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Financial Crisis and Governance in Developing Countries: Socio-economic Issues and Perspectives

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***A*bstract:** The economic crisis had diverse socio-economic effects, particularly in developing countries. Added to the bad political and economic governance, these effects have made the social climate very fragile. So, in several countries, this situation has caused major social movements which have changed the political regime in some cases (Tunisia, Egypt, Libya and Yemen). Through these movements, these societies aim to establish law-governed states. Theoretically, under good governance development should flourish. In this paper, we analyze the socioeconomic effects of the crisis in several regions of developing countries. Then, we present a review of literature on governance and development. The last section is devoted to an empirical study using panel data. The empirical study covers a sample of 51 developing countries during the period 1980-2009 (yearly data, T=30).

The main results show that the contribution of good governance to growth is significantly positive. Moreover, it seems that institutions that promote political and civil freedom enhance the contribution of Foreign Direct Investment (FDI) to growth. However, it is important to mention that these contributions are conditioned by the social endowment of human capital. The last seems to help to benefit, especially in the revolutionary new countries, from the new growth opportunities.

JEL Classification: C33, O11, O43, I25

Keywords: Crisis; Socioeconomic effect; Governance; Human capital; Panel data

1. Introduction

Since 2007, the world has underground the worst financial and economic crisis, since the crisis of 1929. The consequences of this crisis, which started in the United States of America, have not spared any country. In developing countries, the crisis has had negative effects on economic and social performances. The human cost of the crisis, added to the bad governance characterizing these countries, has made the social climate more fragile. In many developing countries, this critical situation has caused social movements (Tunisia, Egypt, Libya, Yemen and Syria). The aim of these movements is the establishment of the institutions promoting good political and economic governance.

In this work, we propose to examine the nature of the relationship between good governance and development. In addition, we try to examine if this relationship depends on the initial conditions of countries. The first section will attempt to identify the economic and social effects of the crisis. The second section will present a review of literature on governance-growth problematic. The last section will be devoted to an empirical study using panel data. This study covers a sample of 51 developing countries during the period 1980-2009 (data are yearly: T=30). In a first step, the objective is to examine the relationship between governance and growth. The second step is an attempt to look for necessary conditions, in terms of human capital, which can promote the contribution of governance to growth.

2. The Crisis in Developing Countries: An Overview on Socio-economic-political Effects

The financial crisis, which started in the United States of America, spread quickly to the real economy of developing countries. It should be noted that the degree of contagion differs from one country to another, depending on the specific characteristics and the degree of integration into the global economy of each country.

Overall, the crisis was transmitted to developing countries through the reflux of foreign capital and the deterioration of financing conditions, the return of foreign trade and the deterioration of the terms of trade and finally, the decline in aid for development and reduction of the remittances from emigrant workers. These factors would contribute to discourage investment and growth, to increase unemployment and poverty and to threaten access to education and health services (World Bank, 2009a). In these conditions, the objectives of the national development plans of these countries and of the international development goals, including the MDGs, had been compromised (Benabdennour et al, 2011).

2.1 The Economic Effects of the Crisis

The analyzes of the IMF (2009a) assume that in 2009, developing countries will register a growth rate of real GDP around 1.6%; this rate is 4.5% and 6.7% lower than rates registered, respectively, in 2008 and 2007. The fixed capital investment would grow only by 0.6%, against 10.2% and 15% respectively in 2008 and 2007 (World Bank, 2009a).The trade of goods and services would fall by 6.4% for exports and 8.8% for imports and terms of trade would decline by 8% (IMF, 2009a). The flow of private capital would fall to 363 billion, against 707 billion in 2008 (World Bank, 2009b). The FDI flows have decreased by 3.6% in 2008 and risk to be worse in 2009 (United Nations 2009). This trend would have a negative impact on external financing and may stop many investment projects.

