How Do Political and Governance Institutions Affect Private

Investment Decisions?

An Application to the Middle East and North Africa

By

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Abstract

This paper shows for a panel of 32 developing countries that political and governance institutions matter for private investment decision. This linkage is empirically verified for a broad number of institutions. This is the case for corruption, quality of bureaucracy, judiciary, security of property rights, regulations and taxation, political stability, as well as political rights and civil liberties. This result is obtained by estimating a simultaneous model of private investment and political and governance quality, where economic policy and other variables explain concurrently both variables. In MENA, the deficiencies in the administration quality, the political instability and the low public accountability contributed significantly to the low investment decisions of the 1980s and the 1990s. This paper shows as well that, although political and governance institutions constitute first order importance for private investment, economic reforms in the form of financial development and trade openness, and human capital affect private investment decision directly, as well as by enhancing the quality of political and governance institutions.

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1. Introduction

The quality of political and governance institutions is part of the investment climate of a country. Because of the forward- looking nature of investment, entrepreneurs need a stable and secure environment to invest. "Good" political and governance institutions are viewed as reducing economic uncertainties and as promoting efficiency (see North, 1981). In this respect, and as reported by the World Bank (2004), better political and governance institutions improves the investment climate by enhancing bureaucratic performances and predictability. This also reduces the cost of doing business. Better governance contributes as well to the effective delivery of public goods that are necessary for productive business. Cross-country correlations using broad proxies for investment climate quality suggest a positive link between the investment climate and private investment decisions[1].

In the MENA region, political and governance institutions have on average been weak. These weaknesses are particularly related to democratic institutions such as political rights, civil liberties, or freedom of the press. Similarly, the quality of the administration -- such as the control over corruption, the quality of the bureaucracy, the reliability of the judiciary, the security of property rights or the degree of regulation and taxation -- are also lacking. These deficiencies have been reported as being responsible for the slow economic activity in MENA (see El Badawi, 2002; and the World Bank, 2004). At the same time, private investment decisions have shown a stagnant trend. Although liberalization of economies and acceleration of reforms increased private investment throughout the world, MENA countries did not follow this movement. This has been the case for the last two decades (see Aysan et al. 2006).

The growing literature on the importance of political and governance institutions for economic performance has, however, recently led to reconsideration of the role of economic policies in explaining cross-country economic achievements. Recent work on the role of both governance and economic policies has found that governance institutions are the dominant factor with little, if any, independent influence of policies[2]. These

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[1] The World Bank (2004) has investigated the correlation between private investment and the ICRG (1999) index of "investment profile". This index is based on measures of contract enforceability, expropriation, profit repatriation, risk of operation, taxation and payment delays.
[2] See in particular Rodrik, Subramanina and Trebbi (2002), and Easterly and Levine (2003).

results, however, are likely to stem from endogeneity and specification problems (see Sachs, 2003). In fact, economic policies can also affect cross-country variations in political and governance quality. There is, in particular, some evidence that greater openness to trade and stronger competition are conducive to better governance[3]. Given these conditions, economic policies may explain economic performances through their impact on political and governance institutions[4]. To capture both effects, we estimate a simultaneous model of private investment and of political and governance institutions, where economic policies concurrently explain both variables.

In this paper, we also investigate what types of political and governance institutions are more detrimental to entrepreneurs' investment decisions. We introduce a large set of political and governance variables which are not typically used in the literature. We classify political and governance institutions in three categories: "Administrative Quality", (QA), "Public Accountability" (PA), and "Political Stability" (PS). Since the initial indicators entering into these three categories are likely to be correlated, we process an aggregated indicator of political and governance institutions *(GOV)* using the principal component analysis methodology.

Our empirical approach relies on panel data (cross section-time series analysis) which is suitable -- contrary to previous studies -- to jointly assessing the impact of economic policies and political and governance institutions on private investments: the time series dimension captures the variability of policies through time and the cross section dimension covers the political and governance variables which tend to evolve slowly. For this paper, we have also collected a new data set on private investment. We have extended and improved the data set of International Finance Corporation (*IFC*) which comprises private investments of various developing countries from 1970 to 1999. We have compared this data set with national and international sources especially when the data provided by country economists of the World Bank or by national sources differ considerably and added extra observations for more recent years. Finally, our data set covers 63 countries over the period 1970-2002 (see *Annex A1* for the list of countries).

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[3] For the positive spillover from trade openness on institutions see Berg and Krueger (2003), Islam and Montenegro (2002), and Wei (2000). For the role of domestic competition, see Ades and Di Tella (1999), Djankov and others (2001), and the World Bank (2002).
[4] This impact might also be explained by the fact that the measure of institutional quality is most often subjective and an amalgam of policy and institutional factors.

Finally, the empirical model allows for the simultaneous estimation of private investments and of political and governance institutions. This model is justified by the fact that -- in addition to economic policies -- changes in private investment can influence the quality of governance[5]. Besides, this model of simultaneous equations allows other factors to affect private investment and the quality of political and governance institutions concurrently.

Our estimations show that political and governance institutions are positively associated with investment's decisions. This finding confirms that the quality of the administration, the political stability and the public accountability are all significant in boosting private investment. Estimation results point out that one standard deviation improvement in aggregate index of governance leads to almost 2.5 percent increase in private investment to GDP ratio which constitutes a considerable improvement especially for developing countries. This result is robust to the introduction of other explanatory variables. Our estimations also confirm that the role of economic policies in the form of financial and trade policies are also highly detrimental for private investors to invest. Our results also uncover that, in addition to their direct impact, economic reforms affect private investment through their influence on institutional quality.

