Does the Perception of Governance Institutions Matter for Private Investment: The Case of Middle East and North Africa?

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Abstract

This paper empirically shows that the perceived quality of governance is an essential determinant of the private investment decisions in the developing countries by stressing the existence of different types of possible measures of governance. We use three different indicators to measure the perceived quality of governance, "Quality of Administration" (*QA*), "Political Accountability" (*PA*) and "Political Stability" (*PS*). All of the three indicators were proved to be significantly –although at different levels of significance and magnitudes of influence- contributing for private investment decisions. We also confirm that Middle East and North Africa (MENA) region could have achieved a better private investment performance if it had an enhanced level of perceived institutions. In particular the low level of political accountability has been an influential factor which has been holding back the region from reaching its private investment potential.

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1. Introduction

The quality of governance in the Middle East and North Africa (MENA) region is generally considered to be inadequate. Although this is true for a large number of institutions, quality of governance is a wide-ranging phenomenon and its distinct features may exhibit quite different paths for the same region (see Table 1). For example in terms of the administrative quality and political stability indicators used in this paper, MENA ranks third -with scores of 0.14 and 0.07 respectively- among the six developing regions and is superior to Africa (AFR), Latin America (LAC) and South Asia (SAS). This basic comparison shows that contrary to common belief, MENA is not particularly deficient in institutional quality when measured by these indicators. On the other hand political accountability for the MENA is the lowest among the regions with the score of -0.90. The disaggregated governance variables in our sample of developing countries, which are shown in Table 2, also confirm the same result. The level of the variables associated with administrative quality –corruption, law and order, investment profile and bureaucracy quality- and political stability –government stability, internal conflict, external conflict and ethnic tensions- look rather satisfactory for the MENA region. The region is ranked as the second best in the categories of bureaucratic quality and investment profile and "the best" in the categories of government stability and ethnic tensions. In contrast, in terms of political accountability variables –civil liberties and government stability- MENA has the lowest score among all the regions[1].

Table 1 Governance Indicators (average 1970-2002)			
Region	Administrative Quality	Political Stability	Political Accountability
AFR	-0.38	-0.63	-0.55
EAP	0.59	0.29	-0.05
ECA	0.29	0.42	0.03
LAC	-0.31	-0.09	1.16
MENA	0.14	0.07	-0.90
SAS	-0.55	-0.88	0.46
Sources: International Country Risk Guide, Freedom House, and the Authors' calculations.			

The different levels of advancement displayed by the various governance indicators in the MENA region (as well as other regions) suggest that the mechanisms shaping each indicator can be quite different. Hence these different types of governance institutions are also expected to exert their influences on the economic variables differently as well. Hence, in studying the relationship between governance and economic indicators, unique influence of each category of institution needs to be taken into account. In this paper we focus on the various different dimensions of governance

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[1] Our argument supports the view presented by World Bank (2004).

indicates and analyze the impact of various types of perceived governance institutions on the level of private investment in MENA.

Region	Corruption	Bureaucracy Quality	Investment Profile	Law and Order	Political Rights	Civil Liberties	Government Stability	Internal Conflict	External Conflict	Ethnic Tensions
AFR	2.81	1.49	5.42	2.71	-5.10	-4.97	6.07	6.96	8.44	2.99
EAP	3.22	2.37	6.29	3.89	-4.29	-4.49	7.07	9.28	9.99	3.33
ECA	3.43	1.71	5.69	4.04	-4.20	-4.39	6.94	9.68	10.06	3.92
LAC	2.71	1.44	5.73	2.81	-2.72	-3.02	6.13	7.61	9.75	4.34
MENA	2.98	1.95	5.89	3.39	-5.41	-5.51	7.62	8.30	8.34	4.34
SAS	1.98	1.81	5.38	2.33	-3.38	-4.08	5.73	6.60	8.27	2.29

Table 2 Disaggregated Governance Variables (average 1970-2002)

Sources: International Country Risk Guide, Freedom House the Authors' calculations.

There is an emerging literature on the quality of governance which advocates that "good" governance institutions are needed for successful market-based economies[2]. The impact of institutions on economic growth[3], GDP per capita[4] and or volatility of the economic activity[5] have been studied extensively in the recent years. Although private investment is arguably one of the main channels through which institutions exert their influence on growth and economic development, very little research is done on the relationship between private investment and governance institutions. The existing studies on governance and private investment have generally concentrated on the effect of the rule of law[6]. However, there is not much research done on the other types of governance institutions. Moreover empirical link between these variables and private investment is not strongly established. This is particularly the case for corruption and bureaucratic administration[7] as well as the quality of the democratic institutions[8]. In terms of political instability and policy uncertainty there are some studies which have been successful in proving the impact of institutions on private investment. [9]

Private investment is very much responsive to the changes in the business environment; which governance constitutes an important element. The forward looking nature of investment also highlights the importance of a stable and secure environment – in particular the security of property rights. High quality governance institutions reduce uncertainty and promote efficiency[10]. Using a large sample of countries, World Bank (2004) finds a strong positive link between the investment climate and private investment

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[2] See in particular Rodrik (1999) and Frankel (2002).

[3] See for example Knack and Keefer (1995), Acemoglu, Johnson, and Robinson (2001), Rodrik, Subramanian, and Trebbi (2002)

[4] See Hall and Jones (1999), Acemoglu, Johnson, and Robinson (2001), Easterly and Levine (2003), and Rodrik, Subramanian, and Trebbi (2002).

[5] See for example Acemoglu, and Taicharoen (2003).

[6] Under this category the security of the property rights is the most studied and empirically validated component. See North (1981), Knack and Keefer (1995), Calderon and Chong (2000), Easterly and Levine (2003), Rodrik, Subramanian, and Trebbi (2002), and Saleh (2004).

[7] See Keefer (2002).

[8] Pastor and Sung (1995) is among the few articles that have been able to establish a link between the political institutions and private investment.

[9] See Rodrik (1991) and Le (2004)

[10] North (1990)

decisions[11]. In that study the reason for this observed relationship is suggested to be the fact that better governance improves the investment climate by improving bureaucratic performances and predictability which in turn reduced uncertainty and the cost of doing business.