The figure 1, drawn from the World Bank data (2011a), shows that the growth decline has not the same magnitude in all developing countries. The growth fall in the countries of the ECA and LAC regions was more pronounced than that in other developing countries. This confirms the fact that the most integrated countries into the world economy are those most affected by the crisis. Moreover, we find that the decrease of growth in the ECA region is more than the double of the world average growth loss. On the contrary, for example, the loss of world average growth is more than the double of the decrease of the growth in the MENA region. The study of the exports evolution over the period 2007-2009, using the World Bank data (2011a), allows us to observe that the growth rate of world exports fell by almost 20 %, from 7.92% in 2007 to -11.31% in 2009. A part of this decline is due to the fall in the aggregate demand in industrialized countries. The rate of exports growth in all regions has decreased dramatically. Note that the EAP region, which registered the highest rate of exports growth in 2007, registered the most pronounced drop of this rate. ECA and LAC regions have registered falling rates of exports growth of around 16% and 13%, respectively. This fact suggests that the decline in exports depends on the nature of exports; countries whose exports are composed mainly of manufactured goods, are those most affected by this problem (Didier et al, 2010) (Figure 2).

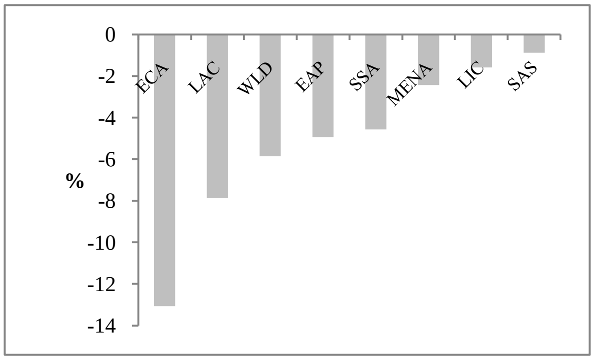

Figure 1. Growth rate of GDP in 2009 less than in 2007[1]

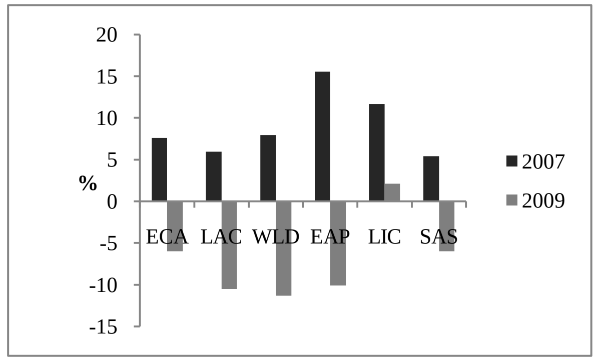

Figure 2. Growth rate of exports of goods and services

The evolution of FDI (figure 3), determined from the World Bank data (2011a), shows that the regions which have registered the important declines of the share of FDI in GDP are EAP, LAC and ECA with respective drops of 58%, 36% and 33%. The only region that registered a slight increase in the share of FDI in GDP is the SAS, with a rise of 5%. We note that the evolution of this share seems to depend strongly on the degree of integration and the nature of FDI.

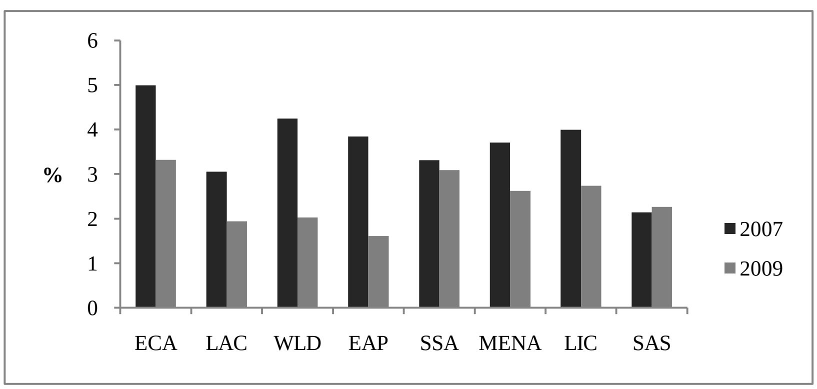

Figure 3. Evolution of the share of FDI in GDP

In summary, it appears that the effects of the crisis on the economic performances in developing countries have been more negative in the most open countries, especially those whose exports are based on manufactured goods. In this sense, the crisis presents an exogenous

[1] ECA: the developing countries of Europe and Central Asia; LAC: the developing countries of Latin America and the Caribbean; WLD: the World; EAP: the developing countries of East Asia and the Pacific; SSA: the developing countries of Sub-Saharan Africa; MENA: the developing countries in Middle East and North Africa; LIC: low-income countries; SAS: the developing countries of the South Asia.

shock to developing countries. It has spread from the center to the periphery, mainly through trade and FDI.

