

Democracy and Growth: Evidence from Transition Economies

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Abstract

The relationship between democracy and economic growth is one of the widely disputed issues in the literature. The relationship between political regime and economic dynamics has been proven. But, the real problem is the direction of the relationship. There has been not any consensus on this. In the historical process, convergence observed in democracy signifies positive direction of this relationship. Main purpose of this study is to analyse the effect of democracy on economic growth in transition economies. The panel data of 1992-2010 period is used in the study in order to examine 12 transitional economies belonging to Commonwealth of Independent States. The concept of democracy is dealt with as political and economic democracy within the scope of the study. The results of the assumptions puts forth that while economic democracy effects growth positively in transition economies, there is not any significant relation between growth and political democracy. It is concluded that political democracy effects growth in transitional economies indirectly through its effects on economic democracy.

Keywords: Democracy, Economic Growth, Transition Economies, Panel Data

JEL Codes: F02, O10, P16, P26

1. Introduction

The relationship between economic growth and democracy has been widely discussed in the second half of 20th century and the debates on the issue have been still going on. It can be argued that there is a rich literature on the issue composing of a vast number of theoretical and practical studies. However, the researchers have not come up with an exact answer to question of whether democracy promotes or prevents economic growth. There has been any consensus on the issue. Democratic movements observed globally in the recent years have also increased the importance of the issue (Haan and Siermann, 1995:175; Doğan, 2005:1). In this context, it is possible to discuss about two big convergences in the world. The first convergence is observed in per-capita income (economic growth) and widely debated; the second convergence is seen in democracy and discussed rarely¹ (Verdier, 1998:1-24). Democratic movements emerged in the aftermath of the dissolution of Soviet Union and Arab Spring² recently happened have increased the significance of democratic convergence which has been spoken quietly before and encouraged many researchers to study the issue.

It is not new to stress the relationship between political order and economic dynamics (Ökten, 2007:95). Observing both economic growth and democratic convergence in the same country and in the same group of country indicates the existence of the relationship between these two concepts. Herein, the main problem is the direction of the relationship. Meta analysis performed by Doucouliagos and Ulubaşoğlu (2008) by using the empirical analysis on “Democracy and Economic Growth” shows the contentious nature of the direction of the relationship. Distribution of 483 different regression assumptions existing in 83 published articles on democracy and growth is as follow: The relationship is negative for 15 %, statistically significant; is negative for 21 %, statistically insignificant; is positive in 27 %, statistically significant; is positive in 37 %, statistically insignificant. A similar kind of classification is made by Kuzmanet. al (2002).

¹Formoreinformationpleasesee: Quah, 1996; Verdier, 1998; Schwartzman, 1998; Anderson, 2002; Pridham, 2007.

²Formoreinformationpleasesee: Kibaroglu, 2011; Gülriz, 2012; BarariandSatkowski, 2012.

In this scope, 47 articles has been analysed and results are as follow: 19 articles puts forth a positive relation between democracy and economic growth, 6 articles depict a negative relation, 10 articles indicate a statistically insignificant relation, 7 articles argues a positive and statistically insignificant relation, 2 articles show a both positive and negative relation. Closeness of the group assumptions provided above pushes researchers to act carefully both theoretical and empirical studies. On the other hand, this makes the results contested. One of the reasons for reaching different results in various analyses on the relation between democracy and economic growth is the prevailing conditions. As well as, theoretical and empirical errors made during the analyses also have a share in this variance. For example, countries or country groups observed may bear different characteristics in this context. The time period examined may also make a difference across countries in terms of the effect of democratic behaviour on economic growth. A period of time that is enough for observing the relationship between democracy and economic growth in one country may not be enough for other countries. By the way, errors made during designing of the model will also bring about different problems. Independent variables that will be used in the growth model formed and independent variables that will be used in order to represent democracy play a vital role in the reliability of results. In this scope, one of the other problems that should be stressed is the problem of measuring democracy.³

The relationship between democracy and economic growth in transition economies will be analysed in this study. The study composes of three sections: theoretical relationship between democracy and economic growth will be analysed and literature will summarized in the first part. The relationship between democracy and economic growth will be tested in the second part. All of the results will be evaluated as a whole in the last part with some recommendations for transition economies.

2. How Democracy Affects Economic Growth?

Bhagwati elaborates on the question of “cruel dilemma relationship” or “symbiotic relation” in his study regarding the ambiguity of the relationship between democracy and economic growth. He sees the prioritization among these them as a choice between “doing the better” and “doing the best” (Bhagwati, 2002:151). Kurzman et al (2002) also made a similar evaluation. Three main questions are asked in the mentioned study: Are the poor countries facing with a cruel trade-off between democracy and economic growth?, Is there a win-win relationship between democracy and economic growth?, Are democracy and economic growth irrelevant? (Kruzman et. al, 2002:3). It is possible to ask more questions on the issue. This study aims to produce an answer for the question of whether democracy facilitates or prevents economic growth.

