NIC ÜLKELERİNDE POLİTİK İSTİKRAR VE EKONOMİK BÜYÜME İLİŞKİSİ

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Özet


Anahtar kelimeler: Büyüme, Bootstrap Nedensellik, Politik İstikrar


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THE RELATIONSHIP BETWEEN POLITICAL STABILITY AND ECONOMIC GROWTH IN NIC COUNTRIES

Abstract

Political Stability is highly important for developing countries experiencing growth, political fluctuation intensively and not completing their democratization process yet. It is difficult to measure political stability or instability. But the index of Political Stability and Absence of Violence/Terrorism published by the World Bank is a very strong index that brings together many components. This paper studies the relationship between political stability and economic growth using Konya (2006) bootstrap panel causality analysis for Newly Industrialized Countries (NIC). Analysis results show one-way causality from economic growth to political stability in case of Indonesia and Turkey.

Keywords: Growth, Bootstrap Causality, Political Stability
INTRODUCTION

Literature has many theoretical and empirical studies on the matter since growth is one of the most important macroeconomic indicators in respect to countries’ economies. Particularly, with having internal growth models in literature, it has been revealed that in addition to variable such as production, investment, technological developments, such as social, political, cultural and corporate etc. have started to play or may play effective roles on growth in this respect. In fact it is highly difficult to explain a variable containing several different concepts such as economic growth merely by means of factors assumed as external ones such as production, investment, population increase etc. as suggested by Neo-Classical and Keynesian growth theories.

In this context, the relationship between political stability or instability and growth is seen as considerably effective variable used for explaining the differences such as growth and income distribution between countries. Rostow (1990) suggests that political stability and strong regime is the prerequisite for growth, and political instability brings constant decrease in savings (Baklouti and Boujelbene, 2018:249). Paolera and Taylor (2003) point out the importance of political stability with reference to Argentina stating that it was put into developing countries category in 2000 while it was in developed countries category in 1900 just because of political factors (Campos and Karanasos, 2008:135).

Literature has several descriptions for political stability or instability. Lipset (1960) highlights consistency of government when defining political stability. According to Lipset’s definition, government’s being dictatorship on democracy is not important at all. Not type but consistency of government is significant. In addition to consistency of Lipset’s definition, Sanders emphasizes legacy and efficacy in consistency of democratic system, and states that government changes resulting from incidents such as military coups and strikes increase instability (Sanders, 1981:51). Alesina and Perotti (1996) categorize and define political instability as slope, social restlessness and political violence expected in constitutional or non-constitutional government changes (Alesina and Perotti, 1996:1206). In light of all above definitions, for any reasons whatsoever, change of government in power is assumed as one of the main reasons for political instability.

Besides to what we have mentioned above, regime or government changes or both together are used as representative of the political instability in most of studies on the subject matter. It is because democratic regimes have strong organizational structure. However, most of underdeveloped and developing countries have yet to complete democratization process or are not governed by democratic regime. For that reason, current political stability cases should be assessed for a
proper measurement rather than regime or government changes of the countries (Yalçınkaya and Kaya, 2017:278-279).

Thus no matter how a country is governed, political stability can be measured. Therefore, in this study Political Stability and Absence of Violence/Terrorism index is used. After political stability and economic growth are studied conceptually, the causality analysis for relationship between them is analyzed empirically. While literature suggests that there is an indirect and direct strong and positive relationship between political stability and growth (the relationship between political instability and growth is negative), there is no agreement on direction of the relationship.

1. POLITICAL STABILITY AND ABSENCE OF VIOLENCE/ TERRORISM INDEX

Political Stability and Absence of Violence/Terrorism Index published by the World Bank is one of the six indexes of World governance indicators. This index reflects the perceptions developed against probability of collapse of current government through political supported or in general, violence, terror or anti-constitutional ways. The index takes values from 0 to 1000 and 0 represents instability while 100 is the top stability rate. Political Stability and Absence of Violence/ Terrorism index values of NIC countries for 2016 and 2017 are given in Figure 1.