2.2 The Social Effects of the Crisis

The crisis has, also, a profound impact on the conditions of human development through its effects on health spending, education, employment, poverty and inequality. The reduction of total expenditure has a negative impact on health expenditures by changing their structure. To sum up, in many African and Arab countries, governments have preferred to keep wages by choosing to economize at the levels of infrastructure and equipment. Thus, they have deferred expenditures on equipment and reduced expenditures on maintenance, on purchases of medicines and on other functional costs. This choice seems to have an immediate and negative impact on health services offered to people, especially the poorest depending on public services.

At this level, a study done by the World Bank (March 2009), covering 69 countries, shows that eight developing countries have registered shortages of certain types of basic medicines and that 22 countries will face problems of this kind later in this year (World Bank, 2009d). The facts are more alarming given that the World Bank (2009d) shows, using data on past crises, that the authorities are forced to reduce spending for health, because of budget difficulties. It is necessary to wait 10 to 15 years to see health spending returning to their pre-crisis levels. Similarly, a study done by United Nations (2009), indicates that, in many developing countries, the crisis threatens the progress made in the domain of education. The quality of education and equity between social classes and regions are threatened. In some countries, the study indicates that budget compression have forced governments to take measures such as reducing the number of teachers and /or their salaries. The results are de-skilling, increase of wages at a lower rate than inflation and an increase in students per teacher ratio.

Regarding the effects of the crisis on employment, several studies have shown that labor market adjustment to the crisis is, in many developing countries, qualitative. Indeed, in a study of 28 countries over the period December 2007-September 2009, Khanna et al (2010) showed that payrolls fell by 8% on average. In some countries employers seem to opt for reduced hours of work, which means an increase of partial unemployment. The second element which explains this loss of income is the change in the conditions of the labor market in the detriment of exports sectors, in which employees relatively enjoyed better remuneration (World Bank and IMF, 2010).

However, others studies conclude that the unemployment rate in the world has increased, during the crisis, by 0.7%, from 5.7% in 2007 to 6.4% in 2009. The number of unemployed in the world grew by 29 million. The negative effects of the crisis on employment seem to affect industrialized countries more than developing countries. For developing countries, the effect of the crisis led to deterioration in the quality of jobs and a shift of labor towards more vulnerable sectors, particularly in the informal sector, in the detriment of exports sectors. The example of Latin America confirms this finding given that between 2008 and 2009 the number of people working for their own accounts grew by 1.7% and the number of unpaid family workers grew by 3.8% (International Labor Organization, 2010). In India, during the last quarter of 2008, employment fell by over 3% in eight exports sectors (International Labor Organization, 2009).

Moreover, it seems that young people are the most social category affected by the crisis. This conclusion is simply explained by the fact that the economic slowdown has made the economies unable to absorb the additional labor, which is composed largely by young people. The unemployment rate of youth people in the world increased from 11.9% in 2007 to 13% in 2010, which is an unprecedented level. In developing countries, this category, which represents 90% of young people in the world, is the most hit by the negative effects of the crisis in terms of unemployment and poverty (International Labor Organization, 2010a).

In addition to the negative impacts on social rights, the crisis has also an adverse effect on monetary poverty, in particular through the loss of jobs in some countries. For example, according to the World Bank (2010a), 90% of the loss of income in Mexico and the Philippines come from the loss of jobs. The World Bank (2009c) estimated that, in developing countries, the total number of people living with less than 1.25$ per day is projected at 1.184 billion in 2009. The World Bank (2010b) specifies that the crisis has plunged into poverty, 10 million people in Sub-Saharan Africa, 8 million in Latin America and 2.6 million in the MENA region. In South Asia, although it is the region of the world that has relatively resisted to the crisis, poverty remains important; 600 million of its people still live below the 1.25$ per day.