It is beneficial to conceptualize democracy as “political democracy” and “economic democracy” in the analysis of the relationship between democracy and economic growth. While multi-party system, free elections, freedom of press, participative and good governance, political stability are fundamental constituents of political democracy; free market, guarantee of the right of private ownership, minimisation of the public share in economic activities, freedom in the activities of business and credit system, regulation on labour market, economic rights and freedoms constitutes main tenets of economic democracy (Barro, 1996a:1; Doucouliagos and Ulubaşoğlu, 2008:64). It is not possible to differentiate these concepts from each other with strict borderlines. They are interlocking most of the time. Diffusion of political democracy will promote economic democracy and enhance its area; as a result of this process, realisation of economic growth is expected (Barro, 1996a:1). While the developments in political democracy have an indirect affect on economic growth, developments in economic democracies make a more direct affect. The analysis made with the indicators of economic freedoms shows that economic freedoms or economic democracy is one of significant determinants of economic growth (Doucouliagos and Ulubaşoğlu, 2008:64). That is to say, economic freedoms have a positive influence on economic growth through promoting productive activities and encouraging private incentives.

“Laissez faire” approach of Adam Smith, a forerunner classical economist, is lying beneath the ideas related to the positive effect of economic freedoms on economic growth/development. Smith states that individual acts according to their economical interests and objects any limitations on individual enterprise rights. Hence, individuals running behind their interests also serve to societal interests (Seyidoğlu, 2007:23). At first glance, settlement of democracy in many countries achieved economic growth and development is an evidence for the importance of democracy.

³For more information please see: Sirowy and Inkeles, 1990; Przeworski and Limongi, 1993; Helliwell, 1994; Leblang, 1997.

But, the good performance of some Asian countries (Hong Kong, Singapore, South Korea, Taiwan and China) in terms of economic growth is in contrast with the arguments for the conduciveness of democracy to economic growth and shows that undemocratic countries can also achieve economic growth (Haan and Siermann, 1995:179; Bhagwati, 2002:151; Drury et al., 2006:124). At this phase, it should be discussed in what kind of a system economic freedoms are more developed and have a more influence on economic growth/development: Whether the democracies or totalitarian systems?

Stability and good governance are the most significant characteristics of political systems. Political instability poses risks and uncertainties on future policies. This situation leads or obliges to extensive use of resources. Since the change in governments happens in accordance with the predefined and transparent rules in democracies, risks and uncertainties are minimal in such a setting. All the segments of population have a right to express themselves in democracies. This reflects to the government through free elections and makes decisions foreseeable. Minimal risks and uncertainties emerge thanks to decrease in political stability doesn't make any negative influence on investments and create a fertile setting for economic growth (Tavares and Wacziarg, 2001:1344). This study aims to show the positive effect of political stability on economic performance/growth (Demirgil, 2011; Arslan, 2011; Hürand Akbulut, 2012). Political stability doesn't solely exist in democratic systems. There may be stable governments in totalitarian and authoritarian regimes (Doğan, 2005:6). Hence, the question of "Which system has a more qualified administration?" should be elaborated. Democracies affect the quality of administration positively (Bhagwati, 2002:156). Rulers having an arbitrary power have more tendencies to follow economic policies serving to the goods of some segment of population. In democratic settings, oppositions have the opportunity to promote possible alternatives, to monitor the government, to check the quality of policy-making process and to eliminate any abuse. In other words, politicians in authoritarian regimes are more inclined to abuse their power in the absence of public supervision (Tavares and Wacziarg, 2001:1344, Doğan, 2005:12). In this context, the primary difference between democracies and authoritarian regimes is the existence and the goal of institutionalization in the former for the sake of raising the quality of the administration.

The size of government spending is an issue that will be considered in the relationship between democracy and growth. Market economy model basing on a scientific root brought about the principle of "as the distance of the state from the economy increased, economy operates better" (Kılıçbay, 1994:176). The share of public in the economy is measured by taking the ratio of government spending to GDP and this ratio shows the size of public sector. It is known that a larger government spending affects growth negatively. Barro came to this conclusion by arguing that the inefficient government spending is financed through higher taxes (Barro, 1996a:7). At this point, positive effects of efficient government spending on growth should not be forgotten. There has been any exact answer of the question of "Is the amount of inefficient government spending larger in the democracies or authoritarian regimes?" in the literature. By taking into account the involvement of different interest groups into policy-making process, it can be brought forward that area and/or dimension of the public sector in the economy are increased more. On the other hand, authoritarians are more inclined to enhance government activities in order to maximise their pressure and effect on the economy (Tavares and Wacziarg, 2001:1345).

Kurzman et. al (2002) stress the necessity of limitation of social spending made by the public to ensure economic growth. But, social programme may be popular and the ones defending the interests of the groups benefiting may be well-organized. Democracies are more responsive to the pressures of these interest groups and could not defend themselves strongly. In this context, it is hard to control social spending in democracies. Since the authoritarian regimes gives autonomy to political elites in the face of pressures, it is capable in providing public goods and producing resources (Kruzman et. al, 2002:6). They prioritize social spending covering all segments of the population rather than concentrating on a group.

