# Democratization and Economic Growth in Emerging Market Economies

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# Abstract

The globalization phenomenon has gained speed in various aspects especially since mid-1980s, this process in turn partially contributed to democratization of the many countries. This study researches the effect of democratization on economic growth in emerging markets over 2002-2015 period with panel cointegration test of Westerlund-Durbin-Hausman (2008) and panel causality test of Dumitrescu and Hurlin (2012). The results revealed a cointegrating relationship between economic growth and democratization, but the interaction between democratization and growth varies from country to country. However, no causality relationships were found between democratization and economic growth in the short run.

**Keywords:** Democratization, economic growth, panel data analysis

JEL Classification Codes: C33, E02, O43

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# Yükselen Piyasa Ekonomilerinde Demokratikleşme ve Ekonomik Büyüme

# Öz

Özellikle 1980>li yılların ortalarından itibaren küreselleşme olgusu çeşitli yönlerden hız kazanmış ve bu süreç birçok ülkenin demokratikleşmesine kısmen katkıda bulunmuştur. Bu çalışma Westerlund-Durbin-Hausman (2008) panel eşbütünleşme testi ile Dumitrescu ve Hurlin (2012) panel nedensellik testini kullanarak 2002-2015 döneminde yükselen piyasa ekonomilerinde, demokratikleşmenin ekonomik büyüme üzerindeki etkisini araştırmaktadır. Çalışma sonucunda ekonomik büyüme ile demokratikleşme arasında uzun dönemli bir ilişki olduğu belirlenmiş, ancak demokratikleşme ile büyüme arasındaki etkileşimin ülkeden ülkeye farklılık gösterdiği belirlenmiştir. Bununla birlikte, kısa dönemde demokratikleşme ile ekonomik büyüme arasında bir nedensellik ilişkisi olmadığı tespit edilmiştir.

Anahtar Kelimeler: Demokratikleşme, ekonomik büyüme, panel veri analizi

JEL Sınıflandırma Kodları: C33, E02, O43

# 1. Introduction

Different forms of government such as democracy, authoritarianism and totalitarianism have been existed in the world. However, countries have gone towards the democratic government especially since collapse of Communist Bloc in 1990s. Also different forms of democratic government such as direct democracy and representative democracy (or parliamentary system and presidential system) already have been in the world. The new growth theories have suggested that the institutions and government method as important components of economic growth (e.g., see North, 1990; Barro, 1989 and 1996; Acemoglu et al. 2005).

So democracy-growth nexus has received considerable attention during the recent years, but the interaction between democracy and economic performance has remained ambiguous.

Different countries with different government methods have achieved considerable economic performance (e.g., see cases of United States, Germany, Russia, China Hong Kong, Singapore, Taiwan etc.). There have been two main views about the interaction between democratization and economic arowth. One view asserts that an authoritarian government is prerequisite for the economic growth especially in the early stages of economic growth and development and support their views with the countries such as Singapore, Taiwan, and Hong Kong, earned abnormal rates of economic growth (e.g., see Tavares and Wacziarg, 2000; Abeyasinghe, 2004; Haggard and Tiede, 2010;Pozuelo et al., 2016). On the other side, some researchers support that a democracy with civil liberties encourages economic growth and development. This outcome in turn is encouraging in view of the democratization process not only in Eastern Europe but also in large parts of developing countries (Alesina and Perotti, 1996; Acemoglu et al., 2014; Baum and Lake, 2013).

Democracy as an administrative system enhances transparent society, rule of law, free choice and steady politics decreasing the fertility of corruption and marginal policies. At the same time democracy raises political participation by way of free elections at regular intervals, and suggests a certain extent political and civil rights which strengthens participation and competition and thus contributes to the economic and social development of the state (Mahmood et al., 2010). Furthermore, Bhagwati (1995), Rivera-Batiz (1999), and Rodrik (2000) suggested that the democracies provided higher quality growth by diverse channels such as enabling greater stability and predictability in the long term. However, the interaction between democracy and economic growth may exhibit a reverse Uform (Barro, 1996). In this context, in the early stages of the democratization, democratization can foster growth by limiting the public administration. But at the advanced levels of the democratization, democratization can have potential to limit the growth through causing large scale accommodations of redistribution of revenue and social support opportunities (Barro, 1996). Democratization also can affect the economic growth positively through raising the economic freedom (Piatek et al., 2013; Gurgul and Lach, 2011).