Since governance is an important determinant for investment, private investors would want to know about the quality of the governance institutions at the time of making investment decisions and also in the future when they will be getting their returns. Although good institutions are beneficial for reducing uncertainty, the perceptions about the quality of the governance institutions may themselves be a source of uncertainty, because investors may not know the actual governance establishments with 100% accuracy. Uncertainty associated with private investment arises both from the unknown future factors and imperfect information about the current state of governance variables. Investors collect information about the quality of governance institutions from consulting firms as well as from the other sources to form their perceptions about these institutions. Since their opinions on governance institutions are crucial in making the investment decisions, perceived level of quality of the governance institutions needs to be analyzed as a determinant of private investment. This paper incorporates this argument into its estimation process.

For the governance variables we use the data obtained from International Country Risk Guide and Freedom House. These are independent private firms that provide consulting services to international investors. We argue that, this data set can be a good proxy to measure the perceptions of the investors about the institutions. At this point it is important to point out the existence of the possible distinction between the perceived and actual institutions. Governance institutions are not expected to show abrupt changes from one year to another, but in our data set we do observe sudden variations for certain years. This may be due to the fact that investors have incomplete-asymmetric information about the quality of governance institutions in the economy. At extraordinary times-like crises-governmental bodies are forced to reveal the true quality of their institutions. With the arrival of the crises government institutions are faced with a real examination and information concerning the true quality of the institutions is uncovered. At regular times investors may not be able to get healthy information about the quality of the institutions to form their perceptions and without additional information they may not be able to modify them. This line of argument is one explanation for the observed pattern of the governance data.

A wide set of governance variables -which are not commonly used as the determinants of private investment in the empirical literature- are employed in our study. These variables are likely to be highly correlated. To account for the multi-collinearity issue we use principal component analysis to aggregate a few broad categories of governance institutions. Based on the existing literature, we classify governance

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[11] The World Bank (2004) has investigated the correlation between private investment and ICRG's index of "investment profile". This index is based on measures of contract enforceability, expropriation, profit repatriation, risk of operations, taxation and payment delays.

institutions in three groups as "Administrative Quality", (QA), "Political Accountability" (PA), and "Political Stability" (PS).

Aysan et.al. (2006a) have reexamined and updated the International Finance Corporation (IFC) data set for private investment by consulting the national sources, IMF and World Bank series and country economists. We use their disseminated data set (which covers the period from 1970 to 2002) in our study. High quality data for the 63 developing countries are included in their database.

We use a simultaneous equations model to stress the joint determination of private investment and different forms of governance institutions. The procedure of this model is justified by the fact that private investment can have a direct effect on the institutions. For instance, an increase in the private investment strengthens the private sector' incentive in lobbying[12]. Hence these newly-empowered corporate bodies are likely to exert more pressure on the government and demand institutional changes for their own well-being. Our findings show that the perceived quality of governance institutions plays an important role in private investment decisions. "Administrative Quality" (QA) and "Political Stability" (PS) and "Political accountability" (PA) are crucial for the determination of private investment. This result supports the hypothesis that different categories of governance institutions effect private investment through different channels.

The paper is organized as follows. The second section introduces our classification of governance institutions. The third section presents the other determinants of private investment that will be taken into consideration in our empirical analysis and highlights the importance of these factors for the MENA countries. The fourth section introduces the model of private investment tested and the results of the estimations. The sixth section uses this model to determine which reasons account for the private investment performance of the MENA region. It also identifies the incentives to be provided to enhance private investment in the future. The last section concludes.

2. Categorization the Governance Institutions

To study the impact of different types of governance institutions on the private investment, we first distinguish between the various dimensions of governance. The existing literature on the classification of institutional quality provided us the guidelines for categorization the governance institutions.

Kaufmann, Kraay and Mastruzzi (2003) categorize these institutions under six groups. Their measures of governance indicators are based on 194 variables drawn from 17 different sources. "Government Effectiveness" and "Regulatory Quality" summarize the ability of the government to devise and implement sensible policies. The respect of the citizens and the state for the institutions which govern their interactions is categorized as "Rule of Law" and "Control of Corruption". "Political Stability and Absence of Violence" measure perceptions of the likelihood that government in power will not be

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[12] See Altmann

destabilized and indicate the continuity of policies. "Voice and Accountability" captures the process by which the citizens of a country are able to participate in the selection of governments. The World Bank (2004) constructs two indices on "Political Accountability" and "Administrative Quality" by aggregating the existing relevant data sets for these aspects of governance.

Taking these categorizations into account, we grouped institutional variables into three broad units: "Administrative Quality" (QA), "Political Accountability" (PA) and "Political Stability" (PS).

2.1. Quality of Administration

Following the World Bank (2004), we have defined the first governance indicator as the "Quality of Administration". This index contains four variables from the International Country Risk Guide (ICRG): "Control over Corruption", "Quality of Bureaucracy", "Investment Profile", and "Law and Order". These four variables are aggregated using the Principle Components Analysis (PCA) to form a broad index for the Quality of Administration[13]. This governance unit shows the capacity of the government to provide investment-friendly and reliable conditions for the private investors.

The negative effect of corruption on the economic variables is firmly established in a number of studies[14]. Mauro (1995) empirically shows that corruption reduces growth. For private investors, corruption increases the initial and operational costs of investment in addition to the uncertainties about the timing and application of government policies. The "Quality of Bureaucracy" index of ICRG shows the ability of the government to generate and implement sound policies. Also, this index indicates that "countries where the bureaucracy has the strength and expertise, govern without drastic changes in policy or interruptions in government services. "Investment Profile" index measures the "government's attitude to inward investment as determined by the assessment of four sub-components: risk to operations, taxation, and profit repatriation and labor costs". By its nature investment requires people to make long-term decisions. Hence risk to operations and other uncertainties about future policies are important for investment decisions. In the "Law and Order" index, the law element presents an "assessment of the strength and impartiality of the legal system", while the order element is related with the "popular observance of the law." Different aspects of the business environment are important for investment, but the security of property rights and the rule of law and their effects on private investment are seen to be the most important ones and these are empirically validated through a number of studies[15]. Investors are concerned about the future state of the economic-social institutions in order to protect their investments. Specifically they need institutions that preserve the right of private property, ensure

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[13] The variables forming the QA index is likely to be highly correlated. In order to account for the multi-collinearity problem in using these variables in the same regression equation PCA method is used to aggregate these variables. The other governance indicators are also formed by using this method.
[14] World Bank (2005) and Mo (2001).
[15] See North (1981); Knack and Keefer (1995); Calderon and Chong (2000); Easterly and Levine (2003); Rodrik, Subramanian, and Trebbi (2002), and Saleh (2004).

equitable and consistent rule of law in protecting this right, as well as effective incentives to respect and enforce it.