An important part of the increase of poverty in developing countries is due to the increase of the unemployment. Abella et al (2009) consider that the increase of unemployment in developing countries has led to a downward pressure on wages in the informal economy. The result is a decline of household incomes, a fall in purchasing power and an increase in the number of poor workers. Based on a threshold of 2$ per day, Abella et al (2009) estimate that the number of poor workers should increase in all developing regions by 75 million between 2008 and 2009. The number is 200 million if the poverty line chosen is 1.25$ per day.

The effects of the crisis on poverty are particularly important in these countries, given the low share of social spending in GDP. For example, this share is only 2% in Africa and Asia, against 14% in developed countries (IMF, 2007). With the fall of resources, developing countries find more difficult to respect their engagements, concerning the social protection.

Poverty in developing countries has risked to be accentuated by the significant decrease in remittances from migrants and menace of declining aid to those countries, which represent a determining factor in the fight against poverty. The World Bank (2009e) estimates that remittances to developing countries in 2009 are expected to decline by 5% to 8%.

In some developing countries, the crisis has hardly hit the middle class. For example, the World Bank (2010a) concluded, in the cases of Mexico and the Philippines, that between 15% and 20% of people in the 4^{th}-7^{th} decile have transited to the last decile. This is justified by the fact that the exports sectors, hardly hit by the crisis, are intensive of workers belonging to the middle class.

In general, whatever its form, the current state of developing economies is characterized by a loss of jobs and an increase of inequality and poverty. These phenomena have penalized especially the young and the middle class. The consequence is a deterioration of the social indicators. At this level, according to the International Labor Organization study (2010b)[2], the unemployment rate registered an increase by 2.8% more in 75.6% of countries which registered deterioration in the quality and standard of living. In 50% of countries that registered deterioration of confidence in the government and 55.4% of countries that registered deterioration in perception of inequality, variations in the unemployment rate compared, to the rest of the economies are, respectively, 2.7% and 1.5%. This means that the crisis, revealing all fragilities, contributed through its social effects to the worsening social climate.

Moreover, it is evident that the quality of governance in developing countries is critical. The socio-economic impacts of the crisis and the bad governance had led to a deterioration of the social indicators. If we add to these elements the political repression, social

[2] The study covers a sample of 71 or 83 countries (depending to the social climate indicator) during the period 2006-2009.

movements and attempts to change regimes in many developing countries, including those of the Arab world, are justified.

2.3 Social Movements and Governance: The Case of the Arab Countries

Most of the Arab countries have opted for the Chinese model of development "growth without democracy". Data published by Kaufmann et al (2009) shows a continuing deterioration of governance in all of the Arab countries. Compared to some developed countries (France and Germany), the quality of governance in these countries is bad, as shown in the following Table 1.

Table 1. The quality of governance in the Arab countries[3]

	Voice and responsibility		Government efficiency		Respect of rules and laws		Corruption control	
	2004	**2008**	**2004**	**2008**	**2004**	**2008**	**2004**	**2008**
Algeria	-0.79	-1.05	-0.45	-0.50	-0.66	-0.70	-0.60	-0.44
Egypt	-0.96	-1.19	-0.31	-0.37	0.05	-0.09	-0.46	-0.67
Libya	-1.75	-1.90	-0.69	-0.84	-0.51	-0.65	-0.77	-0.81
Morocco	-0.55	-0.70	-0.08	-0.09	0.06	-0.11	-0.08	-0.26
Mauritania	-1.21	-0.92	-0.26	-0.97	-0.67	-1.01	-0.14	-0.80
Sudan	-1.66	-1.77	-1.20	-1.41	-1.52	-1.50	-1.31	-1.49
Syria	-1.52	-1.75	-0.99	-0.67	-0.32	-0.54	-0.66	-1.07
Yemen	-0.89	-1.18	-0.93	-0.99	-1.1	-0.93	-0.96	-0.73
Tunisia	-0.81	-1.26	0.44	0.35	0.29	0.24	0.34	-0.04
France	1.43	1.24	1.67	1.54	1.43	1.40	1.42	1.43
Germany	1.52	1.34	1.57	1.65	1.66	1.72	1.88	1.77

Source: Kaufmann et al (2009).