Authoritarian regimes make more military spending in comparison to democracies. They raise taxes in order to finance these spending and this reduces the speed of economic growth. Taxes are relatively lower in democracies due to low levels of military spending (Doğan, 2005:13). This facilitates an economic growth by taking into account the relative weight of redistributive expenditures.

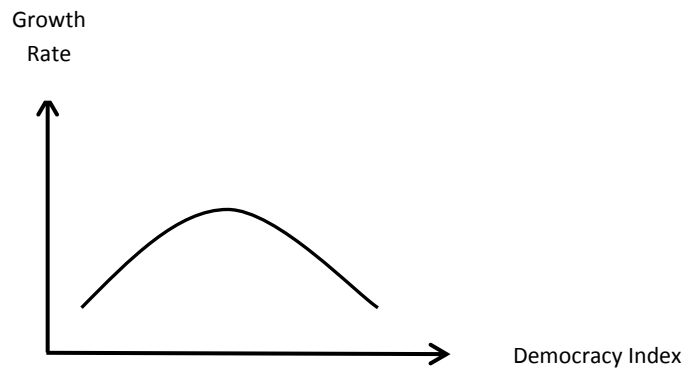
Since more saving equals to a high ratio of investment, an increase in investment level influences economic growth positively. There is a positive relation between investment and growth (Barro, 1996a:9). In this context, an answer to the question of "Which kinds of regimes are more conducive to investment?" should be given.

At first glance, since the authoritarian regimes are capable of making more saving thanks to high taxes and other means, it is anticipated that there will be more investment in authoritarian regimes. However, it should be stressed that the public sector is not the only engine of growth. Use of these savings inefficiently by the public sector or their standardized use in closing budget deficit prevents their turning to efficient investment. Besides, transformation of savings to investment is also supported in private sector. Hence, both democracies and authoritarian regimes may have the necessary savings. Different countries show different performances in terms of investment rates. The important issue is the efficiency of political environment (Bhagwati, 2002:152). Since there is the likelihood of changing the rules of the game of economic activities arbitrarily in the authoritarian regimes, this unexpected situation makes investors less willing to invest. This influences growth negatively (Kruzman et. al, 2002:6). Low level of taxes due to the necessity of getting the appreciation of the society, both savings and investments are lower in democracies (Bhagwati, 2002:152). This makes a negative direct influence on growth. Another approach is that democracy is good for investment and, in turn, has a positive indirect effect on economic growth. Investment will grow in a climate of liberty, free-flowing information, and property rights secure from the arbitrary power of the state (Kruzman et. al, 2002:6). This is one of the direct and natural results of market economy. In a setting which gives opportunity of seeing the risks in the long-run, it becomes easier for the entrepreneur to give a decision of investment. This affects growth positively.

The scale of openness of the economies is also one of the factors influencing economic growth. Openness measured on the basis of the ratio of foreign trade to GDP shows benefitting from comparative advantages through specialization. An increase in exports stemming from external demand by keeping internal demand fixed influences employment and GDP positively and affects growth positively. Political freedoms will increase free trade and reduce protective policies by enlarging economic freedoms in democracies. Free trade is less observed in authoritarian regimes due to the dominance of autarchy.

Human capital accumulation is one of fundamental determinants of economic development (Barro, 1996b; Baum and Lake, 2003; Gürak, 2006). Human capital accumulation is on the one hand related with the numerical increase in population; on the other hand, it is related with quality indicators such as schooling rate, women/men literacy, life expectation. Development and settlement of individual freedoms and democracy are vital for human capital development in less developed countries. In other words, democracy can be seen as a climate in which both economic development and social capital raises and it is also a precondition for economic development (Keskin, 2011:149). Baum and Lake (2003) found that democracy doesn't directly influence growth, but it affects growth indirectly by enhancing human capital. In addition, any increase in per-capita income as a result of a reduction in the speed of population increase is also an indirect effect of democracy on growth.

In line with the discussions related to the direction of the relationship between democracy and economic growth, there is also a different approach in the literature which is rejecting the linear relationship between them. The relation can be indicated in the form of reverse-U as in the Graph 1. That is to say, enhancement of political rights with the transition from dictatorship to democracy will lead to a limitation in the power of public authority and will increase economic growth. This situation can be explained with the part of the graph having an upward slope. The countries with large political and economic freedoms, on-going democratization will bring about extensive redistribution of revenue and social support programmes. Restrictive effects of this process on economic freedom will reduce investments and growth will slow down (Barro, 1996a:3-4; Yay, 2002:40-41). This situation can be explained with the part of the graph having a downward slope. Barro puts forth that mid-range democracies are more advantaged in terms of economic growth. Less developed countries are the second best and advanced democracies are the third. Kruzman et. al (2002) defined the part between the start point and peak point having an upward slope as the "win-win" process.