2.2. Political Accountability

Our second governance indicator is "Political Accountability". This unit consists of two indicators from Freedom House (FH): "Civil Liberties" and "Political Rights".

Since all types of investments involve a certain degree of irreversibility, private investment decisions are highly sensitive to the perception of the credibility and persistence of the political regime, as well as of policies[16]. A participatory political system provides the stability of social institutions and ensures a broad public support to policies, which are in this case more sustainable in the long run. The empirical literature on democratic participation has concentrated on the effects of transparency and accountability on growth, using data on civil liberties, political rights, and freedom of press. These attempts to establish causal links between democracy and growth generated moderate success[17].

2.3. Political Stability

The last indicator is "Political Stability" and is composed of the following variables from ICRG: "Government Stability", "Internal Conflict", "External Conflict" and "Ethnic Tensions". Political instability creates uncertainty which has detrimental effects for the level of investment. Using different measures of political uncertainty, various studies have brought empirical evidence that institutions associated with political instability hinder investment[18].

All of the three indicators reflect the perceptions of the private investors about the quality of the governance institutions. These perceptions are not necessarily the same as the actual level of the quality of the institutions.

3. Other Determinants of Private Investment and Governance Institutions

In studying the private investment performance of the developing countries some additional issues needs to be taken into account. In particular, the business environment in these countries is not always competitive and investors face additional limitations which are not accounted for in the neo-classical model. The debate about how to incorporate these factors into the estimation procedure gave rise to the usage of different types of variables as determinants of private investment by various authors[19]. In this

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[16] See in particular, Rodrik (1991) and Serven and Solimano (1993).

[17] In the contex of private investment the study of Pastor and Sung (1995) is one of the few articles to find a positive influence.

[18] See 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).

[19] See for example Greene and Villanueva (1991) and Blejer and Khan (1984)

paper we address some of the constraints encountered in the developing world, especially the ones linked to economic policy and institutional quality.

In the macroeconomics literature, the neoclassical flexible accelerator model is the most widely accepted model of investment. This model is based on the neoclassical idea of the theory of the firm (Jorgenson, 1963), which claims that enterprises decide to invest so as to generate more profit in the future. The investment function is derived from the optimization problem of the firms, which maximize current and expected profits by equating the production prices to their marginal costs. The net investment is the gradual adjustment of the actual capital stock to its desired level, which is derived from the maximization of profit. The determinants of investment in the neoclassical flexible accelerator model include the expected aggregate demand (the accelerator), the user cost of capital, the wage rate and the initial capital stock.

One of the main assumptions of this model - competitive markets- , however, does not often hold in the developing countries. Empirical validation of the model appears to be successful for several developed countries. However the firms in developing countries face certain constraints that are not accounted for in the conventional neoclassical theory[20]. Next, we will examine some of these constraints – especially the ones that are more relevant for the MENA region- in detail.

One of the main constraints confronted by the investors in the developing countries is the deficit in economic reforms. This is also the case for the MENA countries which have lagged behind other regions in terms of reforming their economy (Nabli and Véganzonès -Varoudakis, 2006). Structural reforms constitute an important determinant of the actual and future profitability of private investment. These reforms are mostly directed towards the establishment of a sound financial system and an economy that is fully integrated to the world. Hence our structural reforms index includes trade policy and financial development.

Financial development is an important determinant for private investment since it creates profitable investment opportunities. A developed financial system mobilizes and allocates resources to the projects that will create the most amount of surplus. This efficiency in the allocation process is derived from the enhanced technological specialization and reduced "information, transaction, and monitoring costs"[21] 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). Financial markets are not fully developed in the emerging economies. Hence the neoclassical assumption of flexible accelerator model about the limitless availability of credit supply by the banking sector cannot be taken for granted in these countries. As pointed out by Blejer et.al (1984) and Rama (1993) the quantity of the available funds in these countries may be restricted by government policies. One of the deriving forces behind these policies can be the public

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[20] See in particular Shafik (1992), Agenor and Montiel (1999) and Aysan et al. (2006b) for a discussion and additional references.
[21] See Creane, Goyal, Mobarek and Sab (2004).

deficits and public debt, which can lead to financial repression and to crowding out of private investment. On the empirical side, the impact of financial development on private investment is now well documented[22]. In the MENA region, reforms needs to particularly focus on the development non-bank financial sector. The corporate bond market and equity market are not active and the investors are forced to rely on bank credits[23].

Trade reforms can also encourage private investment decisions. The link between persistent growth and trade openness is generally acknowledged[24]. Trade openness increases competitiveness and provides access to enlarged markets (Balassa, 1978; Feder, 1982) and can contribute to the productivity gains. In addition, trade openness influences the availability of external credit -- 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). Some countries in the MENA region are highly disintegrated to the world trade and this has adverse consequences on foreign investment levels in the region.[25]

In addition to their direct effects mentioned above, economic reforms are also expected to affect private investment through their impact on institutional quality. For example, there is some evidence that greater openness to trade and stronger competition are conducive to institutional improvement[26]. Opening up markets may help to weaken vested interests and reduce rents derived from prevailing economic and institutional arrangements. Trade openness may also lead to demands for institutions more suited to an increasingly varied and complex range of transactions (See IMF, 2003).

Human capital is an important determinant for the level of private investment. It is generally viewed as a complementary factor of physical capital. In this study, human capital index is composed from health and education variables. Human capital stimulates private capital formation by raising the profitability of investment and can provide positive externalities[27]. Since skilled workers are better in dealing with changes, a skilled work force is essential for firms to adopt new and more productive technologies[28]

Additionally, human capital gives rise to institutions with better quality. 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). Also, educational attainment reduces the political instability by encouraging a consensus environment. This idea constitutes the one of the classical approaches in the literature to highlight the importance of education in bringing better institutions (Lipset, 1959). From the democratic accountability point of

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[22] In his survey of investment functions in developing countries, Rama (1993) presents the positive effect of financial development on private investment in twenty-one of the thirty-one papers surveyed.
[23] See Mc Call (2004)
[24] See Bisat et. al. (1996) and the references there.
[25] See Bisat et.al. (1996)
[26] For the positive spillover from trade openness on institutions see Berg and Krueger (2003), Islam and Montenegro (2002) and Wei (2000).
[27] See Lucas (1988) and Mankiw, Romer and Weil (1992).
[28] See in particular Acemoglu and Shimer (1999).

view, a more educated society is more likely to be enfranchised in terms of civil rights and liberties (Acemoglu and Robinson, 2001). These arguments support the view that in addition to its direct effect, human capital can influence private investment decisions through its effect on the institutions.

