Relationship Between Political Instability & Growth In Some Selected Mena Countries

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Abstract

The presence of a relationship between political instability and economic growth are hotly debated issues in the sphere of political economy. In this study, the purpose is to make an analysis, in the field of political economy, regarding the effect of political variables on the growth in case of MENA (Algeria, Egypt, Iran, Jordan, Lebanon, Morocco and Tunisia) countries. The reason why these seven countries were chosen is their demographic, cultural and economic proximity. To find evidence and proof for the study's hypothesis, range political and economic variables were employed. The study aims to find the high degree relationship between political instability and economic growth by using Least Square Dummy Variable estimation for linear dynamic panel data model on a sample covering up to seven MENA countries for the years starting from 1990 to 2012.

Keywords: *Economic Growth; MENA Countries; Political Instability*

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INTRODUCTION

One of the most important contributions to growth theory has been made by Solow. The core of this theory consists of neoclassical production function (Solow, 1956). According to Solow (1956) theory, the steady-state level of income can be determined by population and saving rate. This theory has been augmented by adding accumulation of human capital by Mankiw and et al. (1992). But then the question of whether economic growth can be explained by other variables than saving, investment and population has begun to be asked. Do political factors explain economic growth? Which political indicators have effect on economic growth? Since the beginning of 1990 this question has been the topic of ongoing studies. In beginning of this period, economists began to add political variables onto economic growth models for a better explanatory power of growth models.

Political Instability is the most important political variable of the created models in this study. The reason of this is that the findings of previous studies suggest that political instability and economic growth are extremely interrelated. The first section reviews the previous literature on the determinant of growth. It analyzes the seven MENA countries which are Algeria, Egypt, Iran, Jordan, Lebanon, Morocco and Tunisia from 1990 to 2012. The following section gives a description of the data and introduces all variables. Third section presents all models and empirical results and the final section concludes this study.

1. LITERATURE REVIEW

What are the determinants of growth? There are so many studies that are done by economists from past to present in order to answer this question. Aisen and Veiga (2010) measured the effect of political instability on economic growth by using GMM estimation. To test the power of political variables on economic growth, Aisen and Veiga (2010) has specified GDP per capita as a dependent variable and employed cabinet chancing,

trade openness, investment, population growth as explanatory variables. According to Aisen and Veiga's (2010) work, political instability has a negative effect on GDP per capita growth and also high politically instable climate leads to reduce output growth by low level of productivity and physical-human capital accumulation.

Another important study of Alesina and et al. (1996) has measured the connection between the political instability (government collapse) and the economic performances. The growth rates of politically unstable countries are significantly lower than other countries in accordance with empirical results (Alesina and et al., 1996).

The work of Alesina and Perotti (1993), *Income Distribution, Political Instability, and Investment,* is about political economy. The main hypothesis of the study is that investors postpone their investments under unstable political conditions. Lower levels of investment impair the income distribution, which then leads to deterioration in income distribution and fuels social discontent (Alesina and Perotti, 1993).

Barro (2003) has also measured the relationship among the growth rate of real per capita GDP and some policy variables like government consumption, macroeconomic stability, rule of law and democracy of 71 economies for the years 1967-75, 1975-85 and 1985-95. The findings show that any development in rule of law would raise the growth rate and democracy also stimulates it (Barro, 2003).

Acemoglu (2005) has argued the importance of constitutional structure on economic growth. Constitutional structure of a country affects the policy and economic decisions of different forms of government and electoral rules (Acemoglu, 2005). By using IV estimation, Acemoglu has reached

the result of presidential and parliamentary system do not provide strong explanatory angle on government spending (Acemoglu, 2005). Majoritarian regimes do not also have a strong effect on productivity, political rents and corruption (Acemoglu, 2005). In parliamentary systems, governments spend for public more than presidential system.

Dogan (2005) has emphasized supportive effect of democracy on economic development in the study of *Democracy and Economic Development*. In his work economic development is explained based upon democracy by using the channels of political stability, quality of government, human capital, income distribution and openness to trade (Dogan, 2005). Democratic regimes lead to better economic performance compared with autocratic regimes.

In the study of Hur and Akbulut (2012), the presence of politically stable climate and its effect on economic performance has been analyzed using panel data analysis. It was found that political stability is closely and positively related with economic growth in Asian countries (Hur and Akbulut, 2003).

2. DATA, METHODOLOGY and EMPRICAL FINDINGS

In this study, the variables are as follows: growth (% annual) is dependent variable; these data series have been taken from World Bank. It represents annual percentage growth rate of GDP at market prices based on constant local currency[2].

