Political Stability and Democratic Governance. A Panel Data Analysis.

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Political Stability and Democratic Governance. A Panel Data Analysis.

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Abstract. In the present paper we undertake to link democracy with a set of indicators for economic freedom and financial crises, using panel data analysis. The sample covers annually the period 2000-2012 for the EU, the USA and Japan. The results point out, that political stability is positively related to the set of economic freedom indicators and negatively to financial crises, because greater economic freedom influences positively investment and economic growth, while financial crises, which lead to austerity policies, which again lead to recession-depression, increases dissatisfaction of citizens with the working of democracy (Georgiou, 2011) and thus, to the rise of extremist parties. Our findings support the idea that democratic stability is linked to economic stability and growth and vice-versa.

Keywords: Democracy, economic freedom, financial crisis, panel data analysis.
JEL Class: C23, E1, N40.

1. Introduction

Democracy and economy are linked from ancient through modern times. Stable and durable democracies either at single state level, or for federations are linked to stable, prosperous and growing economies.

The first well established democracy, that of ancient Athens, was based on a well-functioning and prosperous economy, which permitted the establishment of a

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substantial state budget. This covered, for the first time in history, not just military expenses, but programs of public works (in mainly two periods, that of Pericles during the second half of the 5th century, and of Lycurgus 338-323 BC), education and participation fees for the democratic bodies refer (Amemiya, 2007; Kyriazis, 2009).[1]

The same was true for the first Greek federations, such as the Aetolian and Achaean, which were again based on a strong economic basis where some key institutional elements were also present: free market type of economy, property rights protection, legal binding of contracts as far as commerce is concerned, banking services such as maritime loans,[2] regional mobility of labour and capital, and trustworthy coinages which were making commercial transactions easier and faster (Mackil, 2013; Economou and Kyriazis, 2013; Economou, Kyriazis and Metaxas, 2014).

Through the ages, one can mention much more modern paradigms, by starting for example, with the United Provinces (UP, also known as the Dutch Republic) and England after the Glorious Revolution of 1688.[3] These two historical cases, which are considered as two of the first early modern European states which achieved economic growth were again based on free market economy, international commerce, property rights protection, stable political systems (during the 18th century), functional and trustworthy (in value) coins and innovative institutional mechanisms, such as the first ever recorded functional joint stock companies, banking services and the stock market

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[1] Education comprised the so-called *theorika* payments, fee given from public budget to enable poor Athenian citizens to follow the four days long theatrical plays, which had an education function (Kyriazis and Economou, 2015). It was a compensation for the income they were loosing by not working during these days. Participation fees called *eclessiastika*, were again paid out of the public budget to poorer Athenian citizens to enable them to participate to the citizen's Assembly, the main decision making body in ancient Athens, again as a compensation for income loss.

[2] For the ancient Athenian banking system and commercial transactions Cohen (1973, 1997) offers a detailed analyses.

[3] The UP were characterised by a mixed political system, democratic at the federation and provinces level, aristocratic at the base, cities level (Davids and 't Hart, 2012). For the transformation of the Dutch and the English economy towards free market and international commerce since the late 16th century, which further deepened after the Glorious Revolution in England see among others (North and Weingast, 1989; de Vries and van der Woulde, 1997; Rodger, 1997; Munro, 2007; Kyriazis and Metaxas, 2011; Roy, 2012, Richards, 1929, repr. 2013).

(Schmitthoff, 1939; Lawson, 1993, 53; Gauci, 2000; Gelderblom, 2003; Acemoglu, Johnson and Robinson, 2005; Munro, 2007; Van Nieuwkerk, 2009; Kyriazis and Metaxas, 2011, Roy, 2012).

Thus, we argue to this point that the strong relationship between economic market mechanisms, economic growth, political liberalism and democracy, which was strongly advocated as a system of principles by famous economists and political thinkers such as Hayek (1973) is verified for both modern and pre-modern economies. On the other side, economic crises linked to political instability and in some cases, to the fall of democracy, as in Germany with the rise of Nazism (after winning the elections of 1933) or in some Latin American countries, as for example, the fall of Allende and military dictatorship in Chile in 1973.

Economic crises or recessions contributed to the breakup of federations in modern times, as the fall of the Soviet Union after 1989 testifies. More recently, financial crises have led to changes in governments and smaller or greater political instability, as in the cases of Mexico, Thailand, Indonesia and South Korea (Geithner, 2014). Economic recession after financial crises and slow economic growth and recession in many EU countries, have led to changes in governmental parties, like in today's Portugal, France Italy, Cyprus and Greece linked to the rise of extremist anti-European parties in France (Marie Lepen), the UK (Nigel Farage) and Greece (Golden Dawn political party).