The improvements in the level of educational attainment experienced by the majority of the developing countries have not been sufficient to change the perceptions of private investors about the skills of the workers in these countries. This is the case for the MENA region, where progress is still needed in order for the region to catch up with the developed world as well as with some of the developing regions[29]. As pointed by the World Bank (2004), to meet this challenge, MENA countries have to gear up their educational system both to improve basic education and to equip the labor force with skills appropriate for the enterprises to invest efficiently.

In the developing countries, the government is still the pre-dominant actor in the economy. Hence the level of government consumption can be an important determinant for private investment for these countries. When government spending is used to finance projects which increase the profitability of the private investment, then the effect of this factor on private investment will be positive. Improvements in the infrastructure system and quality of health and education services financed through the government budget can be shown as examples of such cases[30]. Also an increase in the demand for private sector products by the government can stimulate private investment.

On the flip side government consumption can reduce the amount of funds available to the private sector. This effect is most likely to be observed through the increase in the interest rates (Binter 1977) and future tax burden (Friedman 1976). If the excess amount of government spending is financed through "printing money" then this leads to an increase in the level of the inflation which in turn increases uncertainty. Besides using external debt for government deficit may harm the financial and political stability, given that the country can encounter difficulties in reimbursing its debt. The negative impact of instability and uncertainty on private investment is empirically validated in a number of studies[31]. Since government consumption can have beneficial as well as damaging effects on the private investment in theory, the overall impact of this variable on the level of private investment needs to be analyzed empirically.

Government spending is expected to have a positive effect on governance. For example the improvements in the living standards of the bureaucrats caused by the increase in wages can induce them to form better governance institutions. [32]

4. The Econometric Analysis

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[29] See Nabli and Véganzonès -Varoudakis (2006).
[30] See for example Bisat et.al. (1996).
[31] References for political uncertainty and instability are given in the introduction section. In addition to those, for macroeconomic uncertainty see Serven (1997) and (2002).
[32] See Azariadis and Lahiri (2002)

4.1. The Model Tested

The aim of the model tested is to isolate the effects of the perceived quality of the different governance indicators on private investment. In our empirical model, endogenous variables are the share of private investment and the various measures of governance, namely "Quality of Administration" (*QA*), "Political Accountability" (*PA*) and "Political Stability" (*PS*). The endogenous variables have the ability influence each other and hence determined simultaneously. To incorporate this two-way causality into our analysis, we form a system of equations to estimate the share of private investment (*PI*) in GDP and quality of governance institutions (*IQ*) simultaneously. In the private investment equation, perceived quality of governance institutions is expected to increase the private investment. In the other equation in which governance is the dependent variable, the sign of the coefficient of private investment is expected to be positive.

This system of equations is estimated using three stage least squares by controlling for the other determinants which include variables that affect both of the endogenous variables. Three stage least square (3SLS) estimation allows to use the links between endogenous variables efficiently. Since endogenous variables are correlated with the error terms, they have to be instrumented out using exclusion restrictions.

The model estimated is the following:

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

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

Where:

- PI_{it} is the share of private investment in GDP
- IQ_{it} represents the various indexes of governance (*QA*, *PA* and PS)
- X_{1i} and X_{2i} are the other control variables in private investment (*PI*) and governance (*IQ*) equations respectively
- ε_{1it} and ε_{2it} are the error terms of each equations. *i* signifies the country and *t* represents the time of the variable.

As mentioned before, the determinants of investment in the neoclassical flexible accelerator model include the expected aggregate demand (the accelerator) and the user cost of capital. The private investment equation in our model includes real interest rate (Realr) to capture the user cost of capital and the GDP growth rate in last year (Growth) to account for the accelerator effect[33]. These two variables are assumed to have no direct effect on the level of the perceived quality of governance. Hence they are not included in the governance equations. This detail is crucial for the identification of the system.

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[33] GDP growth rate enters the equation with an expected positive sign whereas the effect of the real interest rate is expected to be negative.

GDP per capita, variations in the structural reforms (Struct Ref), human capital (Human Cap) Government consumption (GCons) and oil export as a percentage of merchandise export (Oil export) enters into both of the equations as explanatory variables. GDP per capita is included in the private investment equation to take into account the argument put forward by the Solow growth model; Countries with lower GDP per capita are expected to gradually catch up with the more developed counterparts with their higher capital investment over time. Additionally, GDP can be a proxy for the market size for goods and services which can affect the differences in the private investment ratios across the countries. GDP per capita variable in the governance equation is expected to exert a positive influence because of the theoretical argument that more developed countries can afford to have better institutions[34]. This argument may influence the perceptions of the investors when they are forming their investment decisions.

Structural reforms index is composed from trade policy (TP) and financial development indicators. Financial development is proxied by the private credit by banks and other depository institutions (Pcr). Trade policy indicator is formed by subtracting the exports of oil and mining products and the "natural trade openness" (constructed by Sachs and Warner 1997) from the commercial openness (calculated by aggregating the export and import in total GDP). The trade policy and financial development variables form the structural reform index after applying the principal component analysis. Structural reform is expected to enhance the level of private investment and the perceived quality of the governance institutions.

To form the Human capital index life expectancy at birth and average years of primary, secondary and higher schooling[35] variables are aggregated using the principal component analysis. Human capital is widely considered to improve the private investment and the quality of the governance institutions.

The ratio of government consumption to GDP (GCons) is used to account for the level of government consumption and this variable is included in both of the equations. As mentioned before the effect of this variable on private investment is not certain ex-ante. On the other hand the expected coefficient of the government consumption variable in the governance equations is positive.