In this study, we investigated the democratization-growth nexus in 22 emerging markets, because emerging markets such as China, India, and South Korea have experienced significant growth rates in the recent years and also this sample of countries has had different levels of democratization. So our study will be an early study in the relevant literature researching the interplay between economic growth and democratization for this country group. In this regard, the interaction between democratization and economic growth is investigated in emerging marketsover 2002-2015 period with panel cointegration and causality tests. The coming section summarizes the relevant literature and Section 3 explainsthe dataset and method. Then Section 4 implements the empirical analysis and Section 5 is devoted to conclusion of the paper.

#### 2. Literature Review

The researchers have generally concentrated on the institutional determinants of economic growth with emergence of endogeneous growth theories. However, alimited number of researchers have investigated the interaction between democratization and economic growth in the relevant literature and theyhave reached several findings. Some researchersrevealed that democratization influenced the economic growth affirmatively (Alesina and Perotti, 1996; Acemoglu et al., 2014; Masaki and van de Walle, 2014; and Baum and Lake, 2013), whereas some reserachers discovered that democratization affected the economic growth adversely (Tavares and Wacziarg, 2001; Aisen and Veiga, 2013; Rachdi and Saidi, 2015; Pozuelo et al., 2016). In these studies, democratization has been represented by different indicators such as institutionalized autocracy and democracy score, executive recruitment competitiveness, democracy index of Freedom House, and voice and accountability index of World Bank (e.g., see Kaufmann, 2010; Rachdi and Saidi, 2015; Aisen and Veiga, 2013; Peev and Mueller, 2012).

In one of the first papers, Helliwell (1994) researched the interaction between democratization and growth in 125 countries

over 1960-1985 period and found a bilateral causality between democracy and economic growth. On the other side, Heo and Tan (2001) researched the causality between economic growth and democratization in developing economies over 1950-1982 period with Granger causality test and discovered a two-way causality between two variables. Krieckhaus (2006) also investigated the influence of democracy on economic performance in different regions of the world with regression analysis and revealed that democracy had a negative influence on the economic growth in Latin America and Asia, while democracy affected the growth positively in Africa.

In another study, Papaioannou and Siourounis (2008) researched the influence of democratization on the economic growth in 166 states over 1960-2003 period with dynamic panel regression analysis and revealed that democratization had a positive influence on the economic growth. Doucouliagos and Ulubaşoglu (2008) also analyzed 84 articles on democracy-growth nexus with a meta-regression analysis and revealed that democracy had no direct effects on the economic growth, but had positive indirect effects by the way of increasing human capital, economic freedom and decreasing inflation and political instability. Maimone et al. (2009) conducted a research about the influence of democratization on the economic growth in 66 countries over 1980-2003 period with simultaneous equations approach and discovered that democratization had significant influence on the economic growth.

Ray and Ray (2010) also conducted a research about the interaction between democracy and economic growth in India over 1980-2010 period by time series analysis and discovered that democracy affected the economic growth affirmatively and a two-way causality between two variables. On the other hand, Bilecen and Kibis (2012) made an analysis about the interaction between democracy and growth in Turkey over 1980-2010 period with Johansen co-integration test and reached that improvements in democratization influenced the growth affirmatively in the long term. Piątek et al. (2013) also investigated the interplay between

democratization and economic growth in 25 transition countries over 1990–2008 period by benefiting various economic freedom indicators with Granger causality test. They revealed that economic freedom affected economic growth affirmatively in transition countries. Sandalcılar (2013) also investigated the influence of political democracy on the economic growth in 12 transition states of Commonwealth of Independent States over 1992-2010 period and came to the conclusion that economic democracy affected the growth positively. Moreover, Patnaik (2013) investigated the interaction between maturity of democracy and economic growth in India and concluded that improvements in democracy had accelerated the performance of economic growth.

In another study, Masaki and van de Walle (2014) also analyzed the similar issue in 43 countries from sub-Saharan Africa for the years 1982-2012 and revealed that democracy affected the economic growth positively. Arfaoui et al. (2016) also researched the relationship between democracy and growth in Tunisia during 1980-2014 period employing autoregressive distributed lag model and reached no significant interactions between democracy and economic growth. Finally, Ma and Ouyang (2016) researched the interaction between democracy and economic growth during 1960-2010 with regression analysis. They discovered that the relationship between democracy and economic growth exhibited an asymmetrical form based on the democracy stock of the countries and democracy fosters the growth in the countries with a long democratic past.

# 3. Data and Method

In the study, democratization-growth nexus was analyzed in 22 emerging markets during 2002-2015period with the panel cointegration test of Westerlund-Durbin-Hausman (2008) and panel causality test of Dumitrescu and Hurlin (2012).

