Article Type: *Research Article*

An Empirical Investigation on Growth and Institutional Structure Relations in Central Asian and Caucasian Countries

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ABSTRACT

Whether economic and political institutions have an impact on countries' economic growth performances is one of the important research topics discussed in the literature. Former socialist Central Asian and Caucasian countries trying to adapt into market economy have not yet completed their transition processes, but they have managed to grow their economies in comparison to previous periods. The aim of this study is to analyse the relationship between the growth performances and institutional structures of the Central Asian and Caucasian countries of Azerbaijan, Armenia, Georgia, Kazakhstan, Kyrgyzstan and Tajikistan between the years 2000-2018 by using the decision variables of civil rights, economic freedom, political stability, rule of law and GDP per capita. According to the analysis results obtained via Grey Relational Analysis method by assigning equal importance to all variables, Kazakhstan is found to be the highest-ranking country among all examined countries for all periods. The authoritarian tendencies that these countries have shown during their market economy transitions with regards to matters related to institutional structure have been found to be the reason why countries' economic efforts have failed to yield results.

Keywords: Institutions, Growth, Transition Economies, Grey Relational Analysis, Central Asian and Caucasian Countries.

JEL Classification Codes: P39, B52, C44, O17

Referencing Style: APA 7

INTRODUCTION

Long-term stable growth is one of the economic targets that all countries want to achieve. There are different points of view about sources of growth based on economic theory. For the last two decades, economic literature has shown a tendency to separate the proximate and final causes of the growth. While the proximate causes of growth focus on mechanic concepts such as capital accumulation and productivity, the final causes of growth point to the importance of social structures and institutional factors. For this reason, the connection between the institutions and their growth (un)success of countries has become an important debate for recent economic theories (Özdemir, 2015). The purpose and main contribution of this study are to examine empirically the Central Asian and Caucasian countries where the link between growth dynamics and institutions has received less attention in the literature, although they experienced dramatic institutional changes.

Since the breakup of the Soviet Union, Central Asian (Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan and Uzbekistan) and South Caucasian (Azerbaijan, Georgia and Armenia) countries have been independent for almost two decades. Although the region has deep historical roots and holds strategic importance, it has not been comprehensively examined by social scientists who work on institutional change and growth. While Central Asian countries share a common history and common land, their institutional structures and development levels are different from each other, especially after the transition period.

When considering the general economic and political characteristics of these countries, it is seen that Turkmenistan and Uzbekistan have not completed their market transitions yet. Furthermore, based on World Bank (2022) income classification criteria, Turkmenistan and Kazakhstan belong to upper-middle income group countries while Kyrgyzstan, Tajikistan and Uzbekistan remain in the lower-middle income category. The main reasons why they are yet to adapt to the global economy are closely related to their regional features and political structures such as their access to the sea, their underdeveloped transformation infrastructure,

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their distance from the world's important trade centers and their place in a highly conflicted area with political tensions (Batsaikhan and Dabrowski, 2017; 296-301). As one of the transition countries, Azerbaijan is characterized by a low level of human development as well as technology production capacity despite a relatively higher income per capita. On the contrary, Kazakhstan has high-technology products accounting for 41% of all exports (Suslu and Elmirzeyev, 2019, 4-7) and a high score on the human development index of 0.825 (UNDP, 2022). The other example, Armenia, is the leading country with regards to spatial inequality in consumption and job creation; there are simply not enough social safety nets for low-income people living outside the capital city. Similarly, Georgia has a strong economic performance despite its uneven development, too (Fuchs et al., 2019; 2-29). After 2014, these countries have experienced external shocks, and their economic models are not good enough to tolerate these changes linked to the export products based on natural resources, export patterns as a structural factor, volatility of growth and inflation as well as political tensions, poor governance and weak institutions (Kunzel et al., 2018; 39).

This study examines the links between growth and institutions for six Central Asian and Caucasian countries from 2001 to 2018 and compares institutional structures related to their growth performance before and after the global crisis of 2007. These countries have been chosen because of their experience with the transition process for adapting to the capitalist world after the socialist era and the transition process covers the transformation of institutional structures to a competitive market economy under the constraints imposed by the heritage of the old regime's informal rules. The main limitation of the study is the lack of institutional data set for Turkmenistan and Uzbekistan, and therefore, having to exclude these countries from the empirical analysis. The remainder of the study is organized as follows. After the introduction, an empirical literature review on institutions and growth is presented in section 2 while the study's data, model, and methodology are discussed in section 3. Afterwards, the findings obtained through the study are elaborated in section 4. The conclusion and proposed suggestions are presented in the final section of the paper.