In Greece in particular, after the beginning of the crisis and depression of 2009, there have been four government changes and four elections (October 2009, twice in 2012 and January 2015) up to January 2015, eg. during a period of less than six years. There is a substantial literature linking stability to economic factors, such as, for example, taxation or economic crises, usually in partial analysis. When taxation rises excessively, citizens gradually loose their trust in the political system and vice-versa (Dunning, 2005; Malhotra and Carnes, 2008; Kaufmann, Kraay and Mastruzzi, 2010; Estrada, Mutascu, and Tiwari, 2011; Mutascu, Estrada and Tiwari, 2012; Svensson, Urinboyev, and Astrom, 2012; Vasileiou, 2014).

In our paper we attempt to analyse political stability through a more global approach, combining previous partial approaches. The paper is organized as follows: In the next section we outline our model, followed by the econometric methodology, the results and ending with our conclusions.

2. The model[4]

We use the Economic Freedom of the World data for the 2000-2012 period as a global approach because this is a composite index, being an average of many partial indices, measuring various economic and political aspects. The index comprises five main areas, size of government legal system and property rights, sound money, freedom to trade internationally and regulation, each area comprising again some sub-indices.

The legal system area for example induces as sub-indices judicial independence and impartial courts. We consider, this to be a very important political (and not only economic) indicator, because it illustrates one of the basic foundations of modern democracy, the separation of powers, the legislative, executive and judiciary. Independent and impartial courts are a safeguard not only of property rights but of democracy itself, if they take a stand against political abuses by governments against their citizens. During periods of crises, governments tend to increase such abuses. Impartial courts (Constitutional courts where they exist) have put barriers against such abuses recently in Portugal, France, Greece etc., condemning government legislation in some cases as unconstitutional.[5]

Other indicators, such as the size of government in total and bureaucracy costs in particular (sub-elements of regulation) affect not only the economic, but also the political situation. Bigger governments linked to untransparent bureaucratic regulations and administrative requirements frequent changes in taxation rules, lead to higher fraud and corruption. This again reduces government's legitimacy in the perception of their citizens, which in the longer run can be detrimental to democracy itself. As Learned Hand (1872-1961), a prominent American judge and avid supporter of free speech argued, "*Freedom lives in the hearts of men and women. If it dies there,*

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[4] One can find supportive evidence concerning our argumentation in this section in Georgiou (2014).

[5] In Greece for example the Supreme Administration Court (Greece does not have a Constitutional Court) has condemned many recent laws, as undemocratic-unconstitutional. In fact there has never been before (after Greece's reestablishment of democracy in 1974 a situation in which so many laws have been declared unconstitutional during such a brief period (1974-2014). This substantiates our claim that abusive and undemocratic behavior by governments increase during periods of crises.

no law, no constitution can keep it alive".[6] The same is true for democracy. If faith in democracy dies in the hearts of citizens, democracy will fall, as it did in Italy in 1922 and in Germany in 1933.[7]

2.1 Model Formulation

Our model can be presented by the next equation:

$$ps_{it} = c_0 + c_1\ ts_{it} + c_2\ crisis_{it} + error_{it} \qquad (1)$$

Variable **[ps]** stands for the Political Stability Indicator. Variable **[ts]** stands for the total score index (of World Economic Freedom Indicators). Finally, **[crisis]** is a dummy variable representing the world economic–financial crisis having the value 0 in all years before 2008 and the value 1 for 2008 and afterwards. The subscript **i** stands for the country, while **t** for the year. The sample covers Western Europe, Japan and the United States for the period 2000 – 2012 and is based on data being extracted for the period 2000 – 2012 by the *Economic Freedom of the World* provided by the Fraser Institute (see details in table 3). Thus, the balanced sample has 234 observations in total.

2.2 Econometric Methodology[8]

Before starting the estimation of model (1) through the Eviews software one can see that there is no unit root (1) in Appendix B (tables 4, 5). This means that all variables are stationary and one can estimate the model. The equation (1) and all tests are elaborated through the Eviews software package. The detailed results are shown in table 1, while the diagnostics (based on Halkos, 2003) in table 2 (see Appendix A). For Equation (1) there are basically two types of estimation method, the "fixed" and "random" effects. The appropriate choice depends on whether one treats α_i's as some fixed numbers or 'random drawings' from a specific distribution. As the correlation

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[6] Dilliard, I. (1952), *The Spirit of Liberty: Papers and Addresses of Learned Hand*. New York: Knopf.

[7] Economists have examined the issue of corruption and fraud under the principal-agent problematic.