The bad quality of governance in Arab countries is retained by many observers. The example of Tunisia, the first country in which freedom movements have started, is significant. In fact, Tunisia is distinguished by its relative successes in the macroeconomic areas of growth, health, education and women's rights (El Weriemmi, 2000). A part of these performances is due to the high stability of the country. This stability was maintained at the cost of a political repression. We note that, in recent decades, the Tunisian government was one of the most authoritarian of the region (Freedom House). The regime has contributed to establish a system of corruption within the highest decision-making authorities. The Global Financial Integrity Foundation estimated the cost of corruption in the country about one billion dollars per year (African Development Bank, 2011).

Under the pressure of the political repression and the degradation of economic and social indicators, the Tunisian people have decided to change their destiny to establish a democratic regime guaranteeing human dignity and promoting governance. Indeed, the country is preparing to install the second republic which should give priority to building democracy and respect for human rights, regional development and employment.

The model of political-economic governance adopted by the Arab countries is, overall, comparable to that of Tunisia. Social movements began to spread to other Arab countries like Egypt, Libya, Yemen, Syria, Jordan, Bahrain, Morocco and Algeria. For these countries, although the slopes are different (revolution or movements) the objective is always the same: the establishment of a socio-economic-political regime guaranteeing human dignity and promoting good governance. Can we hope that these movements will contribute to the dynamism of the Arab economies and to improve their living standards? For Arab economies, particularly, and developing

[3] For each governance indicator is assigned a score between (2.5) and (-2.5). An increase of the score is synonym of governance improving.

countries, generally, are good governance and economic policies sufficient, or initial conditions are needed to let these economies to have more growth?

3. Governance and Development Prospects

The role of good governance in the economic and social development is widely recognized by major national, regional and international institutions. Good governance is presented as a universal solution for generating the confidence necessary for economic growth (Meisel and Ould Aoudia, 2007). It advances political representation, freedom and respect for the constitution and it also increases transparency and accountability.

These elements of democracy reinforce the legitimacy of the state, which, in turn, promises peace and stability that are crucial for investment and economic growth. World Bank (2011b) considers that the respect of laws promoting competition and a stable political situation attracting investment, promotes rapid and sustainable growth. It notes that, those countries which have experienced a change towards democracy confirm that the economic benefits are significant.

Acemoglu et al (2004) confirm the positive effects of good governance on the socio-economic development; noting that during the period of the middle Ages, the European region was characterized by political institutions reinforcing the centralization of political power and failure to respect fundamental rights. This political structure was accompanied by a lack of efficient economic institutions. The result was a small accumulation of physical and human capital and blockage of growth mechanisms. On the contrary, from the seventeenth century, the region has undergone profound changes in its political institutions. These changes have aimed to a redistribution of political power. Favored by the industrial revolution, they were followed by radical changes in economic institutions. This new political-economic structure has contributed to a redistribution of resources, to the accumulation of factors of production, to innovation and to an increase of the productive potential.

In the same direction, Maddison (1995) considered that the development witnessed by the European region since the beginning of the nineteenth century, is stimulated by an institutional framework by establishing legal provisions which are not arbitrary, by fostering greater democratic participation and by protecting property rights. This institutional framework has contributed to the establishment of reliable financial institutions and economic instruments leading to greater economic efficiency.