LITERATURE REVIEW

The impact of institutions on economic growth has been the subject of many theoretical and empirical studies. Studies in this field use various assumptions and methods based on using the framework of orthodox and heterodox economic theories. In this context, within the

boundaries of the study, firstly, theoretical and empirical studies emphasize the role and importance of institutions in economic growth will be summarized, and secondly, the findings of the research on the transition economies will be examined.

Institutions are explained as "path dependency or long-term institutional evolution, in other words, the historical roots of societies, are the main determinants of economic progress." The institutions are a matter for growth based on its role in forming and shaping human interactions, social order, and the political, social and economic exchange in a society (North,1989). Acemoglu and Robinson (2015) argue that economic and political institutions are the main determinants of technological evolution and economic development. Acemoglu and Robinson (2019) underline the importance of inclusive political institutions for the broad distribution of political power and the importance of state capacity for economic progress. Acemoglu and Robinson (2008) also explain the mechanism of how inclusive institutions promote economic progress. Inclusive institutions create the right incentives for technological developments and investments through the protection of property rights. However, Acemoglu and Robinson (2008) emphasize that they are at the first stage of understanding the function of institutions. There are debates about limitations in terms of institutional data and empirical modelling in the growth literature and empirical analysis results consistency (Ros, 2011).

Empirical studies discuss the relationship between institutions and growth by using a wide range of statistical and econometric tools. Most of the arguments regarding the main constraints and measurement problems are centred on institutional data set problem endogeneity or multicollinearity between variables. Even if it is acknowledged that institutions are important for growth and development, it is still under discussion which institutions are more effective or when institutional changes show their effect on growth rate. The majority of studies mention the importance of economic institutions such as economic freedom, property size, and size of governments for the growth process (Ayal and Karras, 1998; Vijayaraghavan and Ward, 2001; Siddiqui and Ahmed, 2019; Góes, 2016). On the contrary, Nawaz (2015) underlines the role of political institutions such as bureaucratic quality and corruption control for the growth process for developed and developing countries. Moreover, Nawaz (2015)'s findings support that law and order have more impact on the growth performance in developing countries. Flachaire, Garcìa-Peñalosa and

Konte (2014) investigate the impact that institutions have on growth rate and try to answer the question of whether political or economic institutions are key determinants for growth rate. The results indicate that political and economic institutions play very different roles in growth processes. The findings support that, in the short run, political institutions do not play a significant role while the function of economic institutions is determined within the regime. Democratic regimes and strong economic institutions allow for technological changes and physical capital accumulation. On the other hand, growth can also be possible if weak political institutions are supported by strong economic institutions

From the transition countries' standpoint, Peng (2003) defines institutional transition "as fundamental and comprehensive changes introduced to the formal and informal rules of the game that affect organizations as players." He argues that capitalist institutions emerge with distinctive historical conditions in the Western World, but the institutional transformation process in transition economies is relatively artificial. Moreover, the policies implemented during the transition process vary greatly among countries, including shock therapies and gradualist policies. However, path dependency does not let the rule-based institutions of transition countries change like those in the Western World. During the first phase of the transition, chaos, political conflict and tensions seem inevitable in these countries. Way (2008) claims that the stability of authoritarian regimes in transition countries is closely related to their ties with Western countries. The governments of the transition countries that export natural resources do not prefer to distribute wealth to various segments of society, and their institutional setting is organized to serve political and economic elites.

There is a limited number of empirical studies working on the region to measure how institutional change affects their growth performance. Popov (2007) and Tridico (2007) compare the first and second phases of transition-related institutional structure and growth performance. Popov (2007) compares the impact of liberalism between the periods of 1989-1996 and 1996-2003 by using regression analysis. The empirical findings of this study support that the speed of liberalization experienced during the first phases had negative impacts on the transition processes. According to Popov (2007, 1-5), the underlying reasons for the problems encountered during the first phase are weak political and economic institutions which cause a lack of confidence for investors. On the contrary, the economies that demonstrated high performance in the second phase have strong institutions such as rule of law and democracy. Tridico (2007) also compares the first two phases of transition after the fall of socialism in Central and Eastern European, Central Asian and Caucasian countries based on human development and growth performance. The findings show that countries that were able to adopt institutional policies, social policies and governance principles increased their level of human development.

