International Journal of Economics and Financial Issues
Vol. 2, No. 3, 2012, pp.233-240
ISSN: 2146-4138
www.econjournals.com

Democracy, Investment and Economic Growth

Hadhek Zouhaier
Superior Institut of Gestion (ISG) of Gabès- Tunisia
ISG Gabès rue Jilani Habib 6002 Gabès- Tunisia.
Email: hzouhair2000@yahoo.fr

Kefi Mohamed Karim
ISTEC Business School, Paris, France.
Email: k.kefi@istec.fr

ABSTRACT: The main purpose of this paper is to identify the relationship between democracy, investment and economic growth for a sample of 11 countries from the MENA region during the period 2000-2009, by using a dynamic panel data model. The democracy' effect on the contribution of investment to economic growth has been the subject of a second empirical study within the framework of this research paper. The main outcomes drawn by these two empirical tests prove that there is a significant link between on the one hand the democracy and investment and on the other hand between civil liberties and economic growth. The outcomes also highlight a positive interaction between political rights and investment.

Keywords: Political rights; Civil liberties; Investment; Economic growth; Dynamic panel
JEL Classifications: O43; O47; C23

1. Introduction

During the last years, the relationship between democracy and business performances has been the subject of several theoretical and empirical works. However, the results achieved by these works are very heterogeneous indicating that the effect of democracy on economic growth is far from being clear. Although the attempts to measure democracy started since the 1980s with, notably, the Bollen (1980) data base which provided statisticians with comparable indexes of democracy (available for more than 110 countries) established according to indexes of liberties and political rights assigned by Banks (1979) and Taylor and Hudson (1972).

Because this indicator was not available but for two years, the variable which is used most nowadays is that of Gasti (1986), available for the majority of countries and which covers indexes of the electoral process of freedom of association and political expression. So, although these indexes are relatively old, they haven't contributed in clarifying the role of democracy in the growth process. Thus, today we witness a multitude of results concerning this relationship.

In order to study this relationship between democracy, investment and economic growth, we shall carry out within the framework of this study a dynamic panel data model relating to a sample of 11 countries[1] from the MENA region during the period 2000-2009. The effect of democracy on the contribution of investment to the economic growth will be the subject of a second empirical study relating to the same sample.

Before embarking on the economic studies, it is proper to start under a first section with a review of the empirical literature concerning the relationship between democracy and economic performance. Then focus will shift to the choice of variables and their sources, the interpretations of estimations' results and the study of interaction between institutions and investment under a second section.

[1] Algeria, Bahrain, Egypte, Iran, Jordan, Kuwait, Lebanon, Morocco, Oman, Saudi Arabia and Tunisia.

2. Review of the Empirical Literature

The classic study of the determinants of growth of Barro (1991) tested the effect of indicators of political instability, which it considers detrimental to property rights. The two measures of violence used by Barro are: the average number of revolutions (or coups) and political assassinations. The result which leads this work is that these two variables are negatively and significantly related to the growth rate and the share of private investment in GDP between 1960 and 1985. Alesina and Perotti (1996) also found that political instability weakens the share of investment in GDP.

Generally, empirical studies have been conducted to test the said relationship agree, despite the diversity of samples and indicators, on the adverse effects of political instability on economic performance of the country concerned. Thus, studies of Barro (1996), Azam et al. (1996) showed a direct negative impact of political instability on economic growth. Guillaumont et al. (1999) have shown that political instability is a key variable to explain the systematic underperformance of African countries over the period 1970-1990. De Haan and Siermann (1996) do not contest the effect of instability on growth, but state that this happens mainly by the investment variable.

Fosu (1992) emphasizes the variable of human capital as a channel of influence. The addition of interactive variables allows deducing that it is through the fall of the latter factor productivity (human capital), that growth is permanently affected by political instability. However, in addition to the heterogeneity of sources of impact, there are some dissenting voices in this empirical consensus. If the study of Londregan and Poole (1990) is the only one that finds a non-negative effect of instability on the level of economic growth, Levine and Renelt (1992), on their part, emphasize the small robust aspect of the results concerning the impact of institutional variables on the economic performances.