Oil export as a percentage of total merchandise export is also included as explanatory variables in both equations. The validity of the natural curse hypothesis is tested by incorporating this variable in the investment equation. When a country relies more on natural resources extraction in its export, there can be less incentives to invest for other products[36]. Hence the sign of this variable in the private investment equation is expected to be negative. The share of oil exports has also implications for the quality of governance institutions in the economy. Countries which are less dependent on natural resources are expected to form better governance institutions. The natural resource

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[34] Azariadis and Lahiri (2002)
[35] For the education variables the portion of the population that is over 15 years old is considered.
[36] This may stem from the increase in the cost of labor as mentioned by Rodriguez and Sachs (1999).

abounded countries do not need to mobilize the society to increase the overall level of earnings. The governing body can control the economy by collaborating with a small number of people in the society. The outcome from such a production arrangement does not maximize the well-being of the society as a whole and hence do not lead to governance institutions which are in favor of the society[37]. In these kinds of circumstances, also the elite are not eager to provide high-quality institutions by bearing in mind the future effects of today's enfranchisements (Acemoglu and Robinson, 2001) and engage in more rent-seeking activities. From the above discussion, we can draw the conclusion that oil export as a percentage of total merchandise export is expected to have a negative coefficient in the governance equations.

The tenure of the system (Tensys) from Keefer et al. (2001) is excluded from the investment equation to identify the system. Tensys reports the number of years that an administrative system -regardless of whether autocratic or democratic - lasts in the country. Time is required for institutions to settle down. This variable is an important determinant for establishment of high-quality institutions. Tenure of system is assumed to exert its effect on the private investment only through the governance institutions; hence it is not included in the governance equations. Finally, a regional dummy for the Middle Eastern and North African countries (MENA) appears as a right hand side variable in both of the equations. This variable is essential in understanding the position of MENA countries among the other countries and to see whether MENA substantially differs from the rest of the world in terms of private investment and of perceived quality of the governance performance.

4.2. Estimation Results

Equations (A) and (B) have been estimated on an unbalanced panel of 32 developing countries over 1970-2002 using the three stages least square estimations technique (3SLS). Three sets of regressions have been calculated, each one utilizing a different governance indicator to account for the perceived quality of the government institutions. Tables 3 to 5 present equations when "Quality of Administration", "Political Stability" and "Political Accountability" are respectively taken into consideration.

4.2.1 Administrative Quality

From table 3- column 1; where Administration Quality (QA) is used as a measure of governance; we can conclude that the QA has a positive and significant coefficient at the 5 percent level in the investment equation. This result supports the view that the perception of a low level of corruption, a good quality of bureaucracy, a reliable judiciary system, a clear security of property rights, a reasonable risk to operations, as well as a sound taxation and regulation are primarily important for the private investment decisions.

Our findings are robust to the introduction of other explanatory variables. In this specification especially the structural reforms have a significant impact on private

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[37] Ross (2001) and Bellin (2001).

investment. Hence, our estimations emphasize that, although the perceived quality of governance is a major determinant of the private sector decisions, the role of economic policies cannot be ignored. This result confirms that firms in developing countries face constraints that are not accounted for in more developed economies and shortcomings in the trade policy and financial development have a long term impact on growth performances, through private investment decisions.

The accelerator variable has the expected positive sign and it is significant. This implies that anticipation of an increase in the overall level of demand stimulate the investment decisions. Although not significant, interest rate appears to exert a negative effect on the private investment, which is consistent with the user cost of capital theory. Our model fails to verify the Solow hypothesis of decreasing return to scale of physical capital accumulation. The coefficient of the GDP per capita variable is not significant. The influence of the human capital variable is not significant either. Government consumption variable has a significantly negative coefficient in equation 1 (Table 3). This finding indicates that, for the countries that are included in our sample the crowding out effect of government spending outweighs the crowding in effect.

The coefficient of the oil export variable as a percentage of total merchandise export is significant and negative in equation 1. This result confirms the natural curse hypothesis. Similarly, the regional dummy for MENA countries has a negative coefficient. MENA countries seem to be diverging from the rest of the world in terms of private investment. However, this dummy variable is not significant .This result is most likely stem from the inclusion of the oil exports variable in the regressions.

On the "Administrative Quality" equation (Table 3, equation 2), our results uncover the positive influence of several factors on the perceived quality of the administration. For example GDP per capita-although small- has a significantly positive coefficient which implies that countries with superior resources are able to develop better institutions and/or investors perceive the high level of GDP as an indicator of good institutions. Besides, private investment helps improving the administrative quality considerably. This last result validates the usage of the 3SLSQ estimation technique in order to account for the two way causality issue. Tenure of system is also an important determinant for the administrative quality.

Government spending has a significantly positive coefficient for the administration quality. Our estimations fail to confirm the negative impact of the share of oil export in merchandise export. This result is in conflict with the argument that countries with less reliance on natural resources form better governance institutions. Structural reforms and human capital are not significant in explaining administrative quality in equation (2). However, when estimating the system by excluding private investment from equation (2), the coefficient of the structural reforms and human capital becomes positive and highly significant[38] (see Table 3 equation 4). This result seems to

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[38] When the private investment variable is eliminated form the QA equation results remain primarily the same. The only important change-in addition to the ones mentioned above-is that in the second case the coefficient of the interest rate in the private investment equation becomes significant.

be due to the fact that the structural reforms index is correlated with private investment. Hence, the positive impact of private investment on administrative quality seems mainly due to the structural reforms which stimulate firms' decisions to invest. This result also shows that the impact of human capital on private investment is indirect, considering that this variable exerts its influence on private investment through its effect on the administrative quality. On the other hand structural reforms have both a direct and an indirect channel to exert their influence.

Table 3 Estimation Results –Quality of Administration Case (QA)				
	Endogenous Variables		Endogenous Variables	
Explanatory Variables	Priv inv	QA	Priv inv	QA
	(1)	(2)	(3)	(4)
QA	2.07		2.16	
	(2.08)**		(2.17)**	
Gcons	-0.27	0.07	-0.26	0.04
	(-3.35)***	(4.07)***	(-3.36)***	(3.81)***
Priv Inv		0.12		
		(2.53)**		
Struct Ref	1.71	-0.0018	1.73	0.3
	(5.24)***	(-0.01)	(5.28.)***	(9.11)***
Human Cap	0.25	0.05	0.2	0.09
	(1)	(0.95)	(0.79)	(2.47)**
Oil Export	-0.03	0.0025	-0.04	-0.0025
	(-2.96)***	(0.85)	(-3.28)***	(-1.41)
GDP per capita	0.00009	0.0007	0.00018	0.0001
	(0.38)	(1.80)*	(0.73)	(3.12)***
MENA Dummy	-0.97	0.13	-0.83	0.02
	(-0.99)	(0.67)	(-0.86)	(0.15)
Realr	-0.01		-0.03	
	(-1.53)		(-3.18)***	
Growth	0.19		0.16	
	(2.77)***		(2.13)**	
Ten Syst		0.01		0.02
		(3.55)***		(6.21)***
Constant	15.5	-2.84	15.62	-1.03
	(10.13)***	(-3.85)***	(10.16)***	(-6.65)***
Numb obs	349	349	349	349
Notes: (*) indicates significance at 10 %; (**) indicates significance at 5 %; (***) indicates significance at 1%.				