Piatkowski (2002) investigates the 'new economy' by constructing an indicator (including quality of regulations and contract enforcements infrastructure, trade openness, development of financial markets, R&D spending, quality of human capital, labour market flexibility, product market flexibility, entrepreneurship, macroeconomic stability) for measuring whether economies are ready for ICT to promote long-term economic growth. He found that the speed of adopting the new economy is one of the most important determinants of countries' competitiveness. Based on the empirical results of this study, the highest-scoring country was found to be Slovenia followed by the Czech Republic and Hungary, while Georgia, Azerbaijan, Uzbekistan, Albania, Bosnia and Herzegovina and former Yugoslavia were the lowest-scoring countries. Tridico (2013) argues that the Former Soviet Republic's (FSR) unsuccessful performance in terms of human development and growth was due to its lack of appropriate institutions for social capital and a consistent middle class, which are necessary to improve democracy. These characteristics did not allow for civil society and democratic political institutions. Ordinary and two-stage least squares analyses indicate that an even development target can be reached through democracy, the middle class, and social capital.

Based on the literature review, no sample is not found to apply the grey relational analysis to compare the institutional change and growth performance of Central Asian and Caucasian Countries or other transition countries. The core contribution of this study is to examine the underresearched region by institutional economics by using an alternative method called grey relational analysis for understanding how institutional change affects these countries' growth performance.

DATA

The variables used in the empirical analysis were selected based on the literature review conducted for Central Asian and Caucasian countries (except for Turkmenistan and Uzbekistan) for the period between 2001-2018. Economic institutions (Ayal and Karras, 1998;

Table 1: Definition of Variables

Variable	Original Name of variable and Original Source of Data	Short Description
Civil Rights (C1)	*fh_cl*[*] Freedom House	It includes freedom of expression and belief, associational and organisational rights, rule of law, and personal autonomy without interference from the state.
Economic freedom (C2)	*fi_index*^{**} Fraser Institute	It is designed to identify the consistency of institutional arrangement and policies with economic freedom in five major areas: the size of government, legal structure and security of property rights, access to sound money, freedom to trade internationally, and regulation of credit, labour and business.
Political stability (C3)	wbgi_pve World Bank	It measures perceptions of the likelihood of political instability and/or politically motivated violence, including terrorism.
Rule of law (C4)	wbgi_rle World Bank	It includes several indicators which measure the extent to which agents have confidence in and abide by the rules of society
GDP per capita (C5)	wdi_gdpcappppcon2011 World Bank	GDP per capita as a thousand US dollars based on purchasing power parity

Source: Quality of Government Project, 2020

 * Countries are graded between 1 (most free) and 7 (least free).

 ** The index ranges from 0-10 where 0 corresponds to "less economic freedom" and 10 to "more economic freedom".

Vijayaraghavan and Ward, 2001; Siddiqui and Ahmed, 2019; Góes, 2016) are represented by a composite index of economic freedom and the size of the economy by GDP per capita. Political institutions are represented by civil rights, political stability and rule of law (Flachaire, Garcìa-Peñalosa and Konte 2014; Nawaz, 2015). The studies datasets were collected from the Quality of Government Project which represents all data collected from main sources (Teorell et al., 2022). The variables, their short descriptions and their sources are given in Table 1.

GREY RELATIONAL ANALYSIS

Grey Relational Analysis, which is a method used for solving multi-criteria decision-making problems both on its own and as integrated with other methods, is preferred in this study due to its suitability to the topic and its advantages such as requiring fewer data, being able to produce efficient results under uncertain conditions, ease of calculating grey relational coefficients, and not requiring the data set to conform to a specific distribution. Used in various fields, the grey relational analysis method has proven to be yielding better results in comparison to other statistical analysis techniques in research conducted on small samples (Tung and Lee, 2009). The grey relational solution is suggested for problems that do not fit any distribution with multivariate statistics, do not contain enough data and cannot be modelled due

to uncertainty. Grey relational analysis method can be used to measure the relationship between two series numerically and logically, and it can numerically calculate the relationship between the sequences to be compared for this process, and the degree of relationship calculated as a result of the operations is called the gray relationship degree (Wang et al, 2004).