3. Choice of Variables and Estimation Methodology

3.1 Choice of Variables

The theoretical works which have attempted to examine the relationship between institutional factors and economic growth highlight the existence of controversial link, whether direct or indirect, between democracy and economic growth. In fact, according to Tavares and Waczairg (2001), democracy on the one hand, increases the accumulation of human capital and reduces inequality of income, which accelerates growth. On the other hand, it reduces the accumulation of physical capital and increases public consumption, which decelerates growth.

Generally, if the economic results of dictatorships go from catastrophic to excellent; those of democracies tend to stand halfway between these extremes. According to Prezeworski et al. (2000) it's often under a dictatorial regime that the most rapid growths have been registered, but no democracy has ever shown so lamentable a performance like the worst dictatorships. Thus, it appears that at the economic level, democracy prevents the worst but it doesn't guarantee the better.

Our model involves several measures serving as control variables. Previous studies showed that they take account in large part for national differences in growth rates observed since decades ago.

Thus, the variables employed in this study are the following:

-*Y***:** The growth rate of real GDP per capita.

-*INV:* Statement of the raw formation of capital by the GDP

-*OPEN:* Statement of the volume of commerce by the GDP: (X/M)

-*GY:* the public expenditures, approximated by the portion of governmental consumption in the GDP.

- *Financial development:* measured by money and quasi money as portion of GDP (M2/GDP).

-*Political rights (PR):* defined by the degree to which government is controlled by individuals.

-*Civil liberties (CL):* consist in the freedom of press, the right of assembly, free political organizations, free commercial unions, free religious institutions, and the independence of justice.

These two indicators are evaluated on a scale from (1) to 7 with 1 being the highest degree of liberty and 7 being the lowest degree.

All the variables are relative to the period 2000-2009 on account of the availability of data for all the countries on the scale and in particular for Tunisia.

All the economic variables are drawn from the report about development in the world [2010], the variables relative to political rights and to civil rights are taken from the annual report of *Freedom House* about liberty in the world.

3.2 Estimation Methodology

In what follows, we propose a dynamic study of the relationship institutions - economic growth. Before proceeding to the estimation of the model and interpretations of results, it is necessary to define the dynamic models and present the model to estimate.

3.2.1 Definition of Dynamic Models

Dynamic models are characterized by the presence of one or more lagged endogenous variables among the explanatory variables. As part of our model, the introduction of past growth rates among the explanatory variables allows us to test the persistence of economic growth of countries in the sample under study since the previous economic growth can influence current economic growth. Let's consider for instance the case where there is a single dummy endogenous variable:

$$y_{it} = \alpha y_{it-1} + \beta X_{it} + \varepsilon_{i,t} \qquad (1)$$

(With i=1… N t=1… T)

With y the endogenous variable, X the exogenous variables, (α, β) the parameters to be estimated and $\varepsilon_{i,t}$ the error term.

3.2.2 Presentation of the Model to Estimate and Interpretation of Results

According to the above analysis, democracy can influence economic growth through productivity or capital accumulation. Our study therefore uses the following two equations to test the importance of democracy:

$$y_{i,t} = \alpha_1 y_{i,t-1} + \beta_i X_{i,t} + \mu_i DEMO_{i,t} + \varepsilon_{i,t} \qquad (2)$$

$$INV_{i,t} = \alpha_1 INV_{i,t-1} + \beta_i X_{i,t} + \mu_i DEMO_{i,t} + \varepsilon_{i,t} \qquad (3)$$

With y_{it}: growth rate of real GDP per capita of the country i for the year t.

$Y_{i,t-1}$: growth rate of GDP per capita for the previous year (t-l).

$INV_{i,t}$: the investment rate of the country (i) in the year (t)

DEMO: approximated by PR and CL ; X: a number of control variables, these two types of variable have already been defined above; $\varepsilon_{i,t}$ the error term.

