The Impact of Political Stability on Economic Growth in European Union

Emilia Anuta Corovei
"1st of December 1918" University of Alba Iulia, Doctoral School in Accounting
emilia_lud@yahoo.com
Adela Socol
"1st of December 1918" University of Alba Iulia
adelasocol@yahoo.com

Abstract

In our empirical study we analyze the impact of political stability on GDP growth for European Union Countries over the period 2000-2017. We ran a panel OLS regression with robust standard errors and we removed panel autocorrelation and heteroskedasticity from our data. We consider a politically stable country when doesn't face with conflicts, protests, radical changes of regimes, terorism and wars. Political risk is often associated with foreign investments. Foreign investors are not willing to invest in war and conflict countries, in regions where the legislative, executive and judiciary powers can not operate under normal democratic conditions. Our empirical results indicate that there is a positive and a significant relationship between political stability and GDP growth.

1. Introduction

We analyzed European Union because is an important trading power together with SUA and China. European Union is a politically stable region because doesn't face with conflicts, protests, radical changes of regimes, terorism and wars. Compared with the previous year, GDP growth (%) rose by 1.9% in the European Union in 2018. During the analyzed period, we observed a drop in this indicator for all EU countries during the financial crisis (2007 and 2008); but from the figure bellow (*Figure no. 1*) we can also see that are sign of recovery starting with 2010. The political stability was 0.71 points in 2017. The values of the Political Stability indicator may vary between 1.34 (Luxemburg) and -0.13 (Greece).
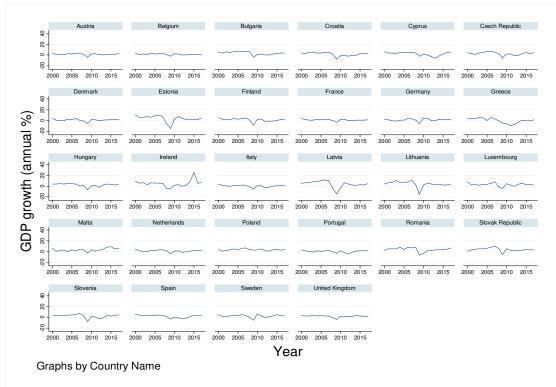
Figure no. 1 GDP growth (%) for European Union, over the period 2000-2017

Graphs by Country Name

Source: Authors' calculations

The structure of the paper is as follows. Section 2 describes the literature review, section 3 describes data used to analyse the impact of political stability on GDP growth across EU countries, section 4 discusses the methodology, section 5 discusses the empirical results and in section 6 we present our conclusions.

2. Literature review

We found lots of articles which analyze the impact of political stability on GDP growth (%). But none of these articles study the impact of political stability for European Union Countries over the period 2000-2017. We will briefly present the most relevant articles analyzed.

Barro and Lee (Barro and Lee, 1994, p. 1-46) analyzed the impact of political instability on economic development. They analyzed 116 economies over the period 1965 to 1985. The results show that political instability has a negative effect on GDP growth.

In addition, Alesina et al. (Alesina *et al*, 1996, pp. 189-211) conducted a similar researh by using a panel of 113 countries. Their findings suggests that „economic growth is influenced by government collapsing" and "the economic development may decline as a result of government negative collapsing effect".

Radu (Radu, 2015, pp.751-757) analysed the relationship between political stability on development in Romania over the period 1990 –2011. The emirical results conclude that political stability has a positive impact in the country's economic growth and sustainable development.

Nazeer and Mansur (Nazeer and Mansur, 2017, pp. 1-20) analysed the impact of political instability on foreign direct investment. Their study is based on a time series data analyzed over the period 1984 to 2013, on Malaesyia. The empirical results suggest that there is a positive relationship between political stability and GDP growth in this country.

The purpose of our empirical research is to make a new contribution to the existing literature by analyzing the relationship between political stability and Gross Domestic Product growth in European Union countries.

3. Data analysis

The aim of our analysis is to study the relationship between political stability and GDP growth. In order to identify the link between these regressors we have used a panel that includes European Union countries analyzed for a period of 18 years, respectively 2000 - 2017.