Grey Relational Analysis Method, which is a method used both alone and in combination with other methods to solve multi-criteria decision-making problems, requires a small number of data, can produce effective results in cases of uncertainty, offers easy calculation of grey relational coefficients, and does not require the data set to comply with any distribution. These advantages as well as its suitability to this paper's topic are why it was preferred for this research instead of other multi-criteria decision-making techniques. It can be seen from the studies conducted on small samples that the grey relational analysis method, which is used in many different fields, yields better results than other statistical analysis techniques (Tung and Lee, 2009).

The grey relational analysis consists of six steps (Agarwal and Patel, 2019):

Step 1: Creating the decision matrix

The decision matrix is created with n alternative and m selection criteria. Equation 1 is formulated by using the set of alternatives and the selection criteria.

$$X_i = \begin{bmatrix} X_1(1) & X_1(2) & \cdots & X_1(m) \\ X_2(1) & X_2(2) & \dots & X_2(m) \\ \vdots & \vdots & \vdots & \vdots \\ X_n(1) & X_n(2) & \cdots & X_n(m) \end{bmatrix} \tag{1}$$

$$i = 1,2, \ldots \ldots, m \quad j = 1,2, \ldots \ldots, n$$

Here, j indicates the alternatives and i is the value of the ith criterion with respect to the jth alternative.

Step 2: Normalizing the data set to create a normalization matrix

All data in the normalized series are in [0, 1] interval. Normalization can be calculated by using one of the following three types.

In Equation 2, the normalization procedure is performed if larger is better.

$$X_i^*(k) = \frac{X_i(k) - min_k X_i(k)}{max_k X_i(k) - min_k X_i(k)} \tag{2}$$

In Equation 3, the normalization procedure is performed if smaller is better.

$$X_i^*(k) = \frac{max_k X_i(k) - X_i(k)}{max_k X_i(k) - min_k X_i(k)} \tag{3}$$

In Equation 4, the normalization procedure is performed if a nominal value is desired.

$$X_i^*(k) = 1 - \frac{|X_i(k) - X_0(k)|}{max\{max_k X_i(k) - X_0(k); -X_0(k) min_k X_i(k)\}} \tag{4}$$

where

$min_k X_i(k)$: minimum value in the decision matrix

$max_k X_i(k)$: maximum value in the decision matrix

k: alternative; $j=1,2 \ldots, n$

$x_0(k)$: desired value of alternative k

Step 3: Construction of the absolute value matrix

The absolute distance between the normalized value with reference criteria series, measured in an absolute way and absolute value matrix is generated. By using Equations 5 and 6 are used to create the absolute value matrix.

$$\Delta_{0i}(k) = |X_i^*(k) - X_0^*(k)| \tag{5}$$

$$\begin{bmatrix} \Delta_{01}(1) & \Delta_{01}(2) & \cdots & \Delta_{01}(m) \\ \Delta_{02}(1) & \Delta_{02}(2) & \dots & \Delta_{02}(m) \\ \vdots & \vdots & \vdots & \vdots \\ \Delta_{0n}(1) & \Delta_{0n}(2) & \cdots & \Delta_{0n}(m) \end{bmatrix} \tag{6}$$

Step 4: Calculating the grey relational coefficient

$$\gamma(X_0(k), X_i(k)) = \frac{\Delta_{min} + \varsigma x \Delta_{max}}{\Delta_{0j} + \varsigma x \Delta_{max}} \tag{7}$$

Where

Δ_{max}: the highest value in the absolute difference series

Δ_{min}: the lowest value in the absolute difference series

γ: grey relational coefficient

ς: adjustment coefficient between Δ_{0j} and Δ_{max}; $\varsigma \in$ [0,1]. In this study, adjustment coefficient is used as 0,5 (Yildirim and Onder, 2014).

Grey factor matrix is created based on the values of the grey relational coefficient in equation 8.

$$\begin{bmatrix} \gamma_{01}(1) & \gamma_{01}(2) & \cdots & \gamma_{01}(m) \\ \gamma_{02}(1) & \gamma_{02}(2) & \dots & \gamma_{02}(m) \\ \vdots & \vdots & \vdots & \vdots \\ \gamma_{0n}(1) & \gamma_{0n}(2) & \cdots & \gamma_{0n}(m) \end{bmatrix} \tag{8}$$