Graph 1: Democracy Index Growth Rate

Source: Barro, 1996a:3

Necessity of dealing with the concept of democracy as “political democracy” and “economic democracy” was explained at the beginning of the part. Economic democracy indicates the market economy in which market and competition prevail. In such an economy, main determinant of growth is markets and market economy. While defining the relationship between market economy (economic democracy) and democracy (political democracy); it should be stated that market is necessary condition for democracy, but not enough, on the other hand democracy is not a precondition for market economy (Yay, 2002:33). Markets (competition) can bring about economic growth with or without democracy. Democracy is the main instrument strengthening and institutionalizing market economy. In this context, the slogan that can be used is “democracy” as a political regimes and “market economy” as an economic regime (Kılıçbay, 1994:177). Moreover, democracy doesn’t make a direct effect on economic growth, but it makes an indirect effect on the determinants of economic growth.

2. Measuring Democracy

It is difficult to measure democracy and define it numerically. In application, democracy indexes are made by taking some indicators of democracy as references; making comparisons between/among countries. “Political rights” and “economic rights are taken as main benchmarks of democracy and countries are ranked. Primary democracy indexes are as follow⁴: “Freedom House Democracy Index”, “Polity Democracy Index”, “ACLP Democracy Index”, “VanhanDemokracy Index” and “EIU DemokracyIndex”.The first two are widely used in studies including applications.

Freedom House DemokrasiIndex has been prepared since 1972 by an independent civil society organisation established in the USA in1940. The annually published report named “Freedom in the World” analyses democratization process in 195 countries on the basis of two categories “political rights” and “civil liberties”. Political rights are evaluated on the basis of sub-categories such as electoral process, political plurality and participation and functions of public opinion; civil liberties are evaluated on the basis of sub-categories namely freedom of expression and belief, freedom of association, individual rights. Countries are coded from 1 to 7 in terms of political rights and civil liberties. While “1” stands for the most democratic country (advanced democracies), “7” stands for less democratic country (unfree, absence of democratic tenets). Moreover, countries with an political rights and civil liberty average between 1.0 and 2.5 are categorized as “free countries”; countries with an average between 3.0 and 5.0 are defined as “partially democratic” and countries with an average between 5.5 and 7.0 are “unfree countries” (Freedom House, 2012).

Polity Democracy Index is prepared by The Center forSystemicPeace (CSP). It gives codes and rates to the administrative characteristics of the countries by making comparisons among them. The serials of these studies are named as “Polity”. The first Polity I project is prepared in 1974 byT.R.Gurr, Polity II project was prepared in 1990, Polity III project was prepared in 1995 andPolity IV project was revised in 2000 (Marshall, 2010:1). Scores in Polity data sets are coded countries with 21 scores ranges from “-10” to“+10”. “-10” signifies strong autocracy; “+10” stands for strong democracy.

⁴Formoreinformationpleaseseen: DemocracyBarometer; http://www.democracybarometer.org/links_en.html; 12.06.2012)

In other words, the range between 0 to “+10” signifies democracy; “-10” to “0” range signifies autocracy. “0” shows absence of democratic tenets or autocratic elements; “+10” stands for strong democracies; “-10” stands for strong autocracies. “-66” score in Polity indexes states mid-term period in administrative processes; “-77” score signifies anarchy period and “-88” score signifies transition period. Codings belonging to 164 countries exist in Polity IV data set published in 2010.

One of the other indexes in the literature is ACLP democracy index. “ACLP Political and Economic Database” are developed by M. Alvarez, J.A. Cheibub, F. Limongive A. Przeworski and covers 135 countries. The countries are listed in the index in terms of sustainability and resistance of democratic regimes. Election of the government, formation of the parliament through elections and existence of several parties are used as main benchmarks in the list (Drury et.al, 2006:127). Data set was revised in 2004 by enlarging the number of countries and time period.

Vanhan Democracy Index covers 187 countries and the period of 1810-2000. It accepts “participation” and “competition” as two main benchmarks of democratization; the countries are rated in terms of these benchmarks in the index (Campbell, 2008:13). EIU Democracy Index was developed by the Economist by taking political rights and civil liberties in the Freedom House Democracy Index as a reference. 2006 EIU Democracy Index covers 165 countries and categorizes countries as “full democracies”, “defective democracies”, “hybrid democracies” and “authoritarian” regimes (Campbell, 2008:14; The Economist, 2012).

2. Economic Growth and Democracy Indicators in Transition Economies

The relationship between democracy and economic growth in 12 transition economies who acquired their independence with the dissolution of Soviet Union will be examined in this study. The concept of transition economy is used to indicate different groups of countries in the literature. The countries members to Commonwealth of Independent Nations are opted as transition economies in the scope of this study. These countries are: Azerbaijan, Armenia, Belarus, Georgia, Kazakhstan, Kyrgyzstan, Moldova, Tajikistan, Turkmenistan, Russia, Uzbekistan, and Ukraine. Turkmenistan is an observing country of the Commonwealth and Georgia left from the Commonwealth in 2009 (CIS, 2012).