![Figure 1: Political Stability and Absence of Violence/Terror index in NIC countries (2016-2017)](http://info.worldbank.org/governance/wgi/#home)
When Figure 1 is considered, the country having the highest index according to Political Stability and Absence of Violence/Terrorism index is Malaysia. Turkey is the last one among 10 countries according to Political Stability and Absence of Violence/Terrorism index. What making governments of countries like Turkey, Philippines and India unstable is violence and terror incidents and because of this such countries are in the last ranks. For instance, coup attempt experienced in Turkey in 2016 was a terrorist action causing death of many people and aiming at defaming and collapsing existing and legal government. The effects of such case continued in 2017 and still continue.

2. THEORETICAL FRAMEWORK AND SELECTED LITERATURE

The relationship between political stability and economic growth may affect one another from various channels. One of them is unfair income distribution and less investments and thus decline in economic growth caused by political instability (Allesina and Perotti, 1996:1203; Barro, 1991:410; Levine and Renelt, 1992:943; Persson and Tabellini, 1994). On the contrary, political stability and fair income distribution affect saving affirmatively (Venieris and Gupta, 1988:874). Political instability is accompanied by ambiguity in markets. Ambiguity negatively affects investors’ investment decisions and reduces economic growth (Leahy and Whitcd, 1996:64). This ambiguity atmosphere causes escape of foreign investors investing in the financial markets (Lensink et al., 2000:74). Foreign capital refers to portfolio investments. The relationship between direct foreign investments and political instability seems uncertain. (Vita and Lawler, 2004:26). Another channel where political instability affects economic growth is negative effect on economic growth by populist policies other than monetary and financial policy purposes (Carmignani, 2003:10). Literature of the subject generally emphasizes that political stability or instability affects economic growth. However, many empirical studies show that the opposite case is also true. The decrease in growth figures reduces the chance of current government before election to come to power again. Furthermore, low growth figures cause social unrest while social incidents increase probability of terrorism, violence and coup. This case is the evidence proving that low growth rates cause political instability (Allesina et al., 1996:191).

As seen, although the literature has many theoretical and empirical studies on political instability and economic growth, in general ways of measuring political stability or instability vary. Şanlısoy and Kök (2010), Arslan (2011), Gür
and Akbulut (2012), Tang and Abosedra (2014), Kalay and Çetin (2016), Uddin et al. (2017), Yalcinkaya and Kaya (2017), Kartal and Öztürk (2017), Baklouti and Boujelbene (2018) have used Political Stability and Absence of Violence/Terror index in their studies and found out that there is a significant relationship between political stability or instability and economic growth.