[8] For the methodology we provide here we are based on Baltagi (2001), Davis (2002), Gujarati (2003) and Halkos (2003).

structure of the error term is ignored, a more efficient estimation method would be the Generalized Least Squares (GLS) provided that there is no correlation between the *x's* and the *α's*. GLS requires weighting the observations of *y* and *x* by $\Sigma^{-(1/2)}$:

$$\Sigma^{-1/2} = \frac{1}{\sigma}\left[I_T - \left(\frac{1-\sqrt{\vartheta}}{T} ii^{'} \right) \right]$$

where $\quad \theta = \frac{\sigma^2}{\sigma^2 + T\sigma_\alpha^2}$

First one obtains an estimate *θ* by estimating the equation:

$$y_{it} - y_{i.} = \beta^{'}(x_{it} - x_{i.}) + (u_{it} - u_{i.}) \qquad (2)$$

Once the component variances have been estimated, one forms an estimator of the composite residual covariance and GLS transforms the dependent and regressor data (Baltagi, 2001; Davis, 2002).

2.3 Econometric Results

We observe that estimated equation (1) meets the three required criteria of homoskedasticity, specification and normality and absence of serial correlation. Further, there is no unit root. Hence, only the above model (1) is robust. At (95%) all coefficients are statistically significant. The constant term is positive, the coefficient of **[ts]** is positive, while that of **[crisis]** is negative. The positive impact of [ts] on [ps] indicates that the higher the [ts] is, then the higher the [ps] becomes. On the contrary, the negative impact of **[crisis]** on **[ps]**, indicates that **[crisis]** reduces [ps]. It should be noted that the afore-mentioned two independent variables explain the 25% of the total variation of the dependent variable **[ps]**. This becomes clear by looking at the value of determination coefficient R^2 (table 6, in appendix B). In economics it means that political stability is explained by **[ts]** and **[crisis]** by 25%, which is too high to be neglected by the policy makers.

3. Conclusion

Our model supports the hypothesis that a well-functioning democracy goes hand in hand with stable and growing economy. As the ancient Athenians knew, as exemplified in Demosthenes dictum First Olynthiac Speech, 20:*"we need money Athenians and nothing can be done without it"*. Democracy and economy mutually reinforce each other. Democracy usually guarantees better than absolutist regimes property rights, which again is one of the basic prerequisites for long-run economic prosperity and nation's strength.

In early modern history for example, more democratic nations, with institutions that guaranteed property rights, individual freedom and enterprises, like the United Provinces and England (United Kingdom after 1707) had faster economic growth and prosperity than more absolutist countries which did not guarantee property rights, freedom etc, like the Asian empires, China under Ming the Tsing (Manchurian) dynasties, the Indian Mungal empire or the Ottoman, but also more absolutist European nations like the Spanish empire and France (Kennedy, 1989, ch. 1; Rodger, 1997; Ormrod, 2003; Kyriazis and Metaxas, 2011; Kyriazis, 2012b).

Strong economies enable democracies to undertake redistributive policies, as initiated by ancient Athens, and these policies (under the modern form of welfare programs like medicate, minimum pensions etc) create a community of interests, which again is the "glue of democracy".[9] In times of crisis, welfare and redistributive policies decrease, as in our model's findings, and this again leads to citizen's dissatisfaction with democracy and thus to the rise of extremist parties.

In particular, for the EU today, there is a grave danger that the austerity policies, if considered by the European citizens to be imposed by the EU, which shows a great democratic deficit[10], will lead to a "delegitimisation" of the EU, which,

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[9] The 4th century Athenian orator Demades called *theorica* the "glue of democracy". Today's China seems to be an exception, combining an undemocratic single party dictatorship political regime with high economic growth. Acemoglou and Robinson (2012) indicate that other modern absolutist such as the Soviet Union showed substantial growth during the same periods, but ultimately failed. They believe that the same will happen to China if it does not democratise itself.

[10] We have examined in detail the issues of community of interest and the EU's democratic deficit in Economou and Kyriazis (2013) and Economou, Kyriazis and Metaxas (2014).

if not inverted, may cause severe strain (Georgiou, 2011)[11]. We have indicated in the introduction the rise of *euroscepticism* and the anti-European parties. Government policies that does not have a bottom up legitimization in the eyes of their constituents erode the prestige of the policymakers who impose them. In such cases citizens feel more and more reluctant to "defend the system" according to Weingast (1997).

Thus, democratic leaders and governments have to be very careful when implementing economic policies. There is absolutely no excuse to invoke economic necessity in order to introduce undemocratic laws (as the former Greek governmental parties discovered in the 2015 elections). Some austerity measures were necessary in many countries, but the timing was probably wrong because it deepened the recession which had already started in 2009.

At the EU level, economic measures imposed to face current problems, like public debt, have to be very finely balanced with long-term aims of European integration. A too strong dose of austerity may be to the detriment of long-term aims, if it convinces many European citizens that the EU is responsible for their current woes.

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[11] For example, after the Greek economic crisis manifested in 2010, the Greek policymakers undertook harsh economic measures such as rising excessively direct and indirect taxes, such as tax on land property which is still into force, the so called "ENFIA" tax. All these measures have caused a social outrage because they were not introduced under a consent building strategy.