#### 3.1. Data

The dependent variable, economic growth, was substituted by real GDP growth rate in the study. On the other side, economic freedom index of Freedom House (2017) was used for democratization. Economic freedom index of Freedom House (2017) consists of civil liberties and political rights. In this regard, civil liberties includes 15 indicators including belief and expression freedom, associational and organizational rights, personal autonomy, individual rights and rule of law which each one gets a value between 0 and 4 points, thus score of political rights are between 0 and 60. On the other side, political rights includes 10 indicators under the headings of electoral process, political pluralism and participation, and functioning of government which each one gets a value between 0 and 40. Therefore score of economic freedom, sum of civil liberties and political rights, can be changed from 0 to 100 (Freedom House, 2017)

Table 1: Data description

Variables	Symbol	Data Source
GRW	GDP, PPP (constant 2011 international \$)	World Bank (2017)
DEM	Economic freedom index	Feedom House (2017)

EViews 9.0, Gauss 10.0 and Stata 14.0 statistical software programs were benefited for econometric analysis. The descriptive characteristics and the correlation matrix with level values were displayed in Table 2.A negative correlation between democratization (DEM) and economic growth (LGDP) was revealed as seen in Table 2.

Table 2:	Descriptive	statistics	and	correlation	matrix
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Variables	Obs	Mean	Std.Dev.	Min	Max
LGDP	308	11.90944	0.4661376	10.85397	13.26974
DEM	308	63.41234	24.89055	13	97
		LGDP			EF
LGDP 1.0000		0000			
DEM -0.2633		1.	.0000		

## 3.2. Econometric Methodology

First, cross-sectional dependence was tested with LM CD test of Pesaran (2004) and LM adjusted test of Pesaran et al. (2008), because cross-section dimension was found to be higher than time dimension (N=22>T=14).On the other hand, the homogeneity was tested with adjusted delta tilde test o fPesaran and Yamagata (2008) considering selection of further econometric tests.

In the second stage of econometric analysis, integration levels of the series were researched with panel CIPS unit root test of Pesaran (2007) regarding cross-sectional dependence. Then, Westerlund-Durbin-Hausman (2008) cointegration test was used to test the cointegrating relationship between the variables due to the existence of cross-sectional dependency. Lastly the causal interaction between the variables was investigated with Dumitrescu and Hurlin (2012) causality test.

## 4. Empirical Analysis

#### 4.1. Cross-sectional Dependence and Homogeneity Tests

The presence of cross-sectional dependence between the variables was tested with and LM CD test of Pesaran (2004) and LM adjusted test of Pesaran et al. (2008) because T=14 was lower than N=22 and the results were shown in Table 3. The results dictated us to reject the null hypothesis at 1% significance level. So a cross-sectional dependency between two series was revealed. Furthermore, the homogeneity was tested with adjusted delta tilde test of Pesaran and Yamagata (2008) and null hypothesis, there is homogeneity, was rejected at 1% significance level. So the cointegrating coefficients were heterogeneous.

Cross-sectional dependency tests					
Test Test Statistic p-value					
LM (Breusch and Pagan (1980))	931	0.0000			
LM adj*	63.44	0.0000			
LM CD*	20.41	0.0000			
Homogeneity tests					
Test Test Statistic p-value					
Delta_tilde	16.435	0.0000			
Delta_tilde_adj	18.375	0.0000			

#### Table 3: Results of cross-sectional dependence and homogeneity tests

\*two-sided test

#### 4.2. CIPS Panel Unit Root Test Results

The integration levels of the serieswere researched with Pesaran (2007) CIPS (Cross-sectionally augmented IPS (Im-Pesaran-Shin (2003)) unit root test and the test results were shown in Table 4. We concluded that DEM was I(0) and GRW was I(1).

Table 4: Panel unit root test results

Variables	Constant	Constant + Trend	
GRW	0.459 (0.677)	2.627 (0.996)	
d(GRW)	-11.534 (0.000)***	-9.813 (0.000)***	
DEM	-3.047 (0.001)***	-0.978 (0.164)	
d(DEM)	-16.035 (0.000)***	-14.775 (0.000)***	

\*\*\* significance at 1% level

## 4.3. Westerlund-Durbin-Hausman (2008) Panel Cointegration Test

We benefited from the panel cointegration test of Westerlund-Durbin Hausman (2008) to see the existence of the cointegrating relationship between two variables and the results were shown in Table 5. The Durbin-Hausman group statistic was taken in consideration due to the results of cross-sectional dependence and adjusted delta tilde tests. So the null hypothesis, there is no cointegrating relationship, was rejected at 1% significance level and there was a cointegrating relationship between two variables.