There are GDP values and democracy indexes belonging to these countries in Table 1. While the GDPs of these countries has increased by years in terms of USA dollar; democracy indexes has stayed either stable or decreased. It is not possible to say that the process of democratization has the same pace with the transition to free market economy. By using the concepts of political democracy and economic democracy identified above, it can be said that there has been slow and painful progress in the way of political democracy; there has been a smooth transition to economic democracy in these countries.

Table 1: Economic Growth and Democracy Indicators in Transition Economies (GDP; Billion \$)

Countries	GDP				Polity IV Index				Freedom House Index							
									Political Freedoms				Civil Liberties			
	1995	2000	2005	2010	1995	2000	2005	2010	1995	2000	2005	2010	1995	2000	2005	2010
Azerbaijan	2,42	5,27	13,25	52,17	0	0	0	0	6	6	6	6	6	5	5	5
Belarus	3,38	10,42	30,21	52,89	3	0	0	0	4	4	5	6	4	4	4	4
Armenia	1,29	1,91	4,90	8,83	4	6	5	5	5	6	7	7	5	6	6	6
Georgia	1,90	3,04	6,41	11,23	6	5	7	7	4	4	3	4	5	4	3	4
Kazakhstan	16,59	18,28	57,12	129,76	1	1	0	0	6	6	6	6	5	5	5	5
Kyrgyzstan	1,49	1,37	2,46	4,44	1	1	3	7	4	6	5	6	4	5	4	5
Moldova	1,44	1,29	2,99	5,36	7	7	8	8	4	2	3	3	4	4	4	4
Uzbekistan	10,17	13,72	14,31	37,72	0	0	0	0	7	7	7	7	7	6	7	7
Russia	313,45	259,70	763,70	1476,91	4	6	6	5	3	5	6	6	4	5	5	5
Tajikistan	0,57	0,99	2,31	5,58	0	2	1	1	7	6	6	6	7	6	5	5
Turkmenistan	5,87	5,02	17,18	33,79	0	0	0	0	7	7	7	7	7	7	7	7
Ukraine	39,01	31,26	86,18	136,56	7	6	6	7	3	4	3	3	4	4	2	2

Sources: IMF Database (2010); Polity IV Project (2010); Freedom House in the World (2012)

4. Econometric Analyses

4.1. Method, Data Set and Descriptive Statistics

The analyses in this study will be made by using panel data. Panel data can be described as the merger of cross-section of observations made on economic units, namely countries, firms and households in certain time period. While the values belong to years constitute the section dimension of the panel, values taken by economic variables in time forms the time dimension of the panel. In this framework, a panel data analysis differs from time serial or horizontal-section analyses (Baltagi, 2005:11). The main equation used in panel data analysis is as follows:

$$y_{it} = \alpha_{it} + \beta_{kit} + \dots + \beta_{kit} X_{kit} + u_{it}$$

$i=1 \dots N$ in the equation constitutes cross-section dimension of the model and it show the data belonging N number of countries, firms or households. $t=1, \dots, T$; stands for time. That is, it is time serial dimension of the model. Briefly, values belonging any year forms cross-section dimension of the model, values taken by economic units forms the time dimension of the model. It is assumed that u_{it} error term is independent for all times and units and distributes in the form of $u_{it} \approx IID(0, \sigma^2)$. Assumptions are made through three different methods. These are panel OLS, fixed effects model and random effects model. Fixed effects model assumes that differences among units can be grasped with the differences in fixed term. In this situation, each unit will have a fixed term that is not changing in time. Fixed term shows the effect of independent variables that is kept outside the model. OLS is built on the main assumptions of fixed effects model and assumes that individual and time effects are not related with independent variables (Sandalcilar, 2012:232). It is assumed that individual effects emerge from a random event and they are independent from error term. Hausman test statistics is used in the decision on which model will be used.

The long-term relationship between democracy and economic growth in transition economies is examined econometrically in this study. The data belonging to 12 countries in the period of 1992-2010 are analysed with panel data method. Two different sets of variables are generally used in modelling of the relationship between democracy and economic growth in empirical studies. Mentioned model can be shown as below: (Leblang, 1997:454).

$$Growth_i = \alpha + \beta Economic + \gamma Political + \mu_i$$

“*Growth*” defines the economic growth of a country in a certain period; “*Economic*” defines economic variables affecting growth; “*Political*” defines political variables affecting growth; μ_i is error term. Accordingly, 6 economic variables and 3 political variable affecting economic growth in transition economies will be used in the study. Information regarding the dependent and independent variables that will be used in the model will be provided in the model below. In this scope, diagnostic statistics in Table 2 and correlation matrix in Table 3 including preliminary briefings on the relations between diagnostic variables and dependent variables will be used.

“*EconomicGrowth*” symbolized dependent variable in the model and shows the GDP of the countries in terms of USA dollar. Annual data whose logarithms will be used are reached from IMF Database (2012). In diagnostic statistics, mean of dependent variables is 22.96; their maximum value is 28.14 and their minimum value is 18.50.