In the case of the Latin American region which has lost the track of development, Maddison (1995), notes that the political, economic and social developments were, largely, different from that of Western Europe. Indeed, this region was hampered from the beginning of the 19th century by the marginalization of certain groups of citizens whose result is an unequal distribution of wealth and education. The region was characterized also by a high level of indebtedness and political instability. This context is, in general, comparable to the African region which is the poorest despite its natural resources. There are others features which are helpful in understanding the continued retard. For example, this region was hampered by a long period of colonization, mainly for the exploitation of its natural resources without regard to modernize infrastructure and develop a mass education system. After independence, many African countries were trapped in civil wars. Others have suffered from the establishment of a totalitarian regime or a system of single political party. These systems have exacerbated the political, economic and social domains facilitating corruption and adopting wrong policies, leading the region to disastrous and catastrophic situations. These situations were reinforced by a small proportion of the educated population and the population explosion. Therefore, the majority of African countries were unable to establish efficient public administration and a legal system guaranteeing property rights. These countries have been as well, directed by fragile and dependant states.

These different development models suggest that a bad quality of institutions encourages market imperfections and the development of annuity research activity. The result is a misallocation of resources, a weak incentive to accumulate factors of production and blockage of the growth mechanisms of endogenous type (World Bank, 2006, Rajan and Zingales, 2006, Report on Arab Human Development, 2002; Acemoglu, 1997).

Other authors confirm that efficient institutions are necessary to promote the private initiative and the accumulation of skills. A part of this work considers that human capital is productive only when it is used optimally. This requires institutions guaranteeing property rights, contract enforcement and civil liberties, which can hinder the development of rent-seeking activities and corruption (Aghion, 2000 and Dessus 1998). Barro and Sala-i-Martin (1995) have shown that efficient institutional framework promotes the most productive investments. This conclusion is retained by the Arab human Development report (2002) and World Bank (2005) which show that countries with efficient institutions have succeeded to accumulate more human capital and to prevent the persistence of bad policies.

In this sense, the World Bank (2006) argues that a corrupt bureaucracy, for example, operates as a tax on production activities. In these conditions, entrepreneurs must allocate a part of their time and resources to corrupt public authorities. The business environment is so risked, transaction costs are high, predictability and transparency are absent and the capital formation is very low as would have been done under different circumstances (Bahloul, 2005, and Haddar, 2005).

The relationship between institutions and the productive performances is also shared by Hall and Jones (1999), who consider the political and economic institutions (as determinants of the environment in which economic agents operate) as key factors that can explain differences between countries in the accumulation of human and physical capital, in productivity and in per capita income. The authors believe that the bad performances in the poor countries are explained by the waste of resources, especially capital and knowledge. Therefore, the problem is not to accumulate more resources, in physical and human capital, for example, but to reduce the waste of resources that already exist. This, in turn, calls for the adoption of institutions that can increase the efficiency of existing resources and to avoid bias in the choices of individuals in favor of rent-seeking.

4. Governance and Socioeconomic Development: Empirical Evidence

Here, we try to study the relationship between governance and economic growth. At this level, we focus on the role of human capital. The assessment of this relationship will be provided from an empirical study using panel data, covering a sample of 51 developing countries[4] during the period 1980-2009 (data are yearly: T=30).

4.1 Definitions and Sources of Variables

The variables used in the regressions are: GY: the growth rate of GDP per capita, G / GDP: the share of government spending in GDP, Inv / GDP: Gross fixed capital formation as percentage of

[4] See Appendix for the list of the countries. Due to unavailability of data for some variables, China and Russia are excluded from the sample.

GDP, FDI / GDP: the Foreign Direct Investment as a percentage of GDP, GX: The growth rate of exports, PR: (Political Rights) an indicator of respect for political rights, taking a value from 1 to 7; it shows, in decreasing order, respect for political rights, CL: (Civil Liberties) an indicator reflecting freedom of the press and assembly, political organizations and independence of justice; it takes a value from 1 to 7 indicating, in decreasing order, respect for civil liberties and HS: a human capital indicator, measuring the average years of secondary schooling of the total population aged 15 and over.

The macroeconomic variables are extracted from the World Development Indicators (World Bank, 2011a). The variables related to the quality of governance (PR and CL) are provided by Freedom House (2011). Concerning the human capital (HS) we used the database of Barro and Lee (2011).