4.2.2 Political Stability

Political Stability (see columns 1and 2 of Table 4) seems to have a significant and positive impact on the investment decisions, but for this governance indicator the level of significance is 10%. This conclusion supports the view that a stable political environment is essential for investment.

Once again, trade openness and financial development are confirmed to be part of a healthy investment climate and to stimulate private investment decisions, but this time their effect is indirect. Structural reforms enhance the level of investment by improving the political stability of a country (see Table 4 equations 1 and 2).

In this specification, both of the variables that are related to the neo-classical investment model- growth and interest rate- are highly significant with the expected signs, pointing out the fact that at the final stage, supply and demand considerations constitute major factors for the entrepreneurs to undertake a new investment project. The influence of human capital on the political stability is highly significant. Hence we can say that the human capital variable is exerting its influence on political stability through its influence on structural reforms. (See equations 1 and 2 of Table 4). Similar to the Administrative Quality case, in this specification we are again able to verify natural curse hypothesis. But the effect of private investment is not significant on political stability.

Table 4 Estimation Results – Political Stability Case (PS)				
	Endogenous Variables		**Endogenous Variables**	
Explanatory Variables	**Priv inv**	**PS**	**Priv inv**	**PS**
	(1)	**(2)**	**(3)**	**(4)**
PS	3.64		3.46	
	(1.72)*		(1.64)	
Gcons	-0.20	-0.01	-.21	0.01
	(-2.52)**	(-0.49)	**(-2.64)*****	(0.77)
Priv Inv		-.07		
		(-1.59)		
Struct Ref	1.11	0.53	1.15	.34
	(1.51)	**(4.36)*****	(1.57)	**(9.29)*****
Human Cap	-0.42	0.25	-.35	0.22
	(-0.76)	**(5.32)****	(-0.63)	**(5.21)*****
Oil Export	-0.05	-0.001	-0.05	0.002
	(-3.02)***	(-0.25)	**(-2.80)*****	(1.15)
GDP per capita	-0.00002	0.0002	-0.0001	0.0001
	(-0.06)	**(3.90)*****	(-0.29)	**(3.68)*****
MENA Dummy	-2.19	.34	-2.24	0.40
	(-1.64)	**(1.81)***	**(-1.68)***	**(2.26)****
Realr	-0.05		-0.03	
	(-2.47)**		(-1.54)	
Growth	0.19		0.19	
	(2.53)**		(3.11)***	
Ten Syst		0.013		0.01
		(3.66)***		**(3.37)*****
Constant	16.96	-0.02	17.00	-1.09
	(7.09)***	(-0.02)	**(7.17)*****	**(-6.16)*****
Numb obs	349	349	349	349
Notes: (*) indicates significance at 10 %; (**) indicates significance at 5 %; (***) indicates significance at 1%.				

The regional MENA dummy in the political stability equation (Table 4 equation 2) is significant with a positive sign. This result establishes a strong conclusion about the level of the quality of the governance in the MENA region as measured by the political stability indicator. Controlling for the other determinants of the political stability, being a

MENA country increases the level of stability. This result shows that MENA region is politically quite stable compared to the other developing countries in our sample. Unlike the administrative quality case, government consumption does not have a robust effect on political stability (Table 4-column 2). Also the positive impact of GDP and Tenure system on political stability are validated in this specification.

4.2.3 Political Accountability

Table 5 reports the regression results when "Political Accountability" measures the perceived quality of institutions. We show that the coefficient of Political Accountability in the private investment equation (See table 5 equation 1) is significant at the 10% level. This can be viewed as an important contribution to the literature on economic activity and democracy. This set of estimations, also confirms that structural reforms encourage private investment decisions. This time, the link appears to be only direct, the coefficient of the structural reforms indicator in the political accountability equation appears insignificant (Table 5 equations 1 and 2)[39]. Like the political stability case human capital has a significant influence on the political accountability but not on private investment. Unlike the previous indicators the MENA dummy variable has different coefficient in both of the equations. In equation (1), the coefficient of the MENA dummy is positive, although not significant. On the political accountability equation (equation 2) the coefficient of this variable is now significant and negative. This last finding strengthens our claims about the low level of democratic quality in the MENA region introduced in the first section.

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[39] This influence becomes both direct and indirect when the private investment is dropped from the PA equation. See Columns 3 and 4 of table 5 for the case where private investment is dropped from the public accountability equation.

Table 5 Estimation Results- Political Accountability (PA) Case				
	Endogenous Variables		Endogenous Variables	
Explanatory Variables	Priv inv	PA	Priv inv	PA
	(1)	(2)	(3)	(4)
PA	4.74		4.67	
	(1.66)*		(1.63)	
Gcons	-0.44	0.05	-0.45	0.06
	(-2.45)**	(2.55)**	(-2.48)**	(4.36)***
Priv Inv		-0.05		
		(-0.87)		
Struct Ref	3.53	-0.13	3.53	-0.25
	(4.66)***	(-0.98)	(4.67)***	(-5.98)***
Human Cap	-0.71	0.25	-0.70	0.24
	(-1.00)	(4.70)***	(-0.99)	(4.92)***
Oil Export	-0.06	0.001	-0.06	0.003
	(-3.06)***	(0.33)	(-3.07)***	(1.31)
GDP per capita	-0.0008	0.0003	-0.0008	0.0002
	(-0.95)	(5.64)***	(-0.96)	(5.85)***
MENA Dummy	4.47	-1.15	4.37	-1.11
	(1.25)	(-5.27)***	(1.22)	(-5.42)***
Realr	-0.04		-0.03	
	(-2.86)***		(-3.11)***	
Growth	0.23		0.19	
	(2.77)***		(2.75)***	
Ten Syst		0.01		0.01
		(2.29)***		(2.21)***
Constant	17.35	-0.25	17.63	-0.95
	(6.80)***	(-0.30)	(6.97)***	(-4.70)***
Numb obs	349	349	349	349

Notes: (*) indicates significance at 10 %; (**) indicates significance at 5 %; (***) indicates significance at 1%.