Economic growth can be defined as "the annual rate increase in total production or income in the economy" (Poulson and Kaplan, 2008, pp. 53-71) or simply we can define economic growth as an increase in the amount of goods and services produced per head of the population over a period of time. Political stability is defined "as the potential for maintaining a stable government without affecting the constitutional or unconstitutional changes" (Alesina *et al*, 1996, pp. 189-211). The explanatory variables used in our analysis are (See also: *Table no. 1 Descriptive statistics*): Credit Risk, Current account, Foreign direct investment, Inflation, Leverage Ratio, Political Stability, Taxes, Unemployment and Wage. These indicators were determined using annual data extracted from the World Bank and Worldwide Governance Indicators (WGI) databases.

Table no. 1 Descriptive statistics

	Political stability	Leverage	Credit Risk	Current Account	Foreign Direct Investment	Inflation	Taxes	Unemployment	Wages
N	476	283	295	492	500	504	494	504	504
mean	0.782122	7.518893	7.638451	-1.09729	10.94437	2.622767	23.2904	8.859978	83.56565
sd	0.421355	2.593839	8.226127	5.855007	36.39621	3.470587	9.399305	4.398795	7.183114
min	-0.47	3.219011	0.081808	-25.7524	-58.3229	-4.4781	6.100773	1.8	53.892
max	1.76	14.82324	48.67585	13.81237	451.7155	45.6666	49.66034	27.47	93.498

Source: Authors' calculations

4. Methodology

The purpose of our paper is to make a new contribution to the literature by analyzing the relationship between political stability and Gross Domestic Product Growth in European Union [28 countries].

The first step in methodology was to check the stationarity of the regressors in the Panel Database by using Fisher Test. The impact of political stability on Gross Domestic Product growth is examined on an annual basis through the following equation:

$$GDP\ growth_{i,t} = \beta_0 + \beta_1 \times Political\ Stability_{i,t-1} + \Phi \times Controls\ variables_{i,t-1} + \varepsilon_{i,t}$$

(1)

where *GDP growth*$_{i,t}$ for country *i* in year *t*, *Political Stability*$_{,t-1}$ denotes the lack of conflicts, protests, radical changes of regimes, terorism and wars for country *i* in year *t*, and *Controls variables*$_{i,t-1}$ are macroeconomic indicators for country *i* in year *t*. The growth of an economy may not feel the effects of political stability immediately so we considered all explanatory variables lagged one period. $\varepsilon_{ij,t}$ is an *iid* error term specific to country i in year t. We ran an OLS panel regression with robust standard errors and we removed panel autocorrelation and heteroskedasticity from our data. There aren't correlations bigger than 0.5 between all indicators (Table 2) and all variables used in our analysis are stationary (Table 3).

Table no. 2 Correlation matrix

	Economic Growth	Political stability	Taxes	Unemployment	Inflation	Current Account	Leverage	Foreign Direct Investment	Credit Risk	Wages
Economic Growth	1									
Political stability	0.1868	1								
Taxes	0.0226	0.0341	1							
Unemployment	0.0171	-0.4815	-0.172	1						
Inflation	0.4558	-0.018	-0.0367	-0.2401	1					
Current Account	0.3636	0.3805	0.1064	-0.0487	-0.4544	1				
Leverage	0.2312	-0.1364	-0.4931	0.3028	-0.0706	-0.0963	1			
Foreign Direct Investment	0.0591	0.2814	0.1285	-0.132	0.0373	-0.0291	-0.029	1		
Credit Risk	0.1187	-0.3262	-0.1462	0.5887	-0.2771	-0.0225	0.3325	-0.024	1	
Wages	0.128	0.4344	0.1106	-0.2462	-0.0262	0.412	-0.0032	0.114	-0.349	1