Table 1: Summary of Literature

<table>
<thead>
<tr>
<th>Author(s)</th>
<th>Country-Periods</th>
<th>Econometric Methods</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alesina et al. (1996)</td>
<td>113 countries 1950-1982 1960-1982</td>
<td>Panel OLS</td>
<td>In all models established with three different dependent variables, they stated that the variables taken as representative of political instability decreased economic growth. In addition, they discovered that in case of military coup, it increases likelihood of collapse of existing government.</td>
</tr>
<tr>
<td>Feng (1996)</td>
<td>96 countries 1960 - 1980</td>
<td>Panel data three stage least square estimation</td>
<td>They suggest that democracy has positive and indirect effect on growth regarding both government and regime changes and political changes have negative effects on economic growth.</td>
</tr>
<tr>
<td>Asteriou and Price (2001)</td>
<td>United Kingdom 1961-1997</td>
<td>OLS and GARCH</td>
<td>They concluded that the variables taken as representative of political instability have negative effect on growth.</td>
</tr>
<tr>
<td>Campos and Nugent (2002)</td>
<td>98 Countries 1960-1995</td>
<td>Granger causality</td>
<td>No causality relationship has been found.</td>
</tr>
<tr>
<td>Telatar (2003)</td>
<td>Turkey 1986-2001</td>
<td>Granger causality</td>
<td>One way causality relationship towards interest rate different taken representing political instability from economic growth and nominal foreign currency increase has been found.</td>
</tr>
<tr>
<td>Campos and Karanasos (2008)</td>
<td>Argentina 1986-2000</td>
<td>PARCH (power ARCH model)</td>
<td>It has been concluded that while informal political instability has a direct negative effect on economic growth, formal political instability has an indirect negative effect.</td>
</tr>
<tr>
<td>Pin (2009)</td>
<td>119 countries 1974- 2003 1984-2003</td>
<td>Factor analysis and GMM</td>
<td>It is revealed that politic instability has negative effect on economic growth.</td>
</tr>
<tr>
<td>Şanlisoy and Kük (2010)</td>
<td>Turkey 1987Q1-2006Q4</td>
<td>Gregory-Hansen cointegration</td>
<td>It discovered that there is a negative relation between politic instability and growth.</td>
</tr>
<tr>
<td>Demirgil (2011)</td>
<td>Turkey 1970-2006</td>
<td>GARCH and EGARCH methods</td>
<td>It concluded that there is a negative relation between political instability and growth for Turkey.</td>
</tr>
<tr>
<td>Author(s)</td>
<td>Country/Country Groups</td>
<td>Period/Time Period</td>
<td>Methodology</td>
</tr>
<tr>
<td>-------------------------</td>
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</tr>
<tr>
<td>Arslan (2011)</td>
<td>Turkey</td>
<td>1987-2007</td>
<td>Johansen and Juselius (1990) cointegration and error correction model</td>
</tr>
<tr>
<td>Gür and Akbulut (2012)</td>
<td>19 developing countries 1986-2003</td>
<td>Panel OLS</td>
<td></td>
</tr>
<tr>
<td>Aisen and Veiga (2013)</td>
<td>1960-2004 5 years period</td>
<td>GMM</td>
<td></td>
</tr>
<tr>
<td>Gurgul and Lach (2013)</td>
<td>10 CCE Countries 1990-2009</td>
<td>Panel AGLS and OLS</td>
<td></td>
</tr>
<tr>
<td>Tang and Aboseda (2014)</td>
<td>24 MENA Countries 2001-2009</td>
<td>Panel OLS and GMM</td>
<td></td>
</tr>
<tr>
<td>Parlakyıldız (2015)</td>
<td>1999-2013 25 Latin America Country</td>
<td>Panel data analysis</td>
<td></td>
</tr>
<tr>
<td>Tabassam et al. (2016)</td>
<td>Pakistan 1994-2016</td>
<td>ARCH-GARCH time series analysis</td>
<td></td>
</tr>
<tr>
<td>Kalay and Çetin (2016)</td>
<td>2010-2011 54 African countries</td>
<td>Granger causality</td>
<td></td>
</tr>
<tr>
<td>Uddin et al. (2017)</td>
<td>55 OIC countries, total 120 developing countries 1996-2014</td>
<td>GMM and quantile regression analysis</td>
<td></td>
</tr>
<tr>
<td>Yağcı and Kaya (2017)</td>
<td>G-8 and G-12 countries 1996-2015</td>
<td>Kao panel cointegration, Fisher panel causality</td>
<td></td>
</tr>
</tbody>
</table>
Studies in the literature show that in general there is a negative and indirect relationship between political instability and economic growth. Although showing difference in the studies on direction of the relationship, it is emphasized that political stability is key actor of growing in underdeveloped and developing countries. Moreover, it is expressed that political instability affects human capital, ambiguity for future and investment channels and economic growth in developing countries.

3. ECONOMETRIC METHOD AND FINDINGS

In this study, data of 2002-2017 period are used and relationship between political stability and growth in Newly Industrialized Countries (Brazil, China, Indonesia, India, Malaysia, Mexico, Philippines, Turkey, Thailand and South Africa) is studied. Political Stability and Absence of Violence/Terrorism Index and real GDP data are used. The causality relationship between variables is examined by bootstrap causality test proposed by Konya (2006). Data used in analysis we obtained from World Bank (http://data.worldbank.org) database. Real GDP series was expressed in logarithms.

3.1. Cross-sectional Dependence and Heterogeneity Tests

In order to test causality relationship between variables in panel data, firstly, probable cross-sectional dependence between panel members and slope heterogeneity should be investigated. If there is cross-sectional dependence, when estimating panel data causality, using Seemingly Unrelated Regressions (SUR) approach will be more effective than Ordinary Least Squares (OLS). In addition to this, Pesaran (2006) expressed that substantial biases and size distortions will take place when cross-sectional dependency presences and is ignored. On the other hand, assuming that panel data has the property of homogeneity, heterogeneity among countries indicating country-specific features will not be caught (Hsueh et al., 2013 :296; Breitung, 2005: 151). For that reason, this study firstly studies...
whether or not there is cross-sectional dependence between countries and slope heterogeneity.