# Table 5: Results of Westerlund-Durbin-Hausman (2008) cointegrating test

	Test statistic	P value
Durbin-Hausman Group Statistic	3.387	0.000
Durbin-Hausman Panel Statistic	0.885	0.188

# 4.4. Estimation of Cointegrating Coefficients

The long-term coefficients were estimated with AMG estimator regarding cross-sectional dependence and heterogeneity and the test results were shown in Table 6. The results showed that democracy affected economic growth affirmatively in Greece, Hungary, India, Mexico, Qatar, Russia, South Africa, Thailand, while democracy had negative influence on the growth in Brazil, Chile, Czech Republic, Peru, Poland, and South Korea.

C	DEM			
Country	Long-term Coefficients	P value		
Brazil	-0.0058758***	0.000		
Chile	-0.0029262***	0.000		
China	0.0289527	0.164		
Colombia	0.0001552	0.860		
Czech Republic	-0.0064329"	0.041		
Egypt	-0.0001149	0.865		
Greece	0.0259261***	0.007		
Hungary	0.0103429***	0.003		
India	0.0231858***	0.000		
Indonesia	0.0007865	0.766		
Malaysia	-0.0017588	0.194		
Mexico	0.0062912	0.000		

Table (	6:	Long-term	cointegrating	coefficients
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	DEM			
Country	Long-term Coefficients	P value		
Peru	-0.019707***	0.000		
Philippines	-0.0001404	0.883		
Poland	-0.004599***	0.000		
Qatar	0.0482166***	0.000		
Russia	0.0026829***	0.002		
South Africa	0.0082002	0.000		
South Korea	-0.0045094°	0.095		
Thailand	0.0008047***	0.000		
Turkey	0.0005899	0.443		
United Arab Emirates	-0.0004724	0.799		
Panel	0.0049817	0.113		

\*\*\*,\*\*, \*: significance at 1,5 and 10 % level

In this context, the democratization affected the economic growth negatively especially Latin American countries in the sample except Mexico and this finding was consistent with the empirical literature (e.g. Krieckhaus, 2006) about democratization and growth for Latin American region. On the other hand, democratization affected the economic growth positively in two leading emerging markets Russia and India. Furthermore, no significant relationships were seen in China, Egypt, Colombia, Indonesia, Malaysia, Philippines, Turkey, and United Arab Emirates in the light of estimations results.

#### 4.5. Dumitrescu and Hurlin (2012) Causality Test Coefficients

The causal interplay between economic growth and democracy was explored by panel causality test of Dumitrescu and Hurlin (2012) and the test results were shown in Table 7. The test results revealed no significant causal interaction between two variables.

Lags: 1					
Null Hypothesis:	W-Stat.	Zbar-Stat.	Prob.		
EF →DLGDP	1.41814	0.27007	0.7871		
DLGDP →EF	1.13359	-0.31023	0.7564		
Lags: 2					
Null Hypothesis: W-Stat. Zbar-Stat. Prob.					
EF →DLGDP	2.47700	-0.47210	0.6369		
DLGDP →EF	2.49049	-0.45992	0.6456		

#### Table 7: Dumitrescu and Hurlin (2012) causality test results

#### 5. Concluding Remarks

The world has experienced considerable social and economic developments as of 1970s. In this context, globalization process accelerated, global production and trade increased substantially, Iron Curtain collapsed and many countries democratized aradually. In the paper, the interaction between democracy and economic growth was researched for the sample of emerging markets over the 2002-2015 period in the short and long term. First, panel cointegration test of Westerlund-Durbin-Hausman (2008) was applied and the the results revealed a cointegrating relationship between two variables. However, individual cointegrating coefficients revealed that democracy influenced the economic growth affirmatively in Greece, Hungary, India, Mexico, Qatar, Russia, South Africa, Thailand, while democracy affected the economic growth negatively in Brazil, Chile, Czech Republic, Peru, Poland, and South Korea. Finally, the causality between economic growth and democracy was tested with panel causality test of Dumitrescu and Hurlin (2012), but no significant causal interactions were seen between two variables as a result of the causality test.

Our findings revealed that democracy had no effects on the economic growth in the short run, but democracy can affect the economic growth only after a reaching certain threshold level of democracy. On the other side, democracy had different effects on the economic growth in the long term depending on the country specific factors such as institutional, educational and infrastructural properties of the countries.

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