Once again both of the variables that are related to the neo-classical investment model- growth and interest rate- are highly significant with the expected signs. Like the political stability and administrative quality cases, crowding out effect of the government sector spending on private investment and the positive influence of government consumption on the quality of institutions is established in this specification too (Table 5 equations 1 and 2). Finally like the previous two indicators, this one also verifies the natural curse hypothesis along with the positive influence of the level of GDP on governance.

5. Perceived Quality of Governance and Private Investment Performance of MENA

In this section, we use the models estimated previously to uncover the contribution of each type of governance institution to the improvement of private investment performance in the MENA region. We evaluate, in particular, the contribution of the "Administrative Quality", "Political Stability" and, "Political Accountability", which have proved to exert primary importance in explaining firm's decision to invest. For this purpose, we compare private investment performance of the MENA region in these respects to the one of the more advanced developing economies of our sample, the East Asian economies.

We simulate which level of private investment MENA could have achieved if the region had the same perceived governance institutions as East Asia. This is done for two time periods – the 1980s and the 1990s respectively – which display, as we will see, quite different characteristics. In our simulations we use the first equations obtained for private investment in the three different specifications. (See the first columns of Tables 3, 4 and 5). The contribution of the Quality of Administration index has been calculated by aggregating the contributions of its four sub-components and the same thing has been done for Political Stability and Political Accountability. Hence, to get the overall impact of the changes in each category of the governance indicators, we first had to calculate the contribution of each initial variable in the category to the overall improvement in the level of private investment. The calculation is based on the estimated coefficients of each type of governance indicator in the regression (Table 3-1, Table 4-1 and Table 5-1), 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 2)[40]. Coefficients of the initial variables are presented in Annex 3 and their contributions appear in Tables 6, 7 and 8.

The weaknesses of MENA institutions during the 1980s are uncovered by the first set of results. From Table 6 (top section) it can be seen that, if MENA had the same perceived quality of administration as the East Asia in the 1980s it's average-private investment to GDP ratio would have reached 13.8 (compared to 11.9 per cent observed).When the contributions of the various components of administration quality to this result are examined, it becomes clear that deficiencies in the investment profile and law &order were the primary reasons for the gap between the actual and potential level of private investment (these two components are responsible for the loss of 0.6 and 0.8 points of private investment to GDP respectively). These results imply that, in the 1980s the countries in the MENA region had difficulties in ensuring an equitable and consistent rule of law in protecting the security rights, as well as providing an investment environment that is free from risks to operations and excessive regulations.

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

Table 6 Private Investment to GDP – Administrative Quality (QA) Case							
	Priv. Invest. (Actual)	**QA**	**Increase with an improvement in**				**Priv Invest. (Potential)**
			Corruption	**Bur. Qual.**	**Invest.Prof.**	**Law& Order**	
1980	**11.9**	**1.9**					**13.8**
			0.2	0.3	0.6	0.8	
1990	**11.6**	**0.4**					**12.0**
			0.0	0.3	0.0	0.1	
Source: Authors' calculations.							

Increase in private investment in this decade would have been even more if the same level of "Political Stability" and "Political Accountability" could have been attained as the East Asian countries. Table 7 shows that in the 1980s, private investment in the MENA region had the potential to reach on average 15.9 per cent of GDP if the gap with the East Asian institutions in terms of political stability was diminished. External and internal stability components were nearly the sole contributors to this result which have reduced private investment decisions by respectively 1.6 and 2.7 per cent of GDP on average per year[41] If MENA had benefited from the same quality political accountability private investment would have been 15.9 percent of GDP in the 1980s (See table 8). The lack of civil liberties and political rights has both been important factors in keeping the region from reaching its potential level of investment.

Table 7 Private Investment to GDP – Political Stability (PS) Case							
	Priv. Invest. (Actual)	**PS**	**Increase with an improvement in**				**Priv Invest. (Potential)**
			Gov. Stab.	**Int. Confl.**	**Ext. Confl.**	**Ethn. Tens.**	
1980	**11.9**	**4.0**					**15.9**
			0.1	1.6	2.7	-0.4	
1990	**11.6**	**-0.7**					**10,9**
			-0.6	0.1	0.3	-0.5	
Source: Authors' calculations.							

In the 1990s, the gap with East Asia has been noticeably reduced and improvement of the "Administrative Quality" and "Political Stability" notably helped investments decisions. The deficit in private investment caused by insufficient quality of administration was 0.4 points of GDP on average per year in the 1990s (see Table 6 bottom section). The gap with East Asia has nearly fully diminished in terms of corruption, investment profile and law &order. On the other hand just like the 1980s lack of bureaucratic quality is still responsible for the loss the private investment equaling to 0.3 points of GDP on average. In the 1990s, MENA had a superior performance –as measured by the overall political stability indicator- than the East Asia in terms of

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[41] From table 7 it can be seen that in the 1980's the level of ethnical tensions were lower in the MENA compared to the East Asian countries.

political stability (see Table 7). Government stability and ethnic tension sub-components are better for the MENA region, whereas- although improved significantly compared to the 1980- external conflict still accounts for the loss of 0.3 points of private investment to GDP.

Things are different on the political accountability side. It seems like the gap between the two regions did not decrease at all in terms of this variable. The low level of perceived political accountability is responsible for the deficit in private investment equaling to 3.9 points of GDP (See Table 8). Like 1980s the contribution of political rights and civil liberties to this aggregate effect is 1.9 and 2.1 points.

Table 8 Private Investment to GDP – Political Accountability (PA) Case					
	Priv. Invest. (Actual)	Increase with an improvement in			**Priv Invest.** (Potential)
		PA	Pol. Rights	Civ. Lib.	
1980	**11.9**	**4.0**			**15.9**
			1.9	2.1	
1990	**11.6**	**4.0**			**15.6**
			1.9	2.1	
Source: Authors' calculations.					

These results confirm that the MENA region could have achieved a better private investment performance if it had an enhanced level of perceived institutions. They also underlie the fact that governance may exert different levels of influence on private investment when measured by different indicators. Generally speaking, the low level of political accountability has been a persistent factor which has been holding back the region from reaching its private investment potential[42].

6. Conclusion

Governance is a wide-ranging phenomenon and its distinct features exhibit quite different states in terms of governance institutions for the same region. In this paper we empirically show that the perceived quality of governance is an important determinant of the private investment decisions in the developing countries by stressing the existence of different types of possible measures of governance.