The rationale behind taking cross-sectional dependence into consideration is the fact that a shock influencing one country may also influence other countries because of high level of globalization as well as of international trade and financial integration (Kar et al. 2011: 688). Presence of cross-sectional dependence between series can be studied by use of Berusch-Pagan (1980) LM test (CD_{BP}) or Pesaran (2004) CD test. CD_{BP} test is used when time dimension is large and cross sectional dimension is small and Pesaran CD test can be used when cross sectional dimension is large and time dimension is small. However, Pesaran CD test will have less power when the population average pair-wise correlations are zero. Pesaran et al. (2008) proposed a bias-adjusted test that is a modified version of the CD_{BP} test () by using the exact mean and variance of the LM test statistics.

The bias-adjusted LM statistics is calculated as follows:

$$LM_{adj} = \left( \frac{2}{N(N-1)} \right)^{1/2} \left( \sum_{i=1}^{N-1} \sum_{j=i+1}^{N} \bar{\rho}_{ij} \left( T - k \right) \rho_{ij}^{2} - \mu_{Tij} \right) / v_{Tij}$$

where $\mu_{Tij}$ and $v_{Tij}$ are the exact mean and variance of $(T - k) \rho_{ij}^{2}$, respectively.

Another important point is the heterogeneity in parameters estimated for each panel. Swamy (1970) suggested following slope homogeneity test given below to test heterogeneity among countries.

$$\tilde{S} = \sum_{i=1}^{N} \left( \beta_{i} - \beta_{WFE} \right) \frac{M_{T} x_{i}'}{\tilde{\sigma}_{i}^{2}} \left( \tilde{\beta}_{i} - \beta_{WFE} \right)$$

where $\tilde{\beta}_{i}$ is pooled OLS estimator, $\beta_{WFE}$ is weighed fixed effect pooled estimator, $M_{T}$ is identity matrix and $\tilde{\sigma}_{i}^{2}$ is estimator of $\tilde{\sigma}_{i}^{2}$. Pesaran and Yamagata (2008) proposed following standardized dispersion statistics:

$$\tilde{\Delta} = \sqrt{N} \left( \frac{N^{-1} \tilde{S} - k}{\sqrt{2k}} \right)$$

The small sample properties of the $\tilde{\Delta}$ test can be enhanced under normally distributed errors by using the following mean and variance bias adjusted version:
\[
\hat{\Delta}_{\text{adj}} = \sqrt{N \left( \frac{N^{-1} \bar{S} - E(\bar{Z}_t)}{\sqrt{\text{var}(\bar{Z}_t)}} \right)}
\]  

(4)

where \( E(\bar{Z}_t) = k \), \( \text{var}(\bar{Z}_t) = 2k(T - k - 1)/(T + 1) \) Cross-sectional dependence and heterogeneity test results are given in Table 2.

**Table 2: Cross-sectional Dependence and Heterogeneity Test Results**

<table>
<thead>
<tr>
<th>Methods</th>
<th>Test Statistics</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Cross-sectional Dependence</td>
<td></td>
</tr>
<tr>
<td>( CD_{BP}(1980) )</td>
<td>718.30*</td>
<td>0.000</td>
</tr>
<tr>
<td>Pearson CD (2004)</td>
<td>26.80*</td>
<td>0.000</td>
</tr>
<tr>
<td>( LM_{adj}(2008) )</td>
<td>25.47*</td>
<td>0.000</td>
</tr>
<tr>
<td></td>
<td>Heterogeneity</td>
<td></td>
</tr>
<tr>
<td>Swamy</td>
<td>10.14**</td>
<td>0.038</td>
</tr>
<tr>
<td>( \Delta )</td>
<td>8.46*</td>
<td>0.000</td>
</tr>
<tr>
<td>( \hat{\Delta}_{\text{adj}} )</td>
<td>9.32*</td>
<td>0.000</td>
</tr>
</tbody>
</table>

Note: *, ** and *** represents significance at , and , respectively.