Economic Variables

“*Investment*” defines the gross fixed capital investments belonging to countries. The logarithms of the annual data received from EBRD Database (2012) and World Bank Database (2012) are used. It is expected that investments have a positive effect on growth. Correlation matrix also verifies this situation. Mean of “*Investment*” data set is 21.44; its maximum value is 26.64; its minimum value is 16.73.

“*Wealth*” is added to the model as a symbol of development levels of the countries. It is expressed in terms of per-capita income. Data, of which logarithm is eliminated is reached from IMF Database (2012). There is a positive relation between growth and wealth. It is assumed that the beginning size of wealth affects subsequent wealth positive. Its mean is 6.79; its maximum value is 9.37 and its minimum value is 3.43.

“*Population₁₅₋₆₄*” is the active population between the ages of 15 and 64 and it is added to the model as a symbol of human capital. In other words, it stands for the labour potential of each country. Logarithms of the data reached from EBRD Database (2012) are eliminated. As it may be seen from correlation matrix, the relationship between growth and labour is positive. Its mean is 15.72; its maximum value is 18.45 and its minimum value is 14.49.

Table 2: Diagnostic Statistics Belonging to Transition Economies

	LEcon. Growth	LGov. Consump.	LInvest.	LWealth	LPop. 15-64	School Enroll.	Trade Open.	Life Exp.	Polity IV	Freedom Hosue
Mean	22,96	21,75	21,44	6,79	4,16	62,68	0,84	67,49	2,90	5,06
Median	22,59	21,50	21,43	6,68	4,18	35,78	0,73	67,30	1,00	5,50
Maximum	28,14	27,09	26,64	9,37	4,28	90,23	3,32	73,78	8,00	7,00
Minimum	18,50	17,74	16,73	3,43	3,96	44,35	0,32	62,29	0,00	2,50
Std. Dev	1,81	1,92	1,96	1,08	0,08	17,60	1,63	2,59	2,97	1,27
Prob.	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00
Observations	228	228	228	228	228	228	228	228	228	228

Source: Calculated by author.

“*Life Expectancy*” symbolizes average life duration. Highness of life expectancy is treated as an indicator of a healthy life and rising productivity of individuals. In this sense, it makes a positive effect on growth. Data has been reached from World Bank Database (2012). Mean life expectancy is 67.49; its maximum value is 73.78 and minimum value is 62.29.

“*School Enrollment*” shows schooling rate and it is added to the model as an indicator of human capital. Data received from World Bank Database (2012) was used and it shows the mean schooling rates at the level of middle school and high school. Expected relation has a positive direction. Mean school enrollment rate is 62.68; its maximum value is 90.23 and its minimum value is 44.35.

“*Trade Openness*” is an index derived from the division of foreign trade volume to GDP [(export+import)/GDP]. It shows outward openness of countries. Its expected effect on growth is positive. According to comparative advantages theory of Ricardo, free trade will result in more outputs thanks to efficient use of sources. Data reached from World Bank Database (2012) is used. Mean index is 0.85; maximum value of index is 3.32 and minimum value of index is 0.32.

Table 3: Correlation Matrix Belonging to Transition Economies

	LEcon. Growth	LGov. Consump.	LInvest.	LWealth	LPop. 15-64	School Enroll.	Trade Open.	Life Exp.	Polity IV	Freedom Hosue
LEcon. Growth	1,000									
LGov. Consump.	0,983	1,000								
LInvest.	0,979	0,966	1,000							
LWealth	0,823	0,776	0,844	1,000						
LPop. 15-64	0,611	0,620	0,606	0,702	1,000					
School Enroll.	0,630	0,649	0,620	0,593	0,605	1,000				
Trade Open.	-0,391	-0,338	-0,386	-0,451	-0,204	-0,006	1,000			
Life Exp.	0,036	0,052	0,045	0,255	0,555	0,168	-0,205	1,000		
Polity IV	0,043	0,085	0,003	0,004	0,464	0,259	-0,038	0,442	1,000	
Freedom Hosue	0,020	-0,031	0,060	0,065	-0,409	-0,142	0,052	-0,463	-0,816	1,000

Source: Calculated by author.

Political Variables

Political variables are added to the model in order to represent the characteristics of a country’s regime. Three political variables will be used in the model:

“*Democracy_{PolityIV}*”, signifies the democracy index that is used for comparing countries with each other, and coding and rating administrative characteristics of the countries. Index values are prepared by The Center for Systemic Peace (CSP) within the scope of Polity IV Project. Countries are coded with 21 scores ranging from “-10” to “+10” in terms of their political system and administrative type in polity data set. It is expected that it will make a positive and/or negative or no effect on growth. It shows a positive influence on growth in the correlation matrix.

“*Democracy_{Freedom}*”, is another democracy index. Data were received from “Freedom in the World” report published by Freedom House. Countries are coded numerically between 1 to 7 in terms of political rights and civil liberties. It is expected that it will make a positive and/or negative or no effect on growth.

“*Government Spending*” stands for government spending. Data whose logarithms were taken received from World Bank Database (2012). Its anticipated effect on growth is negative. Any rise in government spending means the use of sources in line with the interests of pressure and interest groups, rather than efficient use of sources. Correlation matrix shows its positive effect. Average of government spending is calculated as 21.75; its maximum value 27.09 and minimum value 17.74.