Investors do not have perfect information about the current and future states of the governance institutions. Perceptions about the quality of governance are crucial for private investment decisions. Our data set -which is obtained from independent private firms that provide consulting services to international investors - captures this "perceived quality of governance" phenomenon. We use a simultaneous equations model to account for the reverse causality between the various types of governance indicators, namely "Quality of Administration" (*QA*), "Political Accountability" (*PA*) and "Political

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[42] We acknowledge the fact that the lack of other types of governance indicators was also effective in the determination of the level of private investment in the MENA region (especially some sub-components of the indicators). But in terms of magnitude and consistency of the effect, political accountability seems to be the most influential one among the three indicators of governance.

Stability" (*PS*), and private investment. In our empirical model, endogenous variables are the share of private investment and the various measures of governance. When using this model we controlled for the other determinants of private investment and governance indicators as well. Different types of governance institutions are confirmed to exert their influence on private investment through diverse mechanisms. All of the three indicators were proven to be significantly –although at different levels of significance and magnitudes of influence-important for private investment decisions. "Administrative Quality" was significant at the 5% significance level while the Political Accountability and Political Stability were significant at 10%. The validation of the influence of Administration quality confirms that a low level of perceived corruption, risks to operations, taxation procedures and labor costs and the protection of security rights by the enforcement of the laws are crucial for the investment friendly environment in the developing countries. Also we provide empirical evidence for the view that political stability can enhance private investment decisions by providing a stable environment and decreasing the level of uncertainty. Moreover, we present an important piece of evidence which can be useful for the ongoing debate about the role of democratic institutions on economic activity. Our results confirm that an open and participatory political system provides stability of social institutions and ensures a broad political support to policies, which are in this case more sustainable in the long run. In particular civil liberties and political rights can help the government to build credibility.

The weakness of MENA institutions during the 1980s was an important reason for the observed low level of investment in this region. If MENA had the same perceived quality of administration as the East Asia in the 1980s, its average-private investment to GDP ratio would have reached 13.8 instead of the observed 11.9 per cent. In the Administration Quality compartment, investment profile and law &order were the primary reasons for the gap between the actual and potential level of private investment. These results imply that, in the 1980s the countries in the MENA region had difficulties in ensuring an equitable and consistent rule of law in protecting the security rights, as well as providing an investment environment that is free from risks to operations and excessive regulation. The impact of closing the gap with East Asia in terms of "Political Stability" and "Political Accountability" on private investment would have been even more. If political stability was enhanced, private investment in the MENA region had the potential to reach on average 15.9 per cent of GDP in this decade. External and internal stability components were nearly the sole contributors to this result. If MENA had benefited from the same quality political accountability private investment would have been 15.9 percent of GDP in the 1980s. The lack of civil liberties and political rights has both been important factors in keeping the region from reaching its potential level of investment.

In the 1990s the gap between the two regions mostly diminished in terms of the quality of the administration and political stability. The deficit in private investment caused by insufficient quality of administration was 0.4 points of GDP on average per year in the 1990s compared to 1.9 in the 1980s. In this decade, MENA had a superior performance –as measured by the overall political stability indicator- than the East Asia in terms of political stability. Government stability and ethnic tension sub-components

were better for the MENA region, whereas- although improved significantly compared to the 1980- external conflict still accounted for the loss of 0.3 points of private investment to GDP. On the other hand the gap between the two regions did not decrease at all in terms of the political accountability. The low level of perceived political accountability is responsible for the deficit in private investment equaling to 3.9 points of GDP.

These results confirm that the MENA region could have achieved a better private investment performance if it had an enhanced level of perceived institutions. They also underlie the fact that governance may exert different levels of influence on private investment when measured by different indicators. However, the low level of political accountability has appeared to be the most persistent and influential factor which has been holding back the region from reaching its private investment potential.

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Annex 1

List of Countries

___*List of Countries with High Quality Data (63 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 * are included in the final regressions

Annex 2
Principal Component Analysis

Table *A.2.1*: The Administrative Quality Indicator

Component	Eigenvalue	Cumulative R^2
P1	2.23	0.56
P2	0.83	0.76
P3	0.51	0.89
P4	0.43	1

Loadings	P1	P2	P3	P4
Corruption	0.49	-0.57	0.06	0.65
Bureaucracy Quality	0.54	-0.08	0.64	-0.54
Investment profile	0.41	0.81	0.08	0.40
Law and Order	0.54	-0.02	-0.76	-0.36

$$QA = P1*(0.5577/0.7640) + P2*(0.2063/0.7640)$$

Table *A.2.2*: The Political Stability Indicator

Component	Eigenvalue	Cumulative R^2
P1	2.96	0.42
P2	0.97	0.56
P3	0.90	0.69
P4	0.68	0.79
P5	0.62	0.88
P6	0.57	0.96
P7	0.30	1

Loadings	P1	P2	P3	P4
Gov Stability)	0.32	-0.62	-0.38	0.05
Socioeco Conditions	0.29	0.63	-0.44	-0.14
Internal Conflicts	0.51	-0.06	-0.09	-0.07
External Conflicts	0.39	-0.29	0.26	-0.6
Ethnic Tensions	0.39	-0.06	0.02	0.77
Religious Tensions	0.31	0.19	0.76	0.1
Military in Politics	0.39	0.31	-0.12	-0.11

$$PS = P1* (0.4253/ 0.7878) + P2* (0.1373/0.7878) + P3* (0.1280/ 0.7878 + P4* (0.0972/ 0.7878)$$

Table *A.2.3.*: The Political Accountability Indicator

Component	Eigenvalue	Cumulative R^2
P1	1.88	0.94
P2	0.12	1

Loadings	P1	P2
Political Rights	0.71	0.71
Civil Liberties	0.71	-0.71

PA = P1

Annex 3

Table A.3.1 : Short term coefficients of the Disaggregated Indicators

Short and Long Term Coefficients/Elasticities

Index	Variables	Short Term Coefficients	
		Standardized Variables	Level Variables
QA	*corruption*	0,43	0,40
	bureaucraty quality	0,78	0,75
	investment profile*	1,08	0,51
	law and order	0,80	0,62
PS	*Government Stability*	1,81	0,75
	Internal Conflict	1,56	0,60
	External Conflict	1,49	0,67
	Ethnic Tensions	0,67	0,46
PA	*Political rights*	3,37	1,70
	Civil liberties	3,37	2,10