The estimate presented here is the GMM estimation of Arellano and Bond (1998). I prefer to refer to the results of this estimate because it eliminates any bias rigorously related to unobserved individual heterogeneity and provides therefore a better efficiency of the estimation results. The estimation results of our model are satisfactory both econometrically and in terms of economic interpretation (Table 1). The estimation results of different equations are expected given the theoretical and empirical considerations already mentioned:

- The earlier economic growth does not seem to affect subsequent economic growth.
- Investment positively influences economic growth in these countries, because its coefficient is always positive and statistically significant indicating a predominant effect on economic growth.
-The coefficient of the variable "trade openness" is sometimes positive, sometimes negative, but still not statistically significant indicating disconnect between this variable and economic growth in these countries.
-Public spending does not affect the economic growth of countries considered, since the coefficients of this variable are not statistically significant.
-The coefficients associated with the variable "financial development" are negative and statistically significant in most cases, indicating a negative effect of this variable on economic growth.

In practice, the effects of financial development on growth is far from obvious and may even be negative, especially for developing countries. Thus, Bhatia and Khatkhate (1975), using a sample of 11 African countries over the period 1960-1970, found a positive correlation for some countries, negative (or no correlation) for others.

Measurement errors, the small sample and the potential endogeneity of financial development could, in theory, is the cause of this result.

"Civil liberties" exert a dominant effect on economic growth. Indeed, the coefficient of this variable is always positive and statistically significant.

This result is comparable to several others in this field. Indeed, among the first researchers who are interested in studying the impact of institutions on economic performance of nations, Kormendi and Meguira (1985) examined the effect of civil and political freedoms, among others, on economic growth and investment for 47 countries along a period from 1950 to 1977.

Table 1. Estimation results of democracy and growth (Arellano-Bond dynamic panel data estimator)

Variables	(1)	(2)	(3)
L GDP	0.28 (0.67)	0.15 (0.38)	0.2 (0.49)
INV	0.10** (1.66)	0.09 (1.39)	0.14* (2.05)
OPEN	0.02 (1.01)	0.03 (1.15)	0.14 (0.44)
G	-0.008 (-0.04)	-0.09 (-0.41)	-0.06 (-0.27)
M2/PIB	-0.023 (-1.01)	-0.04** (-1.81)	-0.007 (-1.33)
CL	-	1.82* (2.32)	-
PR	-	-	1.08 (1.06)
T-Sargan	9.03 (43)	5.05 (43)	8.39 (43)
AR(2)	0.91	0.93	0.77

Note: t-student in parentheses. LGDP: real GDP per capita growth on t-1.

The result they obtained is that countries that have a high level of civil liberties are most successful. Subsequent studies made by Scully (1989) and Tullock (1987) found a positive association between civil liberties and economic growth for a large number of countries.

Studies conducted in the 90s to test the relationship between regime type and economic growth has interpreted the index of civil and political liberties published by "Freedom House" as a measure of democracy.

Barro (1996) and Helliwell (1994) found that these indices are positively related to economic growth only when some explanatory variables are omitted from the relationship such as: education and the investment rate.

In general the relationship between measures of democracy and economic performance is far from clear (Barro, 1996, 1997; Durham, 1999) because on the one hand, economic growth requires a long-term rule of law and protection of civil and political freedoms, as stated North (1995), and on the other hand, as noted by Olson (1982), political freedom promotes the demands of special interest groups for redistributive policies. The efforts of these groups may produce a legislative deadlock and political sub-optimal, and thus affect growth. In a literature review, Brunetti (1997) compared 17 studies finding a positive, negative or not significant between growth and democracy.

The equation (3) check whether the democracy also have an indirect influence on economic growth through the accumulation of capital (table 2).

-Trade openness has a predominant effect on investment in these countries that the coefficient of this variable is always positive and statistically significant. This can be justified by the fact that openness to trade encourages investors to invest more through the provision of new opportunities in larger markets.

-"Public spending" has a positive effect not robust on investment. This is explained by the fact that governments can encourage private investment through the provision of adequate basic infrastructure, institutional environment healthy and skilled human capital.