2.1. DATA

The variable ***grpop*** shows the population in thousands; the interval for panel data time series is 1990-2012. The resource of this variable is the Penn World Table. Another explanatory variable which is critical for this study is ***regmtype***. It represents the regime type in the country. The resource

[2]*The definition has been taken from World Bank.*

is Hadenius, Teorell & Wahman and Authoritarian Regimes Data Set. This typology of authoritarian regimes is based on a distinction between three modes of political power maintenance: hereditary succession, corresponding to monarchies; the actual or threatened use of military force, corresponding to military regimes; and popular elections, designating electoral regimes. Among the latter there is a difference between no-party regimes (where all parties are prohibited), one-party regimes (where all but one party is prohibited), and limited multiparty regimes a subtype of these regimes where no parties are present, although not being prohibited, are coded as "party-less" regimes. A subtype of military regimes is coded as "rebel regimes" where a rebel movement has taken power by military means. There is also a code hybrid combining elements from more than one regime type. (1) Limited Multiparty (2) Party-less (3) No-Party (4) Military (5) Military No-Party (6) Military Multiparty (7) Military One-party (8) One-Party (9) Other (16) One-Party Monarchy (17) Monarchy (18) Rebel Regime (19) Civil War (20) Occupation (21) Theocracy (22) Transitional Regime (23) No-Party Monarchy (24) Multiparty Monarchy (25) Multiparty Occupied (100) Democracy (Alesina and Perotti, 1992). This variable goes from 1990 to 2010.

Another crucial explanatory variable which criticizes the relationship between political instability and economic growth is ***qog***. This variable is an indicator of the quality of the government. This component can be purchased from the International Country Risk Guide. ICRG collects political information and financial and economic data, converting these into risk points. The mean value of the ICRG variables are "Corruption", "Law and Order" and "Bureaucracy Quality", which are scaled 0-1. Higher values indicate higher quality of government.

The first component is Corruption (originally 6 points); this is an assessment of corruption within a political system. Such a corruption is a threat to foreign investment for several reasons: it distorts the economic and financial environment; it reduces the efficiency of government and business by enabling people to assume positions of power through patronage rather than ability and it introduces an inherent instability into the political process (Ben, 2014). Such a corruption can make it difficult to conduct business effectively, and in some cases may force the withdrawal or withholding of an investment (Ismihan and et al., 2005). The greatest risk in such a corruption is that at some time, it becomes highly overweening or some major scandal may be suddenly revealed, so as to provoke a popular backlash resulting in a fall or overthrow of the government, a major reorganizing or restructuring of the country's political institutions or at worst, a breakdown in law and order, rendering the country ungovernable (Arslan, 2011).

The second component is Law and Order (originally 6 points). Law and Order are assessed separately, with each sub-component comprising zero to three points. The Law sub-component is an assessment of the strength and impartiality of the legal system while the Order sub-component is an assessment of popular observance of the law. Thus, a country can enjoy a high rating in terms of its judicial system, but a low rating if it suffers from a very high crime rate or if the law is routinely ignored without effective sanction (for example, widespread illegal strikes).

The last component is Bureaucracy Quality (originally 4 points). The institutional strength and quality of the bureaucracy is another shock absorber that tends to minimize revisions of policy when governments change. Therefore, high points are given to countries where the bureaucracy has the strength and expertise to govern without drastic changes in policy or interruptions in government services. In these low-risk countries, the bureaucracy tends to be somewhat autonomous from political pressure and to have an established mechanism for recruitment and training. The variable of Bureaucracy goes from 1990 to 2012.

The last variable of analysis is ***openness*** which represents openness to trade and shows the current prices of countries. The ratio is obtained by dividing real GDP per capita of export and import. It goes from 1990 to 2012 received from the Penn World Table. And the last variable ***laggdpgrowth*** which measures the effect of lag GDP growth.

2.2. METHODOLOGY AND EMPIRICAL FINDINGS

The model which measures the relationship between political instability and economic growth in selected MENA countries, is as follows;

(1) $$gdpgrowth = \alpha + \beta_1 grpop + \beta_2 openess + \beta_3 regmtype + \beta_4 qog + \beta_5 laggdpgrwth + u$$

Dependent variable is GDP growth and explanatory variables are population growth, openness to trade, regime type, quality of government and the effect of lag of GDP growth. The model is a dynamic model because the lag of dependent variable is explanatory variable. Least Square Dummy Variable (LSDV) is the method this study. The number of cross-sections in this study are seven and time intervals are twenty-two, this is why using LSDV was much more meaningful. Under the condition that T>N, LSDV method should be applied to do accurate econometric applications.