When Table 2 is examined it is seen that the null of no cross-sectional dependence across the panels members is rejected in each of three tests (\( CD_{BP} \), Pesaran CD and \( LM_{adj} \)) and it is concluded that it has cross-sectional dependence. The results indicate that a shock occurs in one of NIC countries, it will then influence the other countries. In addition, use of SUR method is suitable rather than country-by-country OLS estimation. Null hypothesis indicating homogeneity are rejected in each of three tests (Swamy, and ) and it is concluded that slope coefficients are heterogeneous.

### 3.2. Bootstrap Panel Causality Test

Panel bootstrap causality test proposed by Konya (2006) is based on Wald tests with the country specific bootstrap critical values and Seemingly Unrelated Regression (SUR) models. This approach provides two important advantages. Firstly, bootstrap causality test does not require joint hypothesis for panel members, and secondly, the test does not require pretesting (unit root or cointegration) other than determining lag structure (Konya, 2006: 990).

The equation to be used for panel bootstrap causality test is as follows;
where $N$ represents number of the members of panel ($i = 1, \ldots, N$), $t$ is time period ($t = 1, \ldots, T$), $l$ is the lag length. To test Granger causality in the system, alternative causality relationships are likely to be found for country $j$: For instance, when equations (5) and (6) are examined, if not all $\delta_{1,j,1}$ are zero but all $\beta_{2,j,1}$ are zero, there is one-way Granger causality from $X$ to $Y$. If all $\delta_{1,j,1}$ are zero but not all $\beta_{2,j,1}$ are zero, there is one way Granger causality from $Y$ to $X$. If neither $\delta_{1,j,1}$ nor $\beta_{2,j,1}$ are zero, there is two way Granger causality between $X$ and $Y$. If all $\delta_{1,j,1}$ and $\beta_{2,j,1}$ are zero, there is no Granger causality between $X$ and $Y$ (Kar et al., 2011: 689; Menyah et al., 2014: 392). Panel bootstrap causality test results are given in Table 3

**Table 3: Bootstrap Panel Causality Test Results**

<table>
<thead>
<tr>
<th>Countries</th>
<th>$H_0$: Political Stability does not cause Growth</th>
<th>$H_0$: Growth does not cause Political Stability</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Wald Statistics</td>
<td>$p$-values</td>
</tr>
<tr>
<td>Brazil</td>
<td>0,069</td>
<td>0,925</td>
</tr>
<tr>
<td>China</td>
<td>29,928</td>
<td>0,304</td>
</tr>
<tr>
<td>Indonesia</td>
<td>3,570</td>
<td>0,553</td>
</tr>
<tr>
<td>India</td>
<td>0,024</td>
<td>0,945</td>
</tr>
</tbody>
</table>
Table 3 are reveals a one-way causality from growth to political stability in Indonesia and Turkey. The null hypothesis implying that political stability does not cause growth is not rejected for all NIC countries. In other words, political stability does not cause growth for NIC countries. The low growth is thought to increase the possibility of government change, social events, violence, terror and coup (Allesina et al. 1996:191). Causality relationship found to be from economic growth to political stability for Turkey supports the Aslan (2011) and Telatar (2003)’s findings.

CONCLUSION

Political stability/instability–economic growth relationship is a subject finding considerably broad area of study in literature in various sizes after particularly internal growth theories. General theoretical and empirical literature states that there is a strong direct and indirect relationship between political stability/instability and growth. Direction of the relationship is subject to empirical results and may vary.

This study analyses causality relationship between political stability and growth for NIC countries using bootstrap causality test developed by Konya (2006). The findings obtained in the study suggest that there is causality from growth to political stability for Indonesia and Turkey. In addition, no causality relationship from political stability to growth has been obtained for NIC countries.

Government change, social events, violence-terrorism events, regime changes and coups are important variables explaining political instability in literature. The low growth is thought to increase the possibility of government change, social events, violence, terror and coup for Indonesia and Turkey. Less developed and developing economies in which capital accumulation is inadequate have to increase domestic and foreign investments in order to achieve the targeted growth figures. Having a stable political structure is highly important for it.
REFERENCES


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