In analyzing the contribution of factors to private investment in MENA, we compare performance of the MENA region in political and governance institutions with the ones of the more advanced developing economies of our sample, namely the East Asian economies. By means of the estimation results of the empirical model, we simulate which level of private investment MENA could have achieved if the region had experienced the same economic policies and political and governance institutions as East Asia throughout the 1980s and 1990s separately. Political Stability among other political and governance institutions appears to be most important factor in explaining the deficient private investment performance in the MENA in 1980s. In 1990s, the most important institutional factor turns out to be public accountability. A more precise diagnostic of the weaknesses of the political and governance institutions in MENA is also done by carefully calculating the contribution of each dimension of institutional variables

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[5] See Altmann (2006), Lipset (1959), Glaeser et al. (2004), Azariadis and Lahiri (2002), Alesina et. al. (1996), Isham et. al. (2002).

employed in the regressions. Our results show that the main shortcomings of the 1980s have come from the perception of religious tensions and external conflicts, as well as from the discontent of the population regarding their social economic situation. However, in 1990s political rights and civil liberties appear to be the most important factors in hindering private investment in the MENA region.

This paper is organized as follows. The second section introduces the political and governance institutions which are detrimental for entrepreneur to invest. The third section presents other determinants of private investment, in addition to political and governance institutions. The fourth section introduces the empirical model of private investment and political and governance institutions. The fifth section presents the estimations of the two equations. The sixth section calculates the contribution of political and governance institutions to the low level of private investment in MENA. The last section concludes.

2. The role of Political and Governance Institutions in Private Investment Decisions

The economic literature provides a number of classifications of political and governance institutions (see Kaufmann, Kraay and Mastruzzi, 2003 and the World Bank, 2004). Our choice of indicators has however been limited by the lack of annual data available for a large sample of countries over a relatively long period of time. This paper proposes to group the political and governance variables which are akin to affect individual investors' decision into three categories: "Administrative Quality" (*QA*), "Public Accountability" (*PA*), and "Political Stability" (*PS*).

2.1. Quality of Administration (*QA*)

The "Quality of Administration" expresses the ability of government to provide investors with an investment-friendly and reliable environment. The "Quality of Administration" is defined by four indicators from the International Country Risk Guide (*ICRG, 1999*): (a) "Control over Corruption", (b) "Quality of Bureaucracy", (c) "Investment Profile", and (d) "Law and Order" (see definitions of variables in Appendix

2). These institutions promote investments by reducing the costs and risks of doing business.

Corruption is often described as one of the major constraints facing enterprises in the developing world (see the World Bank 2005). For private investors, corruption raises the costs of investment and of operation. Corruption also increases uncertainties about the timing and effects of the application of government regulations. Besides, corruption augments the costs of public enterprises and in turn leads to insufficient and low quality infrastructure (see Tanzi and Davooli, 1997).

The "Quality of Bureaucracy" describes the ability of the government to formulate and implement sound policies. The "Quality of Bureaucracy" indicates as well that "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" (ICRG, 1999) [6].

The "Investment Profile" measures the government's attitude to inward investment. "Investment Profile" is defined by four indicators: a) risk to operations; b) taxation; c) profit repatriation; d) labor costs (*ICRG, 1999)*. Because investors make long-term decisions, risks to operations and other uncertainties about future policies are detrimental to investment decisions. Taxation and labor costs are also of first order importance for the costs and decisions to invest. Although government regulations and taxation are reasonable and warranted in order to protect the general public and to generate revenues to finance the delivery of public services and infrastructures, overregulation and over-taxation deter investments by raising business start-up and operating costs.

Although many aspects of the business environment affect investment decisions, the security of property rights is one of the most important and the best documented. Because of the forward-looking nature of investment, investors need institutions that preserve the right of private property, ensure equitable and consistent rule of law in protecting this right, as well as effective incentives to respect and enforce it. A

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[6] See for example Evans and Rauch, (2000) for the effects of bureaucratic quality on the economic activity.

reliable judiciary, in particular, reduces transaction costs for businesses and sends positive signals to investors that rules of law will be equitably and consistently protected and enforced. The empirical literature, on the question of property rights and of rule of law is rather wide and the results of cross-country analysis are quite robust[7]. In the "Law and Order" index, the law sub-component provides an "assessment of the strength and impartiality of the legal system". The other sub-component concerns the "popular observance of the law" (*ICRG, 1999*).

2.2. Public Accountability (*PA*)

"Public Accountability" consists in two indicators: "Civil Liberties" and "Political Rights". These indicators are estimated by Freedom House (FH).

Since fixed capital formation involves a certain degree of irreversibility, private investment decisions are sensitive to the perception of the credibility and tenacity of the political regime and of policies[8]. A participatory political system provides stability of social institutions and ensures a public support to policies, which are in this case more sustainable in the long run. Public accountability is a guaranty of transparency and of better availability of information, which also help governments to build credibility. Public accountability provides access to policymakers and can hold them responsible for failures in implementing policies. In particular, freedom of press, free political parties and open elections contribute to government's legitimacy and give voice to citizens in the decision-making process. The empirical validation of the effects of transparency and accountability on growth has, however, produced mitigated success[9]. The work of Pastor and Sung (1995) is one of the few to show a positive effect of various indicators of democratic institutions on private investment in the developing world.

2.3. Political Stability (*PS*)

"Political Stability" includes the following variables from ICRG (1999): "Government Stability", "Socioeconomic Conditions", "Internal Conflict", "External

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[7] See Calderon and Chong, (2000), and Acemoglu, Johnson and Robinson (2001) in the context of growth; See North (1981), Knack and Keefer (1995), Easterly and Levine (2003), Rodrik, Subramanian, and Trebbi (2002), and Saleh (2004) in the context of investment.
[8] See in particular Rodrik (1991) and Serven and Solimano (1993).
[9] See De Haan and Siermann (1996), Prszeworski and Limongi (1993), Prszeworski et al. (2000).

Conflict", "Ethnic Tensions", "Religious Tensions", and "Military in Politics" (see definition in Annex 2). Political instability increases the uncertainty in the economy and deters the risk-averse entrepreneurs to take action for profitable investment opportunities. Various authors have brought empirical evidence that various institutions associated with political instability hamper aggregate investment[10].

All the political and governance indicators have been aggregated by employing principal component analysis (PCA) to account for the multi-collinearity issue in using these potentially correlated variables in the same regression equation. Results of PCA are given in *Annex 3*.