What is the LSDV method? This method is generally used for unbalanced dynamic small sample. Firstly, it should be highlighted that the Least Square Dummy Variable method is not consistent for large N and small T (Bruno, 2005). In contrast, this method can be applied for large T and small N.

For standard dynamic panel-data model, bias-corrected LSDV estimator was produced by Nickell in 1981 (Bruno, 2005). And then, Kiviet developed LSDV estimator in 1995, 1999 and 2003 respectively. In this study, which focuses on the relationship between Political Instability & Economic Growth, LSDV estimator will be used.

2.2.1. FIRST AND SECOND GENERATION TEST RESULTS

Below, Table 1 indicates first and second generation test results of the model. The dependent variable which is ***gdpgrowth,*** does not have a unit root in constant case, but in constant and trend case it has a unit root. Second generation test Pesaran shows non-stationary process for ***gdpgrowth*** in constant and constant & trend case at 5% significance level.

Table 1. *First Generation Unit Root Test Results*

		gdpgrowth	***openness***	***qog***	***Regym type***	***Population***	***laggdpgrowth***
LLC	Constnt	-3.20705* (0.0007)	-1.464* (0.017)	-4.49* (0.000)	-	22.8342 (1.000)	-3.98239* (0.000)
	Constnt & Trend	-1.02053 (0.153)	-2.204* (0.013)	-4.66* (0.000)	-	88.9588 (1.000)	-2.05982* (0.019)
Pesaran CIPS (p=1)	*Const*	-4.164	-1.424	-2.59	0.445	-	-3.830
	Const & Trend	-4.182	-2.066	-3.09	-0.170	-	-3.924

Notes: The null hypothesis of LLC assumes unit root. The numbers in brackets are the p-values for the tests. (*) denotes the rejection of null hypothesis of the null unit root at 5% significance level. For CIPS, the critical value in the case of constant is -2.22 and in the case of constant and trend is -2.82 at 5% significance level.

According to LLC results, ***openess*** does not have a unit root both in constant and constant & trend case. In addition to that, CIPS statistics of ***openess*** provide rejection of null hypothesis of Pesaran test at 5% significance level.

qog which represents quality of government LLC results are statistically significant at 1% level both constant and constant & trend. At the same time, CIPS statistics of ***qog*** is in rejection area. This means that ***qog*** does not have a unit root in both constant and constant & trend case at 5% significance level.

According to second generation unit root test result, ***regymtype*** does not contain unit root process in both constant and constant & trend case at 5% significance level. There are no second generation test results for ***openess*** because this variable represents growth of population. This variable is partly unbalanced and Pesaran test does not calculate any statistic for unbalanced series. But LLC test results of ***openess*** indicate that it has unit root at 5% significance level. The last variable is ***laggdpgrowth***; LLC test result shows it does not have a unit root in both constant and constant & trend case at 5% significance level. But CIPS statistics indicates that there is a unit root in both constant and constant & trend case at 5% significance level.

2.2.2. PANEL CO-INTEGRATION TEST

After detecting unit root, panel co-integration test should be applied to measure long-run relationship among variables. In this part, Pedroni Panel Co-integration Test is applied for finding out whether variables are co-integrated or not.

Table 2. *Panel Co-Integration Test Results*

dpgrowth = α+β1population+β2openess+β3regmtype+β4qog+β5laggdpgrwth+u				
Pedroni Panel Co-Integration Test Results				
(Within Dimension)				
	t-statistics	*Prob.*	*Weighted t-statistic*	*Prob.*
Panel v-statistic	0.555279	0.2894	-1.726267	0.9579
Panel rho-statistic	-1.634716**	0.0511	-0.302942	0.3810
Panel PP-statistic	-8.733858***	0.0000	-2.33852**	0.0097
Panel ADF-statistic	-8.026247***	0.0000	-2.33183**	0.0099
	t-statistics	*Prob.*		
Group rho-statistic	-0.317175	0.3756		
Group PP-statistic	-6.989957***	0.0000		
Group ADF-statistic	-5.904670***	0.0000		

Notes: The null hypothesis of Pedroni Panel Co-Integration assumes no co-integration. (***) denotes significance at 1% and (**) denotes significance at 5% level.

Table 2 indicates Pedroni Panel Cointegration results; there are eleven probability values and t-statistics in both within and between the dimensions. If the majority of statistics are significant, null hypothesis which assumes no co-integration can be rejected; if the majority of the statistics are not significant, the null hypothesis cannot be rejected. Seven statistics are statistically significant so the null hypothesis can be simply rejected. Namely, it can be inferred that there is evidence for co-integration among GDP growth and regime type, quality of government, population growth and openness to trade in selected MENA countries.