-The same observation is valid for "financial development", which is expected given that the availability and diversity of funding are able to induce economic agents to invest more, hence the positive effect financial development on investment. This result is comparable to that found by King and Levine (1993) who studied the impact of financial development on economic growth, capital accumulation and total factor productivity for a sample of 80 countries during the period 1960 to 1989. The main result to what has led these authors is that financial development has a positive effect on economic growth, capital accumulation and total factor productivity.

Table 2. Estimation results of democracy and investment (Arellano-Bond dynamic panel data estimator)

Variables	(1)	(2)	(3)
INV_{-1}	-0.29* (-2.39)	-0.63 (-3.35)	-0.43 (-2.49)
OPEN	0.25 (7.18)	0. 26 (7.77)	0. 24 (6.33)
G	0.006 (0.02)	-0.20 (-0.94)	-0.065 (-0.33)
M2/GDP	0.13** (1.86)	0.12 ** (1.68)	0.055 (0.96)
CL	-	1.85 (3.93)	-
PR	-	-	2.28 (5.02)
T-Sargan	4.25 (43)	3.29 (43)	6.82 (43)
AR(2)	0.91	0.14	0.08

INV_{-1}: Investment on (t-1)

-The "civil liberties" and "political rights" positively influence the investment. This result is comparable to findings released by Isham et al. (1997) who analyzed the impact of the quality of governance on the performance of a hundred projects funded by the World Bank in some developing countries over the period 1974-1993. They found good performance in nations with high levels of civil liberties, as measured by the index of "Freedom House", the fact that a one point increase in this index is associated with an improvement of more than point in the rate of return of the project.

3.3 Interaction between Democracy and Investment

The theoretical analysis proves the existence of a positive interaction between the institutional environment and the productivity of investment. Thus, the latter proves to ameliorate with the amelioration of this environment.

This hypothesis implicates that the coefficient of investment, in the specific equation to estimate, is influenced by the country's political institutions (PR, CL). So, I am going to examine the effect of political institutions on the contribution of investment to economic growth. For this reason, I shall introduce an interactive term into the equation to estimate:

$$Y_{i,t} = \alpha_1 Y_{i,t-1} + \lambda_i X_{i,t} + \gamma_i (INV * DEMO_{i,t}) + \varepsilon_{i,t} \qquad (4)$$

X_i: a vector of control variables already defined.

INV*INS: interactive variable

DEMO: the two of institutional variables defined above (PR and CL).

The estimation results of this equation presented in the table 3 require:

That is to say that investment exerts a positive effect on these countries' economic growth as long as strong political institutions are founded in a way that private initiatives are prompted to invest and that they are freed and protected against any sort of violation.

The political institutions can act also on the economic performances in an indirect way through their effects on the economic institutions.

Seen that in a healthy institutional environment that ensures the security of property rights and avoid the risks of expropriation, the activities of tangible and intangible investment are prompted, and which act positively on overall economic performance.

Table 3. Estimation results of interaction between institutions and investment (Arellano-Bond dynamic panel data estimator)

Variables	(1)	(2)
L GDP	0.42 (1.15)	0.49 (1.37)
INV	0.06 (1.46)	0.06 (1.42)
OPEN	0.03 (0.84)	0. 03 (0.88)
G	-0.05 (-0.21)	-0.03 (-0.14)
M2/GDP	-0.03 (-1.18)	-0.04 (-1.33)
INV*CL	0.01 (1.46)	-
INV*PR	-	0.02** (1.95)
T- Sargan	7.78 (43)	7.98 (43)
AR(2)	0.5	0.49

4. Conclusion

In this research project, I have tried to make a contribution to solve the fundamental question: Is there any link between a country's democracy, investment, and the economic performances that it achieves?

To this end, we employed a dynamic panel data model covering a sample of 11 countries from the MENA region during the period 2000-2009.

After studying the relationship between democracy and economic growth, and the democracy and the investment, an interactive variable has been introduced in order to test the effect of the political institutions (democracy) on these countries' investment productivity.

The main findings derived from this empirical analysis reveal the following:

- A positive impact of democracy on investment.
- A positive effect of civil liberties on economic growth.
-A positive interaction between political rights and investment.