3. Determinants of Private Investment, and of Political and Governance Institutions

Developing countries do not operate in a competitive environment and face constraints that are not accounted for in the neoclassical model[11]. In this paper, we address some of these constraints. After having controlled for the quality of governance and for the traditional determinants of private investment -- the expected aggregate demand (the accelerator) and the user cost of capital (Jorgenson, 1963) – we consider economic policy and human capital as part of the investment's decisions. We also consider these factors as improving the quality of political and governance institutions.

3.1. Structural Reforms

Deficit in economic reforms is among the most common constraints faced by developing countries. Economic reforms, in particular, show a clear deficit in the MENA economies (Nabli and Véganzonès -Varoudakis, 2006). Structural reforms are an important part of the actual and future profitability of private investment. In this paper, structural reforms are assessed through trade policy and financial development.

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[10] See in particular Rodrik (1991), Alesina and Perotti (1996), Le (2004), Brunetti and Weder (1994). In the growth context see also Alesina et al. (1996), Svensson (1998), Olson et al. (2000).
[11] See for example Greene and Villanueva (1991), Blejer and Khan (1984), and Serven (1997). See also Shafik (1992) on *Egypt* ; Schmidt and Muller (1992) on *Morocco,* as well as Bisat, El-Erian, El-Gamal and Mongelli (1996), and Aysan et. al. (2006) on MENA.

Financial development participates directly in private investment decisions. A developed financial system mobilizes and allocates resources to the enterprises. Besides, a developed financial system is expected to be more efficient through an increasing technological specialization, which leads to a better selection of projects and a more advanced diversification of risks. This allows the firms to finance more investment projects and increases the productivity of new investments (see Levine, 1997, for a synthesis). In addition, given the lack of well-functioning financial markets, the neoclassical assumption of the flexible accelerator model about the availability of credit supply by the banking sector cannot be taken for granted in developing countries. This discrepancy also occurs because of the public deficits and public debt, which can lead to financial repression and to eviction of private investment. The empirical literature provides now quite extensive evidence for the positive impact of financial development on private investment decisions[12].

By increasing competitiveness and providing access to enlarged markets (Balassa, 1978; Feder, 1982), trade reforms constitute another factor that stimulates private investment decisions. Trade openness as well is at the origin of economies of scale and of productivity gains. Besides, considering the general consensus on the role of tradable goods in providing positive externalities in the form of collateral for external financing (Caballero and Krishnamurthy (2001), trade openness influence the availability of external credit.

All these factors create favorable conditions for the enterprises to invest. Economic reforms affect as well private investment through their impact on the quality of governance institutions. There is, in particular, considerable evidence that greater openness to trade and stronger competition lead to improved political and governance institutions[13]. Opening up markets may help to weaken vested interests and reduce rents derived from prevailing economic and institutional arrangements. Trade openness may

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[12] In his survey of investment functions in developing countries, Rama (1993) presents the positive effect of financial development on private investment in 21 of the 31 papers surveyed. See also McKinnon (1973) and Shaw (1973).

[13] For the positive spillover from trade openness on governance quality, see Berg and Krueger (2003), Islam and Montenegro (2002) and Wei (2000). For the role of domestic competition, see Ades and Di Tella (1999), Djankov and others (2001), and the World Bank (2002).

also stimulate demands for governance institutions more suited to an increasingly varied and complex range of transactions (See IMF, 2003).

3.2. Human Capital

Human capital is a complementary factor of physical capital. Here, we assume health and education as part of the human capital index. Human capital stimulates private capital formation by raising the profitability of investment. Human capital can also be at the origin of positive externalities[14]. Because skilled workers are better in dealing with changes, a skilled work force is essential for firms to adopt new and more productive technologies[15]. Besides, new technologies generally require significant organizational changes, which are handled better by a skilled labor force[16]. Human capital gives also the opportunity to the enterprises to expand or enter into new markets.

The literature highlights as well the importance of education in bringing better political and governance institutions (Lipset, 1959). . More educated people with higher life expectancy become more competent bureaucrats and -- in addition to better monitoring of the functioning of government officials -- demand for better quality of bureaucracy (Galor et al., 2005). Besides, educational attainment reduces the political instability by generating more avenues to reconcile the opposing parties. From the democratic accountability point of view, a more educated society is more likely to be enfranchised in terms of civil rights and liberties (Acemoglu and Robinson, 2001). These considerations justify why human capital also appears as an explanatory factor of private investment through its impact on the quality of political and governance institutions.

Although educational attainment has improved in the majority of developing countries, many firms still rate inadequate skills and education of workers as severe obstacles to their operations[17]. This is the case of the MENA region as well, where progress is still needed in order for the region to catch up with more advanced developing regions[18].

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[14] See Lucas (1988), Psacharopoulos (1988), and Mankiw, Romer and Weil (1992).
[15] See in particular Acemoglu and Shimer (1999).
[16] See Bresnahan, Brynjolfsson and Hitt (2002).
[17] See the World Bank (2005).
[18] See Nabli and Véganzonès -Varoudakis (2006).

4. The Model of Private Investment and of Political and Governance Institutions

Our empirical model aims at jointly explaining the share of private investment and the quality of political and governance institutions (*Gov*). The endogenous variables are simultaneously determined by influencing each other. In the private investment equation, lower quality of political and governance institutions is expected to reduce private investment. In the governance equation, private investment enters on the right side with an expected positive sign. Other factors that affect both private investment and political and governance institutions are also taken into consideration.

This system of equations is estimated using the three stage least squares estimation technique (3SLS) which allows to use the links between endogenous variables efficiently. Since endogenous variables appear as regressors in other equations, they have to be instrumented out by using exclusion restrictions.