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APPENDIX A

TABLE 1. *Results in Brief*

Method	GLS Period SUR weights
c	11,267
p-value	*0,000*
ts	0,676
p-value	*0,000*
crisis	-0,336
p-value	*0,000*
Adjusted R^2	0,246
Durbin_Watson	1,960
Jarque - Bera	2,362

Note: For n = 234 (*at 95%*), d_U = 1,805. The results in detail are in table 6.

TABLE 2: *Diagnostic Tests[12]*

TESTS	GLS Period SUR weights)	Critical values *(at 95%)*
Heteroskedasticity	1,624	3,037
Heteroskedasticity	1,605	3,037
Heteroskedasticity	2,797	3,841
Heteroskedasticity	2,242	7,815
RESET$_1$	0,313	3,841
RESET$_2$	0,243	5,991
RESET$_3$	0,183	7,815
Normality	2,362	5,991

Test 1: Regression of the squared residuals on X. That is, $u_t^2 = x_t'\gamma_1 + v_{t,1}$

Test 2: Regression of absolute residuals on X. That is, $|u_t| = x_t'\gamma_2 + v_{t,2}$ (a Glejser test)

Test 3: Regression of the squared residuals on $\hat{Y}$

Test 4: Regression of the log of squared residuals on X (a Harvey test)

Test 5: Regression of residuals on $\hat{Y}^2$

Test 6: Regression of residuals on $\hat{Y}^3$

Test 7: Regression of residuals on $\hat{Y}^4$

Test 8: Normality test (Jarque Bera)

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[12] The diagnostic tests are based on Halkos (2003).

TABLE 3. *Countries of the Sample*

Country	Period
Austria	2000 - 2012
Belgium	2000 - 2012
Cyprus	2000 - 2012
Denmark	2000 - 2012
Finland	2000 - 2012
France	2000 - 2012
Germany	2000 - 2012
Greece	2000 - 2012
Ireland	2000 - 2012
Italy	2000 - 2012
Japan	2000 - 2012
Netherlands	2000 - 2012
Norway	2000 - 2012
Portugal	2000 - 2012
Spain	2000 - 2012
Sweden	2000 - 2012
UK	2000 - 2012
USA	2000 - 2012

APPENDIX B

TABLE 4 *Unit Root Test for [ps]*

Panel unit root test: Summary
Series: **PS**
Sample: 2000 2012
Exogenous variables: Individual effects, individual linear trends
User specified lags at: 1
Newey-West bandwidth selection using Bartlett kernel
Balanced observations for each test

Method	Statistic	Prob.**	Cross-sections	Obs
Null: Unit root (assumes common unit root process)				
Levin, Lin & Chu t*	-3,92929	0,0000	18	198
Null: Unit root (assumes individual unit root process)				
PP - Fisher Chi-square	52,0957	0,0403	18	216

** Probabilities for Fisher tests are computed using an asymptotic Chi -square distribution.
   All other tests assume asymptotic normality.

TABLE 5 *Unit Root Test for [ts]*

Panel unit root test: Summary
Series: **TS**
Sample: 2000 2012
Exogenous variables: Individual effects, individual linear trends
User specified lags at: 1
Newey-West bandwidth selection using Bartlett kernel
Balanced observations for each test

Method	Statistic	Prob.**	Cross-sections	Obs
Null: Unit root (assumes common unit root process)				
Levin, Lin & Chu t*	-3,12603	0,0009	18	198
Null: Unit root (assumes individual unit root process)				
PP - Fisher Chi-square	51,3658	0,0466	18	216

** Probabilities for Fisher tests are computed using an asymptotic Chi-square distribution.
   All other tests assume asymptotic normality.

TABLE 6. *The Regression Results in detail*

Dependent Variable: PS
Method: Panel EGLS (Period SUR)
Sample: 2000 2012
Periods included: 13
Cross-sections included: 18
Total panel (balanced) observations: 234
Linear estimation after one-step weighting matrix
Period SUR (PCSE) standard errors & covariance (d.f. corrected)

	Coefficient	Std. Error	t-Statistic	Prob.
C	11,26703	0,700285	16,08919	0,0000
TS	0,676301	0,078895	8,572177	0,0000
CRISIS	-0,336124	0,060415	-5,563582	0,0000

Weighted Statistics				
R-squared	0,252472	Mean dependent var		4,016779
Adjusted R-squared	0,245999	S.D. dependent var		8,031440
S.E. of regression	0,995974	Sum squared resid		229,1436
F-statistic	39,00917	Durbin-Watson stat		1,960051
Prob(F-statistic)	0,000000			

Unweighted Statistics				
R-squared	-0,980949	Mean dependent var		16,01880
Sum squared resid	607,2301	Durbin-Watson stat		0,146747