Source: Authors' calculations

Table no. 3 Fisher-ADF unit root tests

Fisher-ADF unit root tests				
	Inv. chi-squared	Inv.N	Inv.L	M.Inv chi-squared
Economic Growth	236.8614	-11.3156	-12.3019	17.0898
	[0.000]	[0.000]	[0.000]	[0.000]
Political stability	179.6268	-8.9246	-9.1753	11.6816
	[0.000]	[0.000]	[0.000]	[0.000]
Taxes	181.1392	-8.7661	-9.2176	11.8245
	[0.000]	[0.000]	[0.000]	[0.000]
Unemployment	216.4520	-10.3721	-11.1569	15.1613
	[0.000]	[0.000]	[0.000]	[0.000]
Inflation	248.3148	-11.7141	-12.9049	18.1720
	[0.0000]	[0.0000]	[0.0000]	[0.0000]
Current Account	153.2416	-7.4814	-76040	9.1885
	[0.000]	[0.000]	[0.000]	[0.000]
Leverage	135.8056	-6.5748	-6.8237	8.5806
	[0.003]	[0.000]	[0.000]	[0.001]
Foreign Direct Investment	218.1251	-10.7574	-11.3310	15.3194
	[0.000]	[0.000]	[0.000]	[0.000]
Credit Risk	163.9194	-8.3327	-8.6262	10.9746
	[0.000]	[0.000]	[0.000]	[0.000]
Wages	142.4817	-6.2699	-6.5755	8.1718
	[0.000]	[0.000]	[0.000]	[0.000]
GDP per capita growth (annual %)	248.4000	-11.7509	-12.9204	18.1801
	[0.000]	[0.000]	[0.000]	[0.000]

Source: Authors' calculations

Note: Fisher-ADF tests with drift, one lag and cross-sectional means removed. Its null hypothesis states that all panels contain unit roots, with the alternative that at least one panel is stationary.

5. Results

The political stability show a positive relationship with the GDP growth as expected. The determination coefficient shows that 40,7% of the gdp growth is explained by the regressors.

Table no. 4 Determinants of Economic Growth

Variables	Main model (1)
Political stability	**0.920***
	(0.549)
Taxes	-0.0428
	(0.0301)
Unemployment Rate	-0.0925**
	(0.0415)
Inflation Rate	-0.905***
	(0.127)
Current Account	0.0474
	(0.0396)
Leverage	0.461***
	(0.132)
Constant	-1.192
	(1.878)
Observations	***257***
R-squared	***0.407***

Robust standard errors (RSE) in parentheses, where
*** $p<0.01$, ** $p<0.05$, * $p<0.1$

Source: Authors' calculations

We run a number of robustness checks on our main regression model (Main model:1). We ran our regressions adding other control variables (Robustness Tests: 2, 3, 4 and 5) and we also changed the dependent variable GDP growth (annual %) with GDP per capita growth (annual %) (Robustness Tests: 1). Our main results are maintained. The other control variables affecting economic growth are: taxes, unemployment rate, inflation rate, current account, leverage, foreign direct investment, credit risk and wages.

Table no. 5 Robustness Tests

	Robustness Tests				
Variables	(1)	(2)	(3)	(4)	(5)
Political stability	**0.411**	**0.803***	**1.071**	**1.143***	**2.206***
	(0.553)	**(0.578)**	**(0.655)**	**(0.646)**	**(0.725)**
Taxes	-0.000782	-0.0400	-0.0466	-0.0484	-0.0594*
	(0.0287)	(0.0308)	(0.0330)	(0.0339)	(0.0342)
Unemployment Rate	-0.0381	-0.0936**	-0.0920**	-0.0905**	0.00345
	(0.0448)	(0.0416)	(0.0448)	(0.0431)	(0.0460)
Inflation Rate	-0.870***	-0.903***	-0.856***	-0.851***	-0.914***
	(0.124)	(0.127)	(0.133)	(0.129)	(0.125)
Current Account	0.0461	0.0524	0.0718*	0.0807*	0.0536
	(0.0399)	(0.0400)	(0.0418)	(0.0441)	(0.0434)
Leverage	0.473***	0.455***	0.457***	0.468***	0.390***
	(0.130)	(0.133)	(0.134)	(0.143)	(0.144)

		Robustness Tests			
Variables	(1)	(2)	(3)	(4)	(5)
Foreign Direct Investment		0.00300	0.00202	0.00213	0.00117
		(0.00289)	(0.00301)	(0.00300)	(0.00295)
Credit Risk			-0.000856	-0.00600	-0.0262
			(0.0308)	(0.0315)	(0.0314)
Wages				-0.0195	0.00192
				(0.0447)	(0.0403)
Dummy_income					-3.019***
					(0.906)
Constant	-0.618	-1.029	-1.378	0.0912	0.0273
	(1.862)	(1.918)	(1.992)	(3.859)	(3.409)
Observations	*257*	*257*	*238*	*238*	*238*
R-squared	*0.407*	*0.409*	*0.417*	*0.418*	*0.447*

Robust standard errors (RSE) in parentheses, where
*** $p<0.01$, ** $p<0.05$, * $p<0.1$

Source: Authors' calculations

Taxation is defined as the revenue collected from the population by the governments of EU Countries. The amount collected and the way this money is spent has a significant impact on GDP growth. There is a large number of empirical studies that examine the impact of taxes on economic growth (Poulson and Kaplan, 2008, pp. 53-71; Holcombe and Lacombe, 2004, pp. 292-312). All these studies suggest a negative relationship between economic growth and taxes. In our empirical study we have also found a negative relationship between GDP growth (%) and taxation; an increase in taxes on income, profits and capital gains (% of revenue) will reduce the GDP growth. When the state increases consumer taxes, they'll defeat the desire to buy goods and services.