The model estimated is the following:

$$PI_{it} = \alpha_0 + \alpha_1 Gov_{it} + \alpha_2 X_{1i} + \varepsilon_{1it} \qquad (1)$$

$$Gov_{it} = \gamma_0 + \beta_1 PI_{it} + \beta_2 X_{2i} + \varepsilon_{2it} \qquad (2)$$

Where

PI_{it} is the share of private investment in GDP

Gov_{it} represents the aggregate index of political and governance institutions

X_{1i} and X_{2i} are the other control variables in private investment (*PI*) and governance (*Gov*) equations respectively

ε_{1it} and ε_{2it} are the error terms of each equations. i indicates the country and t represents the time of the variable.

In the neoclassical flexible accelerator model, the determinants of private investment include the expected aggregate demand (the accelerator) and the user cost of capital. The private investment equation incorporates the real interest rate (*Realr*) and the GDP growth rate in last year (*grow*) to capture for the user cost of capital and the accelerator effect respectively. These two variables are excluded from the governance equation (*Gov*) in order to identify the system.

Besides, the two equations include the GDP per capita, as well as the variations in structural reform (*SR*) and human capital (*H*). Structural reforms consist of trade policy (*TP*) and financial development. Financial development is proxied by the private credit by banks and other depository institutions (*Pcr*). Trade policy is constructed by deducting the exports of oil and mining products, as well as the "natural trade openness" constructed by Frankel and Romer (1999) from the export and import in GDP ratio The structural reform indicator is generated by applying the principal component analysis to the trade policy and financial development variables (see results of PCA in *Annex 3*). Structural reform is expected to stimulate private investment and the institutional change for the better. The human capital indicator (*H*) consists of the life expectancy at birth, and the average years of primary, secondary and higher schooling in the total population over 15 years old. These variables are also aggregated using principal component analysis. Human capital is considered to enhance the private investment, as well as to lead to better political and governance institutions. Human capital variable is expected to have positive coefficients in both of the equations.

In the investment equation, GDP per capita accounts for the neoclassical Solow growth model. Countries with lower GDP per capita are expected to invest more over time and gradually catch up with more developed economies. Moreover, GDP per capita stands for possible externalities, such as greater market size on demand and supply of good and services. GDP per capita in governance equations represents the idea that more developed countries can afford to have better political and governance institutions (Azariadis and Lahiri 2002). A positive relationship is expected between GDP per capita and both private investment and political and governance institutions quality.

The oil export as a percentage of total merchandise export stands for the natural curse hypothesis in the investment equation. When a country relies essentially on natural resources extraction, there can be less incentive to invest for other products. This result may stem from the increase in the cost of labor (Rodriguez and Sachs, 1999). Moreover, countries with less reliance on natural resources are expected to form better political and governance institutions. The natural resource-abounded countries do not need to mobilize the society to enhance aggregate income. The ruling class can control the economy by collaborating with a small number of people in the society (Ross 2001, Bellin, 2001).

Under these circumstances, the elite is also less inclined to provide better governance by considering the future effects of today's enfranchisements (Acemoglu and Robinson, 2001) and engage in more rent-seeking activities (Aysan, 2006). The share of oil export in merchandise export is expected to reduce the quality of governance institutions.

To identify the system of equations, we exclude the variable *TenSyst* (tenure of the system, (see Keefer et al., 2001) from the investment equation. *TenSyst* reports the number of years that an administrative system lasts in the country -- regardless of whether autocratic or democratic. The underlying idea is that institutions settle over time. The longer the time passes with the existing system, the better institutions are established. This exclusion restriction is quite reasonable considering that *TenSyst* has a direct impact on the governance institutions whereas its influence on private investment is more likely to be realized through its effect on these institutions. Both of the equations include, finally, a regional dummy for the Middle Eastern and North African countries (*MENA*) to identify the position of the region among the other countries and to verify whether MENA substantially diverges from the rest of the world in terms of private investment, as well as of political and governance performance.

5. Estimating the Model of Private Investment and Political and Governance Institutions

Table 1 reports the results of estimations. Equations (1) and (2) have been estimated on an unbalanced panel of 32 developing countries over 1980-2002 using the three stages least square estimations technique (*3SLS*). One of the most interesting outcomes of our estimations concerns the Governance indicator which positively explain investment's decisions. This finding confirms that the quality of the administration, the political stability and the public accountability – as defined in section 2 – have first order importance for the enterprises to invest. The aggregated governance indicator is characterized with 5 percent significance level. One standard deviation improvement in aggregate index of governance leads to almost 2.5 percent increase in private investment to GDP ratio which constitutes a considerable improvement especially for developing countries. This result makes a factual contribution to the empirical literature on political and governance institution by validating, over a relatively long period of time, the substantial role of a large set of political and governance variables on private economic performance.

This result is robust to the introduction of other explanatory variables: structural reforms and human capital in particular. The roles of economic policy in explaining cross-country economic achievement has recently been questioned (Easterly and Levine; 2003). Our estimations confirm however that, although the quality of governance constitutes a major factor in the private sector decisions, the role of economic policies cannot be disregarded. Structural reform indicator emerges to be significant at 1 percent level with high coefficient value. Besides, our finding illustrates that firms in developing countries face constraints that are not accounted for in more developed economies and that deficiencies in trade policy, financial development and education have a long-term impact on private investment decisions and growth.

Our estimations validate as well the neoclassical theory of the firm in the case of developing countries. The accelerator variable has the expected positive sign, which implies that anticipations of economic growth induce more investment. Similarly, the interest rate appears to exert a negative and highly significant effect on private

investment, which is consistent with the user cost of capital theory. These variables are highly significant even less than 1 percent level. Our finding indicates that supply and demand considerations are also part of private investment decisions in developing countries. Our estimations fail, however, to verify the Solow hypothesis of decreasing return to scale of physical capital accumulation. The coefficient of the GDP per capita variable, although negative, is not significant.

Estimation of equation (1) finally confirms the natural curse hypothesis. The coefficient of the oil export variable as a percentage of total merchandise export is significant and negative. Conversely, the regional dummy for MENA countries is not significant. This result shows that, after controlling for various explanatory factors, private investment in MENA do not diverge from the rest of the world.

