1	1.2	18.7	1.9
							Kuwait	18.9	15.3	44.6	9.4	.8	11.0

Source: research findings

## SUMMARIZING AND CONCLUSION



In the present study, the weighting coefficients of influential governance components on economic performance based on the technique of relative importance have been investigated. This technique is generally used when we are looking to estimate the weight coefficients of the dimensions of an interconnected concept. The results of comparing the mean weight coefficients of influential governance components on economic performance during the study period and based on the scale of countries show that for all developing countries and non-oil developing countries, government institutions had the highest weight ratio and two components of political stability and regulatory quality ranked second for these countries, respectively. While for oil-producing developing countries, the regulatory quality (29%) and control of corruption (25%) had the highest weight coefficients among the governing components influencing in economic performance. Based on the scale of countries, the average weighting coefficients of governance components affecting economic performance in non-oil developing countries shows that the components of corruption control (21%), the effectiveness of government (19%) and the rule of law (17%) have the highest weight coefficients among the components of governance on the economic growth of non-oil developing countries.

The average weight coefficients of governance components affecting economic performance in oil developing countries also show that the components of government effectiveness (20.8%), regulatory quality (19.6%) and control of corruption (18%) have the highest weight coefficients, respectively. The study of weight coefficients in both time and country scales shows that the two components of regulatory quality and corruption control in both scales had a higher weight coefficient.

#### REFERENCES

1. Acemoglu, D ; Robinson , J . 2010, The Role of Institutions in Growth and Development, Review of Economics and Institutions, Vol. 1 – No. 2
2. Ahmad. M , Hall. S. G,2012, Do institutions matter for growth? Evidence from East Asian countries, MPRA Paper No. 42158
3. Alonso, J. A, Garcimartin. C,2009, The Determinants of Institutional Quality. More on the Debate , CREDIT Research Paper
4. Baldwin, R.E. Economic Development and Export Growth: A Study of Northern Rhodesia, 1920-1960. Berkeley and Los Angeles, CA: University of California Press, 1966.
5. Baumol, W.J. 1990. —Entrepreneurship: Productive, Unproductive and Destructive, Journal of Political Economy 98(5): 893–921.
6. Budescu, D. V. (1993). Dominance analysis: A new approach to the problem of relative importance of predictors in multiple regression. Psychological Bulletin, 114, 542-551.
7. Caselli, F., Esquivel, G., & Lefort, F., (1996). Reopening the convergence debate: A new look at crosscountry growth empirics. Journal of Economic Growth 1 (3), pp. 363–389.
8. Cavalcanti . T, Novo. A, 2005. Institutions and economic development: How strong is the relation?, Empirical Economics , 30:263–276
9. Danish. A. A, Qazi. M. A, 2009, Does Institutions e\_ect growth in Pakistan? An Empirical investigation, MPRA Paper No. 19744
10. Djankov, S., LaPorta, R., Lopez-de-Silanes, F., & Shleifer, A. (2002). The Regulation of Entry. Quarterly Journal of Economics, 117 (1), 1–37.
11. Gelb, A.H. Windfall Gains: Blessing or Curse?, New York: Oxford University Press, 1988.
12. Greif (2006): Institutions and the Path to Modern Economy. Lessons from Medieval Trade, Cambridge, Cambridge University Press.
13. Hall, R. E., & Jones, C. 1999. —Why do some countries produce so much more output per worker than others? Quarterly Journal of Economics 114(1): 83–116.
14. Hirschman, A. O. The Strategy of Economic Development. New Haven CT: Yale University Press, 1958.
15. Hoeffler, A. (2002). The augmented Solow model and the African growth debate. Oxford Bulletin of Economics and Statistics 64 (2), pp. 135–158.
16. Islam, N. (1995). Growth empirics: a panel data approach. Quarterly Journal of Economics 110 (4), pp.1127–1170.
17. Jeffrey D. Sachs and Andrew M. Warner(1997) , NATURALRESOURCE ABUNDANCEANDECONOMICGROWTH, Center for International Development and Harvard Institute for International Development, Harvard University, Cambridge MA
18. Johnson, J. W., & LeBreton J. M. (2004.) History and Use of Relative Importance Indices in Organizational Research. Organizational Research Methods, 7, 238-257.
19. Knack, S., & Keefer, P. (1995). Institutions and Economic Performance: Cross-Country Tests using Alternative Measures. Economics and Politics, 7 (3), 207–227.
20. Mankiw, G. N., Romer, D. & Weil, D.N. (1992). A Contribution to the Empirics of Economic Growth. The Quarterly Journal of Economics, Vol. 107, No. 2. pp. 407-437.
21. Matsuyama, K. "Agricultural Productivity, Comparative Advantage, and Economic Growth." Journal of Economic Theory. 1992. 58, pp. 317-334.
22. North D. C. 1990. —Institutions, institutional change and economic performance. Cambridge, MA: Cambridge University Press, New York
23. Olson Mancur. 1982. —The Rise and Decline of Nations. New Haven: Yale University Press.
24. Radygin A. D., Entov R. M., In search of institutional characteristics of economic growth New approaches at the turn of the 21st century. Voprosy ekonomiki, 2008, № 8, pp. 4-27.
25. Seers, D. (1964) "The Mechanism of an Open Petroleum Economy." Social and Economic Studies, 1964:13, pp. 233-242.
26. Tabellini G. 2005. "Culture and Institutions: Economic Development in the Regions of Europe." CESIFO Working Paper no.1492.