4.2. Model and Estimation Results

The effect of democracy on growth in transition economies will be measured by adding democracy variable as an explanatory variable to the growth model that will be developed below. The model includes main determiners of growth. The first estimation is made through Freedom House Democracy Index and second estimation is made through Polity IV Democracy Index. Estimation results of panel OLS, fixed effects and random effects methods applied in panel data analyses are provided in Table 4 and Table 5. Unsignificance of Hausman test results statistically has led to the preference of random effects model to estimate the effect of democracy on growth. By the way, it shows that results can be estimated without any deviation.

$$\text{LogGrowth}_t = \text{Constant} + \beta_1 \text{LogInv}_t + \beta_2 \text{logGovSpend}_t + \beta_3 \text{LogWealth}_t + \beta_4 \text{LogPop}_t + \beta_5 \text{Trade}_t + \beta_6 \text{LifeExp}_t + \beta_7 \text{SchoolEn}_t + \beta_8 \text{Dem}_t + \mu_t$$

Table 4 shows that the signs of explanatory variables in both OLS and random effects method show coherence to a great extent with theoretical expectations. Variable of per capita GDP is estimated positive and significant at the level of 1 %; active population variable is estimated positive and significant at the level of 10 %; openness to outward variable is estimated positive and significant at the level 10 %. These two variables make a positive effect on both growth and welfare in transition economies. Any significant estimation regarding the other determinants of growth namely gross fixed capital investments and schooling rate explanatory variables could not be made. Mean life expectancy variable is significant, but its negativesness is not in line with the theory. Any increase in mean life expectancy is an indicator of the existence of proper and successful health services. By increasing the efficiency, this makes a positive effect on production. At this phase, it will be appropriate to interpret government spending and democracy (Freedom House) together. That is, it is expected that government spending affects growth positively in democratic regimes.

Accordingly, democracies are sensitive in meeting the demands of pressure and interest groups and could not defend themselves. Estimation of government spending variable as positive and significant shows that government spendings do not only serve to the interests of pressure and interests groups, but also to serve to common good. Democracy variable is estimated positive and significant at the level of 5 %. In other words, democratic activities make a positive effect on growth in transition economies. However, contrast between theoretical expectations and the signs of government spending and democracy variables can be explained as follows: By taking the concept of democracy as economic democracy and political democracy as it is identified in the first part, it can be argued that level of economic democracy is higher than political democracy in transition economies. Negative sign of government spending is a phenomenon related with the level of political democracy. Estimations related to the positive sign of democracy is related with relative highness of the level of economic democracy in comparison to political democracy. The estimations made by Emsen and Değer (2007) verify these results. In the mentioned study, political rights and civil liberties composing Freedom House Democracy Index are added to the model separately; it has been detected that while civil liberties variable makes a positive effect on growth, political rights variable makes a negative effect on it.

Table 4: The Effect of Democracy on Economic Growth in Transition Economies (Freedom House DemocracyIndex)

Dependent Variables	Panel OLS	Fixed Effects	Random Effects
Constant	0,3007 ^b (0,1190)	-0,4257 (0,7159)	0,3108 (0,1439)
Investment	0,0057 (0,0113)	0,0065 (0,0113)	0,0058 (0,0111)
Wealth	0,9094 ^a (0,0191)	0,9133 ^a (0,0193)	0,9106 ^a (0,0190)
Population ₁₅₋₆₄	0,0053 ^c (0,0029)	0,0647 (0,0432)	0,0045 ^c (0,0036)
Trade Openness	0,0149 ^c (0,0087)	-0,0022 (0,0126)	0,0114 ^c (0,0097)
Life Expectacy	-0,0032 ^b (0,0012)	-0,0079 ^b (0,0039)	-0,0034 ^b (0,0016)
School Enrollment	-6,9900 (0,0003)	-0,0008 (0,0008)	-0,0018 (0,0003)
Government Spending	0,0526 ^a (0,0165)	0,0512 ^a (0,0166)	0,0529 ^b (0,0164)
Democracy _{Freedom House}	0,0052 ^b (0,0024)	0,0018 (0,0054)	0,0044 ^b (0,0027)
Hausman X ²			8,1458
R ²	0,98	0,98	0,98
D-W Stat.	1,9540	2,1518	2,0014
F Stat.	524,0157 ^a	372,3985 ^a	529,4581 ^a
Observations	228	228	228

Note: a, b ve c show that coefficients are statistically significant at % 1, % 5 and % 10 levels respectively.