There are a lot of studies analyzing the relationship between GDP growth (%) and unemployment rate (Zonzilos, 2000. pp. 15-30; Villaverde and Maza, 2009, pp. 289-297; Dumitrescu *et al*, 2009, pp. 317-322). Unemployment is a negative phenomenon in all economies. Lack of jobs and implicitly lack of income from wages affects the level of goods and services produced in an economy. Our results suggest an inverse relationship between the gdp growth (%) and unemployment rate.

There is also a a negative relationship between GDP growth and inflation rate. Inflation imposes negative externalities on countries when it interferes with GDP growth.

The current account indicator is defined as "the difference between the value of exports and the value of imports of goods and services". This regressor has a positive impact on GDP growth (%). When imports are higher than exports may highlight the fact that investments have a higher share than saving, which can generate the economic development of the country.

The leverage positively influences economic growth. An efficient banking system and financial markets create a positive impact on the overall wealth and development of society. Foreign direct investment, credit risk and wages have an insignificant impact on economic growth.

6. Conclusions

The purpose of this paper is to determine the relationship between Gross Domestic Product growth and political stability. In order to identify the link between these indicators we have used a panel that includes European Union Countries analyzed for a period of 18 years, respectively 2000 - 2017. We found a positive relationship between political stability and Gross Domestic Product growth. We run a number of robustness checks on our main regression model but the results are maintained. Other control variables affecting GDP growth (%) are: taxes, unemployment rate, inflation rate, current account, leverage, foreign direct investment, credit risk and wages.

7. Acknowledgement

8. References

- Alesina, A., Özler, S., Roubini, N. and Swagel P., 1996. Political instability and economic growth, *Journal of Economic Growth*, 1(2), pp.189-211.
- Barro, R.J. and Lee J.W., 1994. Sources of economic growth, *Carnegie-Rochester Conference Series on Public Policy*, 40, pp.1-46.
- Dumitrescu, B.A., Dedu, V., and Enciu, A., 2009. The correlation between unemployment and real GDP growth. A study case on Romania, *Annals of Faculty of Economics, University of Oradea,* 2(1), pp.317-322.
- Holcombe, R.G., and Lacombe, D., 2004. The Effect of State Income Taxation on Per Capita Income Growth, *Public Finance Review,* 32(3), pp.292-312.
- International Monetary Fund, *IMF World Economic Outlook Database, October 2018*, Retrieved 31 December 2018, [online] Available at: https://www.imf.org/external/pubs/ft/weo/2018/02/weodata/index.aspx [Accessed 25 April 2019].
- Muhammad, Y., Lin, X.X., Yahya, S., and Santhirasegaram, S., 2008. Political Stability and Economic Growth in Asia, *American Journal of Applied Sciences,* 5(3), pp.203-208.
- Nazeer, A.M., and Mansur, M., 2017. *Impact of political instability on foreign direct investment and Economic Growth: Evidence from Malaysia,* pp.1-20. [online] Available at: https://mpra.ub.uni-muenchen.de/79418/ [Accessed 25 April 2019].
- Poulson, B.W. and Kaplan, J.G., 2008. State Income Taxes and Economic Growth, *Cato Journal,* 28(1), pp.53-71.
- Radu, M., 2015. Political Stability - A Condition for Sustainable Growth in Romania?, *Procedia Economics and Finance*, 30, pp.751-757.
- Villaverde, J., and Maza, A., 2009. The robustness of Okun's law in Spain, 1980–2004: Regional evidence, *Journal of Policy Modeling*, 31(2), pp.289-297.
- Zonzilos, N. , 2000. The Greek Philips Curve and Alternative measures of the NAIRU, *Economic Bulletin of Bank of Greece,* 15, pp.15-30.