Step 5: Calculating the grey relational degree

If the weights (W_i) of the criteria are equal, the grey relational degree τ is calculated as:

$$\tau(X_0, X_i) = \frac{1}{m} \sum_{k=1}^{m} \gamma(X_0(k), X_i(k)1) \tag{9}$$

If the weights (W_i) of the criteria are different, the grey relational degree τ is calculated as:

$$\tau(X_0, X_i) = \sum_{k=1}^{m} \gamma(X_0(k), X_i(k)).W_i(k) \tag{10}$$

APPLICATION

This study examines the economic growth performances of previously socialist Central Asian and Caucasian countries in the periods of 2001-2006, 2007-2012, and 2013-2018 and tries to determine

Table 2: Decision Matrix

Countries	Years	C1	C2	C3	C4	C5
Azerbaijan	2001-2006	5,000	6,260	1,427	1,612	6993,900
	2007-2012	5,000	6,11	2,005	1,626	15952,900
	2013-2018	6,000	6,340	1,750	1,941	16024,100
Armenia	2001-2006	4,000	7,477	2,344	2,076	4540,215
	2007-2012	4,000	7,608	2,589	2,056	7055,567
	2013-2018	5,000	7,713	2,143	2,246	8320,700
Georgia	2001-2006	3,667	7,217	1,487	1,703	4665,151
	2007-2012	3,500	7,595	1,735	2,305	7062,894
	2013-2018	3,000	7,945	2,110	2,750	9210,973
Kazakhstan	2001-2006	4,667	5,990	1,524	1,562	2294,721
	2007-2012	4,667	6,700	1,628	1,233	2800,762
	2013-2018	4,833	6,857	1,791	1,520	3278,704
Tajikistan	2001-2006	5,167	5,530	1,252	1,342	1559,961
	2007-2012	5,167	6,163	1,516	1,253	2120,161
	2013-2018	6,000	6,135	1,678	1,316	2749,310

whether differing economic and political institutions in these periods have had any effect on these countries' economic growth performances during their transition periods. Three separate 6-year periods have been taken into account to more clearly see the realization performance of the transitional goals of the countries. These periods are the six-year period before the 2008 economic crisis, the six-year period during the crisis, and the six-year period after the crisis. The reason why the era is determined into 6-year periods is that the future plans of many governments are set as 5–6-year targets. Within this context, using an equally weighted grey relational analysis method, we evaluated the civil rights, economic freedoms, political stability, rule of law and income per capita indicators of Azerbaijan, Armenia, Georgia, Kazakhstan, Kyrgyzstan and Tajikistan for these years. Then, based on the analysis results, we performed a growth performance test by comparing the results both between different periods and between the countries. Accordingly, the variables determined through the literature review and explained in Table 1, and the decision matrix used in the study are given separately in Table 2 by calculating the arithmetic mean values of 2001-2006, 2007-2012 and 2013-2018.

As can be seen, by using the decision matrix in Table 2, separate assessments were made for each country for 6-year periods. To do this, reference series and comparison matrix were used, and by using the optimal value for each criterion, the normalized decision matrix given in Table 3 was obtained. Furthermore, this study considered all criteria as equally important and used an equally important grey relational analysis method and evaluated countries first by comparing their own 6-year periods' data individually, and then against each other.

To create Table 3, the normalization process was performed according to Equation 2 by adopting the principle of "the larger the value, the better its contribution", and the process of transforming criteria into the same standard values was completed.

The normalized results in criteria levels were deducted from the reference value in Equation 5, and the absolute values table in Table 4 was obtained.

Using the absolute values calculated in Table 4, the $\Delta maks= 1,000$ and $\Delta min= 0,000$ values were determined. In this study, the distinguishing coefficient was taken as $\zeta = 0,5$ to use in the grey relational coefficient matrix. The grey relational coefficient matrix in Table 5 was obtained through Equation 8. The grey relational analysis performance scores and rankings related to each country's 6-year periods are given in Table 6, which were calculated by taking the significance levels of all criteria as the same.