Generally speaking, the heterogeneous results in terms of link between institutional factors and economic growth which have been reached by the empirical tests carried out within the framework of this research reinforce the conclusion achieved by the empirical literature of the subject; that a clear relationship between the institutional sphere and the economic sphere is far from being found.

The census done by Borner et al. (1995) falls within this same framework, since among all the studies done to test this relationship, they registered three empirical studies leading to a positive relationship, three going in the opposite direction, and ten which identify no conclusive relationship between democracy and economic growth.

To conclude, these analyses have permitted, though in part, to show that there exists a relationship between democracy and the economic performances and to detect certain essential channels through which may transit the effects of the political institutions on the performances of the countries as regards economic growth.

However, it is important to note that, despite the importance of the empirical results which this work has led to, some insufficiencies may be raised:

-Other possible mechanisms of the studied relationship haven't been included.
-The issue of causality hasn't been treated.

The relationship between the institutional factors and the economic growth may be better grasped once its underlying mechanisms continue to be analyzed and the techniques used to quantify them are improved.

In the light of the present debate generally concerning good governance, democratic transition in some countries from the MENA region (Tunisia, Egypt) these fields of investigation can be the subject study of several future works.

References

Alesina, A., Perotti, R. (1994), "*The Political Economy of Growth: A Critical Survey of the Literature*", The World Bank Economic Review, 8, 351–71.

Alfaro, L., Chanda, A., Kalemli-Ozcan, S., Sayek, S. (2004) " *FDI and economic growth: the role of local financial markets*" Journal of International Economics, 64, 89-112.

Arellano, M., Bond, S. (1991): "*Some Tests of Specification for Panel Data: Monte-Carlo Evidence and an application to Employment Equations*" Review of Economic Studies, 58, 277-297.

Arellano, M., Bond, S. (1998): "*Dynamic panel data Estimating using DPD98-A Guide for users*", Institute for Fiscal Studies, mimeo.

Azam, J-P., Berthelemy, J-C., Calipel, S. (1996) "*Risque politique et croissance en Afrique*" Revue Economique, 47(3), 819-829.

Banks, A.S. (1979) (and subsequent updates). "Cross-National Time Series Data Archive" Center for Social Analysis, State University of New York at Binghamton. Processed.

Bhatia, R.J., Khatkhate, D.R. (1975), "*Financial intermediation, savings mobilization and entrepreneurial development: The African experience*", IMF Staff Papers, 22(1), 132-158.

Barro, R.J. (1996), "*Democracy and Growth*", Journal of Economic Growth, 1, 1-27.

Barro, R.J. (1997), *Determinants of Economic Growth. A Cross–Country Empirical Study*, MIT Press, Cambridge.

Bollen, K.A. (1980) "*Political democracy and the timing of development*" American Sociological Review, 44, 572-587.

Borner, S., Brunetti, S., Weder, B. (1995), Political Credibility and Economic Development, Macmillan, Londres.

Borner, S., Bodmer, F., Kobler, M. (2004), "*L'efficience institutionnelle et ses déterminants: Le rôle des facteurs politiques dans la croissance économique*", les éditions de l'OCDE n°53358, 2004.

Brunetti, A. (1997), *Politics and Economic Growth: A Cross–country Data Pers*pective, OCDE, Paris.

Burkhart, R.E., Lewis-Beck, M.S. (1994) "*Comparative democracy: The economic development thesis*" American Political Science Review, 88, 903-910.

Caselli, F., Esquivel, G., Lefort, F. (1996), "*Reopening the Convergence Debate: A at Cross–Country Growth Empirics*", Journal of Economic Growth, 1, 363–379. New Look.

Cukierman, A., Edwards, S., Tabellini, G. (1992), "*Seignorage and Political Instability*", American Economic Review, 82, 537–55.

De haan, J., Siermann, C.L.J. (1998) "*Further evidence on the relationship between economic freedom and economic growth*". Public Choice, 95, 363-380.

Dessus, S. (1998) "*ouverture et productivité à Taiwan*" Economie International, n°73.