In the "Governance" equation (Table 1, column 2), our estimations reveal the positive impact of several factors on the quality of the political and governance institutions. GDP per capita shows that more developed countries entail better political and governance institutions. Tenure of system also brings better political and administrative quality. Likewise, human capital improves political and governance institutions. This result also confirms that education and health of the population stimulate private investment by also improving the governance quality.

Our estimations fail, however, to validate the role of private investment in enhancing governance quality, neither of the negative impact of the share of oil export in merchandise export. This finding contradicts the opinion that countries with more reliance on natural resources form worse governance institutions. There is no evidence also that structural reforms improve governance quality. However, when estimating the system by eliminating private investment from equation (2), structural reforms appears this time to be positive and highly significant, while other results remain unchanged (see Table 1, column 4). This may stem from the correlation between structural reforms and private investment. Furthermore, our finding confirms that, in addition to the direct link highlighted previously, economic reforms affect private investment through their impact on institutional quality. As for human capital, this bidirectional causality brings novel empirical evidences on the link between institutions and private economic activity.

An interesting result, finally, concerns the MENA dummy variable. Its coefficient is significant and negative. This finding confirms the deficit in political and governance institutions of the MENA region, as already mentioned (see the World Bank, 2004). After controlling the other determinants, MENA countries on average experience almost half point less aggregate index of political and governance institutions and this result is highly significant at less than 1 percent level. This result indicates the need for institutional reform in the MENA region, especially considering the positive and persistent role of political and governance institutions on private investment.

Explanatory Variables	Endogenous Variables		Endogenous Variables	
	Priv Inv	**GOV**	**Priv Inv**	**GOV**
	(1)	**(2)**	**(1)**	**(2)**
GOV	2.25		2.29	
	*(1.99)***		*(2.02)***	
Private Investment		0.029		
		-1.01		
Structural Reforms	2.03		2.04	
	*(8.79)****		*(8.8)****	
		0.03		0.1
		-0.45		*(4.0***)*
Human Capital	0.48		0.46	
	*(2.05)***		*(1.97)***	
		0.07		0.09
		*(1.88)**		*(3.16)****
Oil Exports	-0.035		-0.037	
	*(2.97)****		*(3.07)****	
		-0.0001		-0.0001
		-0.08		*-0.09*
GDP per Capita	-0.0003		-0.0003	
	-0.88		*-0.88*	
		0.0003		0.0003
		*(9.56)****		*(10.04)****
MENA Dummy	0.026		0.07	
	-0.02		*-0.07*	
		-0.44		-0.49
		*(3.29)****		*(3.78)****
Realr	-0.028		-0.035	
	*(2.67)****		*(3.28)****	
Growth	0.22		0.22	
	*(3.68)****		*(3.66)****	
Ten Syst		0.015		0.016
		*(6.03)****		*(7.21)****
Constant	11.9	-0.91	11.9	-0.56
	*(16.74)****	*(2.6***)*	*(16.77)****	*(9.08***)*
Numb obs	349	349	349	349

Notes: (*) indicates significance at 10 %; (**) indicates significance at 5 %; (***) indicates significance at 1 %. See sources of data in footnote

Sources of data are as follows: the private investment series have been processed from various national and international sources (International Finance Corporation (*IFC*), World Development Indicators (*WDI*), Life Data Base (*LDB*), see section 4.1 for more details). The "Administrative Quality" and "Political Stability" indexes use ICRG (1999) data. The components of the "Public Accountability" indicator come from Freedom House (2002). The "Structural Reforms" index uses data from WDI, but the oil export series entering the trade policy indicator comes from the United Nations. In the "Human Capital' indicator, the numbers of years of schooling are from Barro and Lee (1994) and from Barro (2000a and b), and the life expectancy series is from WDI. All aggregated indicators have been generated after implementing the PCA methodology (see Annex 4 for more details). Interest rates (*Rear)* have been calculated from IFS and *TenSyst* comes from Keefer et al. (2001). All other data are from WDI.

6. How Much Deficiencies in Political and Governance Institutions Explain Low Private Investment in MENA?

To assess the contribution of factors to private investment in MENA, we compare performance of the MENA region in "Administrative Quality", "Political Stability" and "Public Accountability" – as well as in structural reforms and human capital -- to the ones of the more advanced developing economies of our sample, namely the East Asian economies. Using the model estimated previously, we simulate which level of private investment MENA could have achieved if the region had experienced the same economic policies and political and governance institutions as East Asia. This comparison has been done for two time periods – the 1980s and the 1990s respectively – which reveal quite different characteristics.

			Table 2: Private Investment to GDP						
			Increase with Improvement in						
% GDP	Private Investment (actual)	Structural Reforms	Human Capital	GOV				Total Contributions	Private Investment (potential)
					QA	PA	PS		
1980	11.9	1.78	0.6	3.09				5.47	17.37
					0.7	0.67	1.72		
1990	11.6	4.2	0.2	1.16				5.56	17.16
					0.18	0.67	0.31		
Source: Authors' calculations									

We first calculate the coefficients of the initial variables entering into the composite governance indicator. The calculation is based on the estimated coefficients of the aggregate indicator in the regression (*Gov,* Table 1 column 3), as well as on the weights of each principal component in the aggregate indicator combined with the loading of the initial variables in each principal component (*Annex* 3)[19]. Coefficients of the initial variables are presented in *Annex 4* and contributions appear in Tables 2 and 3. The contribution of the Administration Quality has been calculated by aggregating the

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[19] See for example, Nagaraj et al (2000) for more details on the methodology.

contributions of its four sub-components[20]. Same thing has been done for Political Stability[21], Public Accountability[22], Structural Reform[23] and Human Capital[24] as well.

A first set of conclusions concerns the weaknesses of MENA institutions during the 1980s (see Table 2). Insufficient "Administrative Quality" compared to East Asia has cost to the region 0.7 percent of private investment to GDP on average per year. The cost of deficiencies in "Political Stability" has even been higher (1.72 per cent of GDP). Private investment could have reached on average 14.29 per cent of GDP (compared to 11.9 percent observed) if MENA had benefited from the same quality of administration and political stability as East Asia.