Reliability of the results listed above is tested by adding a new democracy variable to the model. Accordingly, the results reached with Polity IV Democracy variable are provided in Table 5. Estimation results are converging with the previous estimation results. The only difference is the fact that democracy variable is estimated as negative and insignificant. In other words, any relationship between democracy and growth has not been detected. From this angle, results existing on Table 5 do not verify the results in Table 4 without rejecting. It is assumed that such a difference stems from the use of diverse methods in the formation of these two indexes. Polity IV DemocracyIndex composes of codings related toCompetitiveness of ExecutiveRecruitment, Openness of ExecutiveRecruitment, Competitiveness of PoliticalParticipation andConstraints on theChiefExecutive (Başaret. al, 2009a:61; Marshall, 2010:15). In this sense, codings existing in the formation of Polity IV Index concentrate more on the measurement of “political democracy”. When Table 5 is reinterpreted with this approach, inability to estimate a significant relation between political democracy and growth is an anticipated result. Freedom House Democracy Index covers codings related with both political democracy and economic democracy. The results of estimations are in line with the result of Başar et.al, (2009b) which is the positive effect of demoracy on the revenue level.

Table 5: Effect of Democracy on Economic Growth in Transition Economies (Polity IV DemocracyIndex)

Dependent Variables	Panel OLS	Fixed Effects	Random Effects
Constant	0,3741 ^a (0,1086)	-0,4372 (0,7139)	0,3723 ^a (0,1326)
Investment	0,0060 (0,0113)	0,0067 (0,0113)	0,0059 (0,0111)
Wealth	0,9076 ^a (0,0192)	0,9127 ^a (0,0194)	0,9094 ^a (0,0190)
Population ¹⁵⁻⁶⁴	0,0057 ^c (0,0028)	0,0660 ^c (0,0430)	0,0048 (0,0036)
Trade Openness	0,0151 ^c (0,0087)	0,0014 (0,0126)	0,0110 (0,0098)
Life Expectacy	-0,0038 ^a (0,0013)	-0,0080 ^b (0,0039)	-0,0038 ^b (0,0015)
School Enrollment	-3,0500 (0,0003)	-0,0007 (0,0008)	-0,0002 (0,0004)
Government Spending	0,0538 ^a (0,0166)	0,0518 ^a (0,0167)	0,0539 ^a (0,0165)
Democracy ^{Polity IV}	-0,0015 (0,0010)	-0,0007 (0,0024)	-0,0013 (0,0012)
Hausman χ^2			9,3119
R ²	0,98	0,98	0,98
D-W Stat.	1,9474	2,1612	2,0036
F Stat.	518,0646 ^a	372,3659 ^a	526,1220 ^a
Observations	228	228	228

Note: a, b ve c show that coefficients are statistically significant at % 1, %5 and % 10 levels respectively.

This study aiming to examine the relationship between democracy and economic growth in transition economies found that positive developments in economic democracies effect growth positively. In other words, some developments observed in transition economies such as economic liberties, opens to outward, free market etc. affect growth positively. But, some other developments in political democracies namely political rights, election system, multi-party system, free press etc. does not have a detected influence on growth. It can be said that the relationship between democracy and growth in transition economies is in the form of reverse-U and having a positive slope as it is stressed in the study of Barro (1996a).

5. Conclusion and Evaluations

When the concepts of democracy and economic growth are examined theoretically, it has been detected that there have been many studies which are arguing for positive and/or negative nature of the relationship between democracy and economic growth. This is an open evidence showing the absence of a consensus on the matter. This leads to the question of whether the convergence process in democracy make a positive effect on growth and encourages empirical studies.

The effect on democracy on economic growth in case of transition economies was examined in this study. The concept of democracy was taken in the form of political democracy and economic democracy in the analyses and the results were interpreted accordingly. In this econometric analysis, it was conducted to measure the effect of democracy on growth by adding democratic variables to the classical growth model. The first analysis including Freedom House Democracy Index showed that democracy has a positive and significant effect on growth in transition economies.

The second analysis covering Polity IV Democracy Index, any significant relation between democracy and growth was not detected. Despite the contrast between these two results, codings basing on the indexes used are approving the validity of this situation. That is, while political democracy does not have a direct effect on growth in transition economies, its positive effects on the determinants of economic democracy can be seen as its positive effect on growth. Indirect effect of political democracy on the ongoing transition to market economy in such countries can not be denied. This result is very much in line with the results reached in the study conducted by Emsan et.al (2007).

Despite the negative effects of high inflation and decrease in production level emerged in the aftermath of the independence, macro-economic stability and economic and structural reforms have become a main determinants of growth. Simultaneous process of transition from autocracy to democracy has made also positive effect on the growth.

The assumption of positive government spending existing in both Freedom House Democracy Index and Polity IV Democracy Index is not an anticipated result. However, this can be seen as an evidence for the greater effect of economic democracy on growth in comparison to political democracy. At this point, one of the issues that must be considered is the indirect interaction among the variables. The effects of democracy on investments, government spending and trade liberalization will effect growth positively or negatively, but directly.

The results of the analyses show that not only internal dynamics, but also external dynamics should be mobilized simultaneously for growth in transition economies. That is to say, by considering the positive effect of opening to outward on growth, it is necessary to make structural reforms in this field and support policies aiming to enhance foreign trade. Positive developments in political and economic democracy are main determinants of mentioned reforms.

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