Durham, J.B. (1999), "*Economic Growth and Political Regimes*", Journal of Economic Growth, 4, 81–111

Fosu, A.K. (1992) "*Political instability and economic growth: evidence from sub-Saharan Africa"* Economic Development and Cultural change, 40(4), 829-841.

Freedom House (diverses années), Freedom in the World – Political Rights and Civil Liberties, Freedom House, New York.

Gastil, R. (1982-1983), *Freedom in the World*. Westport, Greenwood Press, édit°1986.

Guillmont, P.S., Guillmont, J., Brun, J.F. (1999) "*How instability lowers African growth*" Journal of African Economics, 8(1), 87-107.

Gupta, S., Davoodi, H., Alonso-Terme, R. (1998) "Does corruption affect income inequality and poverty?" Working paper n°WP/98/76. Fonds monétaire international, Département des affaires fiscals, Washington, D.C.

Hall, R.E., Jones, C.H. (1999), "*Why do some Countries produce so much more output per worker than others?*", Quarterly Journal of Economics, 114(1), 83-116.

Helliwell, J. (1994) "*Empirical linkages between democracy and economic growth*." British Journal of Political Science, 24, 225-248.

Islam, N. (1995), "*Growth Empirics: A Panel Data Approach*", Quarterly Journal of Economics, 110, 1127–1170.

Isham, J., Kaufmann, D., Pritchett, L. (1997), "*Civil liberties, democracy and the performance of government projects*", The World Bank Economic Review, 11(2), 219-242.

Kaufmann, D., Kraay, A., Zoido-Lobaton, P. (1999a), "Aggregation governance indicators", Policy research working paper 2195. World Bank, Policy research department, Washington, D.C.

Kaufmann, D., Kraay, A., Zoido-Lobaton, P. (1999b), "*governance matters*", Policy research working paper 2196. World Bank, Policy research department, Washington, D.C.

Knack, S., Keffer, P (1995), "*Institutions and Economic Performance: Cross–country Tests Using Alternative Institutional Measures*", Economics and Politics, 7, 207–27.

Kormendi, R.C., Meguire, P.G. (1985), "*Macroeconomic Determinants of Growth: Cross–Country Evidence*", Journal of Monetary Economics, 16, 141–163.

Levine, R., Renelt, D, (1992) "*A sensitivity analysis of cross-country growth regressions*", American Economic Review, 4, 942-963.

Londregan, J.B., Poole, K.T, (1990) "*Poverty, the coup trap and the seizure of executive power.*" World Politics, 42(2), 151-183.

Mauro, P. (1995), "*Corruption and Growth*", Quarterly Journal of Economics, 110, 681–712.

Mauro, P. (1996), "*The effects of coruption on growth, investment and government expenditure*" In Kim-(eds) Corruption and the World Economy.

North, D.C. (1991), *Institutions, Institutional Change and Economic Performance*, Cambridge University Press, Cambridge.

North, D.C. (1995), "*The New Institutional Economics and Third World Development*", in J. Harriss, J. Hunter et C.M. Lewis (dir. pub.), 17–26.

Olson, M. (1982), *the Rise and Decline of Nations*, Yale University Press, New Haven.

Ozler, S., Tabellini, G. (1991) "*External debt and political instability*" NBER Working Paper, n°3772. Cambridge. MA: National Bureau of Economic Resesarch.

Prezeworski, A, Alvarez, M., Cheibub, J-A., Limongi, F. (2000), democracy and development: Political Institutions and Well-Being in the World, 1950-1990 (Cambridge).

Sachs, J., Warner, A. (1997) "*Fundamental Sources of Long-Run Growth*", American Economic Review, 87, 184-188.

Scully, G.W. (1992), *Constitutional Environments and Economic Growth*, Princeton University Press, Princeton.

Tavares, J., Wacziarg, R. (2001) "*How democracy affects growth*" European Economic Review, 45, 1341-1378.

Talyor, C., Hudison, M (1972). *World Handbook of Political and Social Indicators*. New Haven, Conn: Yale University Press.

Tullock, G. (1987). *Autocracy*, Dordrecht: Kluwer.