In the 1990s, the gap with East Asia was noticeably reduced. Progress in "Administrative Quality" (0.18) and "Political Stability" (0.67) helped investment's decisions, which deficit has only been of 0.85 points of GDP on average per year (see Table 2). Other studies acknowledge this progress in the quality of the administration during the late 1990s (see in particular the World Bank, 2004)[25]. "Public Accountability", however, did not improve throughout the 1990s. With an identical "Public Accountability` level as in East Asia, MENA region could have increased private investment by 0.67 percent of GDP on average per year on each decade.

Institutional deficiencies have not been the only reason of the low private investment performances in MENA region. Deficit in structural reforms constitutes another major explanatory factor over the whole period, but more importantly during the 1990s. The low trade openness of the region compared to East Asia and the insufficient development of the financial system have reduced private sector investment projects by 4.2 points of GDP in average per year (1.78 during the 1980s). The ratio of private investment could have reached 16.96 percent of GDP during the 1990s (compared to 11.6

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[20] Theses sub-components are corruption, bureaucracy quality, investment friendly profile of administration and law and order (see section 2)..
[21] Political Stability has been proxied by aggregating the following indicators: government stability, social economic conditions, military in politics, internal and external conflicts, religious and ethnic tensions.
[22] Public Accountability has been calculated by using civil liberties and political rights.
[23] The Structural Reform indicator contains trade policy and financial development
[24] Human Capital is defined from life expectancy, and years of primary, secondary and tertiary education
[25] The same studies note, however, that the smaller gap with East Asia is also partly due to a less significant improvement in the quality of institutions in this region.

observed) and 16.77 percent in the 1980s, if both factors (structural reforms and governance) had been improved to a similar level as in East Asia (see Table 2).

Interesting conclusions emerge also in analyzing a more precise diagnostic of the weaknesses of the political and governance institutions in MENA. In the 1980s, weaknesses involve the four sub components of "Quality of Administration": corruption is one important aspect, but the quality of the bureaucracy and of the judiciary system, as well as limitations dues to risks to operations, regulations, taxations, and cost of labor are also salient (see Table 3). Our findings are in line with the conclusions of the literature on the role of corruption, as well as of rules of law and property rights in reducing the costs and risks of doing business. Besides, our results unravel new empirical evidences on the subject of regulation and taxation and on their impact on the business environment.

Table 3: Private Investment to GDP
How much Private Investment Increases with Improvement in:

PI/GDP percent	*QA*	corrup tion	bur qual	inves prof	law ord	*PA*	pol rights	civ lib
1980s	*0.7*	0.19	0.17	0.18	0.16	*0.67*	0.31	0.36
1990s	*0.18*	0.01	0.15	0	0.02	*0.67*	0.32	0.35

PI/GDP percent	*PS*	gov stab	soc eco. cond	int confl	ext confl	ethn tens	relig pol	milit pol
1980s	*1.72*	0	0.45	0.25	0.45	-0.11	0.48	0.2
1990s	*0.31*	-0.02	0.15	0.02	0.05	-0.13	0.31	-0.07

PI/GDP percent	*SR*	priv cred	trade pol
1980s	*1.78*	0.48	1.3
1990s	*4.2*	2	2.2

*Source***: Authors' calculations**

On "Political Stability", the main shortcomings of the 1980s have come from the perception of religious tensions and external conflicts, as well as from the discontent of

the population regarding their social economic situation (0.48 0.45 to 0.45 points of GDP respectively depending on the factors, see Table 3). This finding confirms that institutions associated with political instability have a disruptive effect on aggregate investment. Finally, on "Public Accountability", concerns about civil liberties and political rights explain in the same way the deficiencies in private investment. After all, this section also contributes to the literature by identifying which specific factors are more costly for private investment decisions in MENA countries. For example, in 1990s political rights and civil liberties appear to be the most important factors in hindering private investment.

Another striking feature relates to the critical concern about trade policy and financial development. In MENA, trade policy deficiencies have reduced private investment decisions by respectively 1.3 and 2.2 per cent of GDP on average per year during the two decades. Likewise, a better financial system (such as in the East Asian economies) would have stimulated firms' decisions to invest by 4.8 points of GDP yearly during the 1990s (see Table 3). This result makes of structural reforms another important question that MENA governments have to address if the region wants to catch up with more successful developing economies.

7. Conclusion

The main conclusion of this paper is that political and governance institutions matter for private investment decisions. This result has been empirically shown by estimating a model of private investment and political and governance quality for a panel of 32 developing countries over the 1980s and the 1990s. Our estimations verify that a low level of corruption, a good quality of bureaucracy, a reliable judiciary, a strong security of property rights, a reasonable risk to operations, as well as a sound taxation and regulation contribute significantly to the firms' decision to invest. Our estimations also corroborate that "Political Stability" and "Public Accountability", by providing a sound and predictable environment to the enterprises, participate in a friendly business environment. These results add significantly to the literature on governance by validating the role of a large set of institutional variables on private economic performances over a relatively long period of time.

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Our findings are robust to the introduction of other explanatory variables: structural reforms -- in the form of trade openness and financial development -- and human capital in particular. We are therefore able to confirm that -- contrary to recent works which approach political and governance institutions as the dominant factors with little independent influence of economic policies (see Rodrick, Subramanina, and Trebbi, 2002; and Easterly and Levine, 2003). -- economic policies and political and governance institutions both participate in the firms' decisions to invest. Besides, our finding illustrate that firms in developing countries face constraints that are not accounted for in more developed economies.

In MENA, political and governance deficiencies greatly explain the low private investment performances of the region during the 1980s. Deficit in "Quality of Administration" and "Public Accountability" compared to East Asia has cost on average per year 1.37 point of private investment to GDP. The "Political Instability" of the period has deterred investment decisions even more, with a deficit in private investment of 1.72 percent of GDP.