2.2.3. PANEL SERIAL CORRELATION TEST

The presence of serial correlation in linear panel data models leads to biases of standard errors and results with a less efficient test result (Drukker, 2003). Therefore, serial correlation in error terms should be identified to obtain robust outcomes.

Table 3. *Panel Serial Correlation Test Results (Wooldridge)*

D. gdpgrowth	***Coef.***	***Std. Rob. Err.***	***t-statistic***	***p-value***
openess D1.	.0469877	.0392638	1.20	0.277
Qog D1.	-11.28536	16.61778	-0.68	0.522
regymtype D1.	.279176***	.0336202	8.30	0.000
population D1.	.4235128	.7380969	0.57	0.587
laggdpgrowth D1.	-.4769161**	.1849263	-2.58	0.042
F(1,6)=1.849		*Probability=0.2227*		

Notes: The null hypothesis of serial correlation assumes no-first order auto correlation. (***) denotes significance at 1% level and (**) denotes significance at 5% level.

Table 3 denotes panel serial correlation results; the null hypothesis of no serial correlation can strongly be rejected because the probability of serial correlation is 0.2227 which is bigger than 0.05. Namely, it can be inferred that there is no evidence for serial correlation. Under this condition, there is no bias in error terms and results are efficient.

Panel data models generally exhibit cross-sectional dependence in errors, which may arise because of the presence of common shocks and unobserved components that become a part of the error term, spatial dependence (Hoyos and Sarafidis, 2006). The appropriate test is Breusch Pagan LM test for this model. Because N=7 and T=22 of the model and Breusch Pagan LM test is appropriate for small N and large T.

Table 4. *Cross-sectional Dependence Test Results*

Breusch Pagan LM tests of cross sectional independence (chi^2)	*Probability*
23.958t	*0.2951*

Notes: The null hypothesis of no cross-sectional dependence which Pesaran assumes no-cross sectional dependence.

Table 4 indicates the result of cross-sectional dependence. The null hypothesis of Breusch Pagan LM test assumes no cross-sectional dependence. According to Table 4, the null hypothesis cannot be rejected.

2.2.4. LEAST SQUARE DUMMY VARIABLE TEST RESULTS

The last empirical part of this study contains analyzing Least Square Dummy Variable Test Result. Before interpreting LSDV results, it should be remembered that the variables of gdpgrowth and population include unit root process. In order to eliminate unit root, the lag of these two variables was used.

Table 5. *LSDV Test Results (Kiviet 1995)*

D. dgdpgrowth	***Coef.***	***Std. Err.***	***p-value***
dgdpgrowth LD.	.2014927	.0673007	0.003
dpopulation D1	.20479	.5918977	0.730
regymtype D1	-.3821645	1.435706	0.791
qog D1	-30.05311**	9.603799	0.002
openess D1	.0635648	.0411706	0.125
laggdpgrowth D1	-1.81564***	.1241687	0.000
Instrumented: LD dgdpgrowth *Instruments. dpopulation D.regimetype D.qog D.openess D. laggdpgrowth L2. dgdpgrowth*			

Notes: (***) denotes statistical significance at 1% and (**) denotes statistical significance at 5%.

Expectation is to find out if there is any relation between the quality of government, regime type and GDP growth. According to LSDV test results, there is no evidence that there is a relationship between regime type and GDP growth. The outcomes of econometric application do not provide our expectations. Regime type like military, one-party, monarchy or democracy does not explain selected MENA countries' economic growth. However, there is negative relationship between quality of government and GDP growth. The negative effect of quality of government on selected MENA

countries' economic performance. There may be an increase in efficiency since decisions about investment do not pass through a long bureaucratic and legal process.

CONCLUSION

In this study, conducted in the field of Political Economy, is basically concerned with the relationship of GDP growth and political stability. Expectation is that politically stable environment has a positive effect on GDP Growth.

The output does not correspond with the theoretical expectations. Only one type of political stability variable which is quality of government is statistically significant in the panel regressions. The sign of government quality shows that there is negative relationship between political stability and GDP Growth in selected MENA countries.

The results of other variables are as follows: any effect of regime type on growth rate could not be found. It means that there is no difference in regime distinctness for the MENA Countries.

Population does not explain GDP growth successfully in the regressions. Openness to trade doesn't also affect it. There is an effect of lag of GDP growth on dependent variable.

In conclusion; seven MENA countries which are Algeria, Egypt, Iran, Jordan, Lebanon, Morocco and Tunisia were analyzed from 1990 to 2012. According to the dynamic panel data model, only the quality of government index is successful in explaining the economic growth in selected MENA countries.

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