According to Table 6 prepared during the last stage of the grey relational analysis, each country had a different economic growth momentum based on the six-year periods that they needed to adapt to a market economy and to structure their economies accordingly. It was found based on these results that in general,

Table 3: Normalized Decision Matrix

Countries	Years	C1	C2	C3	C4	C5
Azerbaijan	2001-2006	0	0,348	1	1	1
	2007-2012	0	1	0	0,958	0,008
	2013-2018	1	0	0,440	0	0
Armenia	2001-2006	0	1	0,549	0,898	1
	2007-2012	0	0,444	0	1	0,335
	2013-2018	1	0	1	0	0
Georgia	2001-2006	1	1	1	1	1
	2007-2012	0,750	0,481	0,601	0,425	0,473
	2013-2018	0	0	0	0	0
Kazakhstan	2001-2006	0	1	0,192	1	1
	2007-2012	0	0,295	0	0,625	0,384
	2013-2018	1	0	1	0	0
Kyrgyzstan	2001-2006	0	1	1	0	1
	2007-2012	0	0,181	0,611	1	0,486
	2013-2018	1	0	0	0,129	0
Tajikistan	2001-2006	0	1	1	0	1
	2007-2012	0	0	0,381	1	0,529
	2013-2018	1	0,045	0	0,294	0

Table 4: Absolute Value Matrix

Countries	Years	C1	C2	C3	C4	C5
Azerbaijan	2001-2006	1	0,652	0	0	0
	2007-2012	1	0	1	0,042	0,992
	2013-2018	0	1	0,56	1	1
Armenia	2001-2006	1	0	0,450	0,102	0
	2007-2012	1	0,556	1	0	0,665
	2013-2018	0	1	0	1	1
Georgia	2001-2006	0	0	0	0	0
	2007-2012	0,250	0,519	0,399	0,575	0,527
	2013-2018	1	1	1	1	1
Kazakhstan	2001-2006	1	0	0,808	0	0
	2007-2012	1	0,705	1	0,375	0,616
	2013-2018	0	1	0	1	1
Kyrgyzstan	2001-2006	1	0	0	1	0
	2007-2012	1	0,819	0,389	0	0,514
	2013-2018	0	1	1	0,871	1
Tajikistan	2001-2006	1	0	0	1	0
	2007-2012	1	1	0,619	0	0,471
	2013-2018	0	0,955	1	0,706	1

during the initial stages of their market economy transition, each country made some advances towards maintaining strong relations between their economic and institutional structure dynamics to have optimal congruence. However, the economic crises they experienced in later years prevented them from achieving the desired momentum in their progress. Based on this, it was assumed that evaluating these countries together and interpreting the results accordingly would provide more correct findings; therefore, the Central Asian and

Table 5: Grey Relational Coefficients

Countries	Years	C1	C2	C3	C4	**C5**
	2001-2006	0,333	0,434	1	1	1
Azerbaijan	**2007-2012**	0,333	1	0,333	0,922	0,335
	2013-2018	1	0,333	0,472	0,333	0,333
	2001-2006	0,333	1	0,526	0,831	1
Armenia	**2007-2012**	0,333	0,473	0,333	1	0,429
	2013-2018	1	0,333	1	0,333	0,333
	2001-2006	1	1	1	1	1
Georgia	**2007-2012**	0,666	0,490	0,556	0,465	0,487
	2013-2018	0,333	0,333	0,333	0,333	0,333
	2001-2006	0,333	1	0,382	1	1
Kazakhstan	**2007-2012**	0,333	0,415	0,333	0,571	0,448
	2013-2018	1	0,333	1	0,333	0,333
	2001-2006	0,333	1	1	0,333	1
Kyrgyzstan	**2007-2012**	0,333	0,379	0,562	1	0,493
	2013-2018	1	0,333	0,333	0,365	0,333
	2001-2006	0,333	1	1	0,333	1
Tajikistan	**2007-2012**	0,333	0,333	0,447	1	0,515
	2013-2018	1	0,344	0,333	0,415	0,333

Table 6: The performance score and ranking of six years period

Countries	Years	Performance Score	Ranked Data	Countries	Years	Performance Score	Ranked Data
Azerbaijan	**2001-2006**	0,7535	1	Kazakhstan	**2001-2006**	0,7431	1
	2007-2012	0,5848	2		**2007-2012**	0,4202	3
	2013-2018	0,4944	3		**2013-2018**	0,600	2
Armenia	**2001-2006**	0,7380	1	Kyrgyzstan	**2001-2006**	0,7333	1
	2007-2012	0,5138	3		**2007-2012**	0,5535	2
	2013-2018	0,600	2		**2013-2018**	0,4729	3
Georgia	**2001-2006**	1	1	Tajikistan	**2001-2006**	0,7333	1
	2007-2012	0,5330	2		**2007-2012**	0,5257	2
	2013-2018	0,3333	3		**2013-2018**	0,4849	3

Caucasian countries were evaluated together by using the same criteria for the periods of 2001-2006, 2007-2012, 2013-2018, and the grey relational analysis ranking results can be found in Table 7.