In the 1990s, the gap with East Asia was noticeably reduced. Progress in "Administrative Quality" and "Political Stability" helped investment's decisions. "Public Accountability", however, did not improve throughout the 1990s. In MENA countries, deficient political rights and civil liberties have led to 0.67 less private investment to GDP ratio per year throughout 1990s. This result shows that improvement in democratic institutions is still a key issue in the region.

Institutional deficiencies, however, have not been the only reason of the MENA low private investment. Deficit in structural reforms constitutes another major explanatory factor, over the whole period, but more importantly during the 1990s. These deficiencies have cost 4.2 points of GDP in terms of private investment in the 1990s. This makes of structural reforms an important question that MENA governments have also to address in order for the region to catch up with more successful developing economies.

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Table A1.

List of Countries with High Quality Data (61 countries)

Argentina	*Kenya**
*Bangladesh**	*Lithuania*
*Barbados**	*Malawi**
Belize	*Malaysia**
*Benin**	*Mauritius**
*Bolivia**	*Mexico*
*Brazil**	*Moldova*
Bulgaria	***Morocco***
Cambodia	*Namibia*
*Chile**	*Pakistan**
*China**	*Panama*
*Colombia**	*Papua New Guinea**
Comoros	*Paraguay**
*Costa Rica**	*Peru**
Cote d'Ivoire	*Philippines**
Croatia	*Poland**
Dominican Rep.	*Romania*
*Ecuador**	*Serbia and Montenegro*
***Egypt, Arab Rep**.*	*Seychelles*
El Salvador	*South Africa**
Estonia	*St Lucia*
Ethiopia	*St. Lucia*
*Guatemala**	*St. Vincent and the Grenadines*
Guinea-Bissau	*Thailand**
Guyana	*Trinidad & Tobago**
Haiti	***Tunisia***
*Honduras**	*Turkey**
*India**	*Uruguay**
*Indonesia**	*Uzbekistan*
***Iran, Islamic Rep**.*	*Venezuela**
	Yugoslavia (FR)

*Due to the lack of corresponding data for some countries, only counties marked with an * are included in the final regressions*

Annex 2

Definition of the Political and governance Indicators

Quality of Administration (*QA*)

The Quality of Administration index is composed of four indicators from ICRG defined in the following manner:

(i) Control over Corruption "is a measure of corruption within the political system. Such 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, last but not least, introduces an inherent instability into the political process".

(ii) Quality of Bureaucracy indicates that "countries where the bureaucracy has the strength and expertise 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. Countries that lack the cushioning effect of a strong bureaucracy receive low points because a change in government tends to be traumatic in terms of policy formulation and day-to-day administrative functions."

(iii) Investment Profile "is a measure of the government's attitude to inward investment as determined by an assessment of four sub-components: the risk to operations, taxation and repatriation and labor costs".

(iv) Law and Order "are assessed separately. 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."

Public Accountability (*PA*)

The second set of candidates measures the "Public Accountability". This index includes two indicators from Freedom House (FH): "Civil Liberties" and "Political Rights".

The "Civil Liberties" index mainly addresses the following questions:

- Are there free and independent media, literature and other forms of cultural expressions?

- Is there open public discussion and free private discussion?

- Is there freedom of assembly and demonstration?

- Is there freedom of political or quasi-political organization?

- Are citizens equal under the law, do they have access to an independent and nondiscriminatory judiciary, and are they respected by the security forces?

- Is there protection from unjustified imprisonment, exile or torture whether by groups that support or oppose the regime?

- Is there freedom from war or insurgency situations?

- Are there free trade unions and peasant organizations or equivalent, and is there effective collective bargaining?

- Are there free professional and other private organizations?

- Are there free businesses or cooperatives?

- Are there free religious institutions, and free private and public religious expression?

- Are there personal social freedom, which includes aspects such as gender equality, property rights, freedom of movements, choice of residence, and choice of marriage and size of family?

- It there equality of opportunity –which include freedom from exploitation by or dependency on landlords, employers, union leaders, bureaucrats, or any other type of denigrating obstacle – to a share of legitimate economic gains?

- Is there freedom from extreme government indifference and corruption?

The "Political Rights" index addresses the following questions:

- Is the head of the state, head of government, or other chief authority elected through free and fair elections?

- Are the legislative representatives elected through free and fair elections?

- Are there faire electoral laws?

- Are the voters able to endow their freely elected representatives with real power?

- Do the people have the right to freely organize in different political parties or other competitive political groping of their choice, and is the system open to the rise and fall of those competing parties or groupings?

- Are there a significant opposition vote, a de facto opposition power, and a realistic possibility for the opposition to increase its support or gain power through elections?

- Are the people free from domination by the military, foreign powers, totalitarian parties, religious hierarchies, economic oligarchies, or any other powerful groups?

- Do cultural ethnic, religious, and other minority groups have reasonable self-determination, self-government, autonomy, or participation through informal consensus in the decision making process?

- For traditional monarchies that have no parties or electoral process, does the system provide for consultation with the people encourage discussion of policy, and allow the right to petitions the rules?

Political Stability (*PS*)

The political stability index includes the following variables from ICRG:

Government Stability "is a measure both of the government's ability to carry out its declared program(s), and its ability to stay in office. This will depend on the type of governance, the cohesion of the government and governing party or parties, the closeness of the next election, the government's command of the legislature, popular approval of government policies, and so on."

Socioeconomic conditions "is an attempt to measure general public satisfaction, or dissatisfaction, with the government's economic policies. In general terms, the greater the popular dissatisfaction with a government's policies, the greater the

chances that the government will be forced to change tack, possibly to the detriment of business, or will fall."

Internal Conflict "is an assessment of political violence in the country and its actual or potential impact on governance. The highest rating is given to those countries where there is no armed opposition to the government and the government does not indulge in arbitrary violence, direct or indirect, against its own people. The lowest rating is given to a country embroiled in an on-going civil war."

External Conflict "is an assessment both of the risk to the incumbent government and to inward investment. It ranges from trade restrictions and embargoes, whether imposed by a single country, a group of countries, or the international community as a whole, through geopolitical disputes, armed threats, exchanges of fire on borders, border incursions, foreign-supported insurgency, and full-scale warfare."