It can be said that the ranking results given in Table 7, where we compare different periods, are consistent with the institutional theory and the growth trends of the countries. It is inevitable for countries trying to establish institutional structures that allow them to integrate

Table 7: Ranking results for all periods

Countries	2001-2006	2007-2012	2013-2018	General Ranking Result
Azerbaijan	3	4	4	4
Armenia	2	2	3	2
Georgia	4	3	2	3
Kazakhstan	1	1	1	1
Kyrgyzstan	6	6	6	6
Tajikistan	5	5	5	5

with global markets to have successful economic performances. The fact that Kazakhstan was always found to be the country with the best performance for each period proves that in addition to its rich natural resources, the country has been able to produce technology and export technological products and that it has been more successful in human capital compared to other countries. When the economy of Kyrgyzstan is analyzed, it becomes clear why it ranks last in terms of economic growth performance. The Kyrgyz economy has failed because it has not been able to create an institutional capacity to eliminate its political instability, which is consistent with its ranking.

CONCLUSION

The reasons that affect countries' economic growth performances have been an important topic of discussion both in the national and international literature (Acemoglu et al. 2001, Bal and Ozdemir, 2017). Recently, it is observed that the answers given to this question focus on the effects of economic and political institutions. It is especially interesting why there are differences among the economic growth performances of transition economies, which are needed to redesign both their economic and political institutions after transitioning from central planning into a market economy. This study investigates the periodic changes that the economies of Central Asian and Caucasian countries of Azerbaijan, Armenia, Georgia, Kazakhstan, Kyrgyzstan and Tajikistan went through between the years 2001-2018 and looks into the relationship between institutions and these periodic changes.

It is seen that countries that can design and establish institutional structures, such as property rights, regulatory institutions, macroeconomic stability, social security and conflict management to ensure that markets function effectively, can adapt to global competition and have good economic performance (Rodrik, 2014). The inclusive institutions designed by governments increase

creativity and technological development through the improvement in the quality of economic and political institutions. The quality of political institutions and economic institutions ensures the efficient use of public expenditures due to transparency and accountability as well as equal distribution of opportunities between economic agents.

In the study, the period between 2001-2018 was divided into 6-year periods such as 2001-2006, 2007-2012, and 2013-2018 by taking into account the economic crises and wars that these countries experienced. Variables of civil rights, economic freedom, political stability, rule of law and GDP per capita, which were determined through a literature review to evaluate the periodic changes experienced by the Central Asian and Caucasian countries during their transition process and their economic growth performances, were identified as institutional criteria that have an impact on economic growth performance, and they were evaluated with equal significance. The findings obtained via the grey relational analysis technique, which is a multi-criteria decision-making technique, were demonstrated in tables enabling us to comment on the economic growth performances of the countries and the momentum they gained in their transitions throughout different periods. When the analysis results were examined, the findings were found to be consistent with the theoretical approaches that emphasize institutions' effect on growth as well as the growth trends of countries.

In short, although it is known that direct foreign capital investment is the driving force behind countries' momentum and success during their transition to the market economy, it is widely accepted that foreign capital considers economically and politically stable countries to be the rational environment for investment. Based on this statement, it can be said that there is no reason why countries with a stable economic institutional structure cannot be successful if they also create an investment climate that will provide political stability. Therefore,

although Kazakhstan, Armenia and Georgia, which were found to be ranking high in this study in terms of economic performance, are relatively more democratic with regard to their political institutions, it does not seem quite possible to consider them as truly western liberal democracies. Even though they have progressed quickly during their transition to the market economy, they have not been able to fully achieve the desired momentum due to their authoritarian tendencies in matters related to institutional structure.

Finally, the fact that Kazakhstan ranked the highest in all periods can be interpreted as the result of its rich natural resources as well as its ability to produce technology, export technological products, and its success in human capital. Armenia and Georgia, which come after Kazakhstan, ranked high through their efforts towards being a part of the world trade and existing in the global economic system. If Armenia and Georgia wish not only to transform their institutions to match market economy norms both politically and economically but also to have a good economic performance, they must give importance to the stabilization of their political institutional structures. When the economic structures of the lower-ranking countries are examined, it is seen that despite their efforts to integrate into global markets, they have not been successful in establishing institutional structures that enable an efficient resource distribution mechanism.

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