Ethnic Tensions "measures the degree of tension within a country attributable to racial, nationality, or language divisions. Lower ratings are given to countries where racial and nationality tensions are high because opposing groups are intolerant and unwilling to compromise. Higher ratings are given to countries where tensions are minimal, even though such differences may still exist."

Religious Tensions "may stem from the domination of society and/or governance by a single religious group that seeks to replace civil law by religious law and to exclude other religions from the political and/or social process; the desire of a single religious group to dominate governance; the suppression off religious freedom; the desire of a religious group to express its own identity, separate from the country as a whole."

Military in Politics: "The military is not elected by anyone. Therefore, its involvement in politics, even at a peripheral level, is a diminution of democratic accountability. However, it also has other significant implications. The military might, for example, become involved in government because of an actual or created internal or external threat. Such a situation would imply the distortion of government policy in order to meet this threat, for example by increasing the defense budget at the expense of other budget allocations."

Annex 3

Principal Component Analysis

Table A3.1: The Governance Indicator

Component	Eigenvalue	Cumulative R2
P1	4.73	0.36
P2	1.72	0.5
P3	1.32	0.6
P4	1.1	0.68
P5	0.76	0.74
P6	0.7	0.8
P7	0.66	0.85
P8	0.53	0.89
P9	0.45	0.92
P10	0.39	0.95
P11	0.26	0.97
P12	0.24	0.99
P13	0.13	1

Table A3.2: The Governance Indicator Loadings

Loadings	P1	P2	P3	P4	P5	P6	P7
Corruption	0.25	0.18	0.49	0.02	0.19	0.06	0.27
Bureaucracy Qual	0.28	0.2	0.27	0.38	0.17	0.08	0
Investment profile	0.29	0.04	0.39	0.38	0.31	0.01	0.25
Law and Order	0.34	0.28	0.02	0.14	0.27	0.1	0.08
Political Rights	0.23	0.59	0.1	0.2	0.09	0.1	0.04
Civil Liberties	0.23	0.59	0.07	0.18	0.01	0.12	0.07
Government Stab	0.25	0.14	0.58	0.18	0.15	0.03	0.31
Socio Eco Cond	0.22	0.26	0.26	0.26	0.69	0.16	0.29
Internal Conflicts	0.37	0.13	0.13	0.24	0.06	0.07	0.24
External Conflicts	0.29	0.12	0.21	0.22	0.04	0.53	0.53
Ethnic Tensions	0.27	0.01	0.05	0.38	0.04	0.74	0.09
Religious Tensions	0.21	0.18	0.09	0.52	0.45	0.22	0.53
Military in Politics	0.32	0.01	0.22	0.04	0.22	0.23	0.17
Loadings	**P8**	**P9**	**P10**	**P11**	**P12**	**P13**	
Corruption	0.41	0.48	0.38	0.04	0.09	0.03	
Bureaucracy Qual	0.33	0.67	0.24	0.08	0.1	0.02	
Investment profile	0.02	0.02	0.23	0.46	0.44	0.08	
Law and Order	0.06	0.27	0.56	0.52	0.19	0.05	
Political Rights	0.02	0.11	0.11	0.11	0.05	0.7	
Civil Liberties	0.03	0.13	0.14	0.03	0.01	0.71	
Government Stab	0.15	0.1	0	0.43	0.45	0.06	

Socio Eco Cond	0.11	0.16	0.04	0.17	0.3	0.01
Internal Conflicts	0.21	0.14	0.17	0.5	0.6	0.01
External Conflicts	0.29	0.08	0.3	0.17	0.2	0.02
Ethnic Tensions	0.07	0.3	0.34	0.05	0.04	0.01
Religious Tensions	0.09	0.17	0.26	0.01	0.06	0.02
Military in Politics	0.73	0.18	0.31	0.03	0.21	0.05

GOV = P1*(0.32/0.74) + P2*(0.16/0.74) + P3*(0.10/0.74) + P4*(0.08/0.74)+ P5*(0.07/0.74)

Table A3.3: The Structural Reform Indicator (SR = P1)

Component	Eigenvalue	Cumulative R2
P1	1.49	0.75
P2	0.59	1

Table A3.4: The Structural Reform Indicator Loadings

Loadings	P1	P2
Trade Policy	0.71	0.71
Private Credit	71	-0.71

Table A3.5: The Human Capital Indicator (H = P1)

Component	Eigenvalue	Cumulative R2
P1	3.14	0.78
P2	0.38	0.88
P3	0.31	0.96
P4	0.18	1

Table A3.6: The Human Capital Indicator Loadings

Loadings	P1	P2	P3	P4
Life Expectancy	0.52	-0.33	0.03	-0.79
H1	0.5	-0.41	0.55	0.53
H2	0.5	-0.05	-0.8	0.32
H3	0.48	0.85	0.23	-0.03

A4.1: Short-Term Coefficients of the Disaggregated Indicators

Index	Variables	Short Term	Elasticities
		Standardized	Level
		Variables	Variables
GOV	*corruption*		0.31
		0.32	
	bureaucraty quality		0.37
		0.38	
	investment profile*		0.16
		0.34	
	law and order		0.13
		0.17	
	political rights	0.56	0.28
	civil liberties	0.56	0.35
	government stability	0.06	0.02
	socioeconomic conditions*	0.41	0.23
	internal conflict	0.24	0.1
	external conflict	0.25	0.11
	ethnic tensions	0.19	0.13
	religious tensions	0.28	0.2
	military in politics	0.39	0.24
SR	*TradeP*	1.44	0.05
	PCrBOG	1.44	0.07
H	*life*	0.25	0.02
	H1	0.24	0.15
	H2	0.24	0.32
	H3	0.23	1.84

Source: Authors' calculations.
Notes: (1) Impact is calculated using the estimated coefficient of the aggregated indicators (GOV, SR and H, see equation (3), Table (1)), as well as the weights of each principal component in the aggregate indicators, combined with the loading of the initial variables in each principal component (see Annex 3).