4.2 Estimation Methodology

Using panel data, we propose to estimate the effects of the quality of governance on economic growth. The model is presented by the following equation:

$$GY_{i,t} = \alpha_i + \beta\, GOUV_{i,t} + \lambda\, X_{i,t} + \varepsilon_{i,t}\,; \quad i = 1, 2, \ldots N \quad and \quad t = 1, 2, \ldots T \qquad (1)$$

where "GY" is the growth rate of GDP per capita, "GOUV" represents the quality of governance and "X" is a matrix of control variables. "α_i" is a parameter of individual specific effects and "$\varepsilon_{i,t}$" is an error term.

4.2.1 Test of stationarity

In the case of time series, it is important to study their stochastic characteristics and to verify that they have neither trend nor seasonality. In order to test the stationarity of our series, we opted for the Levin-Lin-Chu method (LLC).

This method of unit root test has the following specification:

$$\Delta GY_{i,t} = \rho\, GY_{i,t-1} + \sum_{j=1}^{n} \lambda_{ij}\, \Delta GY_{i,t-j} + \eta\, Z_{i,t} + e_{i,t} \qquad (2)$$

The null hypothesis of the proposed specification is: H0: $\rho = 0$. The alternative hypothesis is: H1: $\rho < 0$. Note that the null hypothesis considers that the series is not stationary; in this case the variance increases in time. The alternative hypothesis supposes that the series is stationary. The results of unit root tests (Table 2) allowed us to reject the null hypothesis and retain that our series are stationary.

Table 2. The unit root tests

Series	Statistic	Prob*
GY	-10.66	0.0000
G/GDP	-3.05	0.0011
INV/GDP	-3.15	0.0008
FDI/GDP	-3.45	0.0003
GX	-9.06	0.0000
PR	-3.83	0.0001
CL	-4.04	0.0000
HS	-2.74	0.0030

***** Probabilities are computed assuming asympotic normality.

4.2.2 Test of Hausman

The model to estimate is supposed to be an individual effects one. This hypothesis is retained to take into account the structural differences between economies. These structural differences may be justified by the fact that the countries do not share a geographic location or climate, neither history nor the natural resources endowments. The constant " α_i " in equation (1), takes into account the individual effects due to the structural differences.

The constant " α_i ", measures the individual effects which can be fixed or random. To identify the specification of our model (fixed individual effects or random individual effects), we use the test of Hausman. The null hypothesis considers that the covariance between the explanatory variables and *al ά*s is zero; in this case, the model can be specified with random individual effects. The alternative hypothesis assumes that the covariance between the explanatory variables and *al ά*s is different from zero, which means that the model can be specified with fixed individual effects.

The results of the Hausman test allowed us to reject the null hypothesis and conclude that our model is a fixed individual effects one; the unbiased estimator is WITHIN.

4.3 Results and Interpretations

The results of regressions are presented in the table 3[6]. In the regression (1), all coefficients are significant and having expected signs. We note that the share of public spending in GDP coefficient is negative. This sign can be justified by the fact that public spending may be subject to decreasing marginal returns. In this case, it is likely that excessive government spending on infrastructure is less efficient, compared to private investment. Also, the competition between the public and private sectors may cause substitution effects that can lead to adverse effects on growth. Otherwise, it seems that the contribution of private investment to the economic growth is less than that of FDI and exports ones. The contribution of FDI can be explained by the fact that they are moving, generally, to the productive sectors.

Table 3. The results of regressions[5]

Variables	(1)	(2)	(3)	(4)	(5)
C	-0.23 (-0.27)	2.58 (3.55)	2.92 (3.78)	0.46 (0.48)	0.69 (0.65)
G/GDP	-0.18 (-4.74)	-0.20 (-5.48)	-0.20 (-5.31)	-0.17 (-4.66)	-0.17 (-4.63)
FDI/GDP	0.11 (2.78)	0.15 (3.75)	0.14 (3.55)	0.10 (2.61)	0.10 (2.61)
INV/GDP	0.07 (3.73)	0.06 (3.27)	0.06 (3.42)	0.07 (3.74)	0.07 (3.8)
GX	0.10 (11.71)	0.10 (11.46)	0.10 (11.44)	0.10 (11.67)	0.10 (11.64)
HS	1.12 (3.62)			1.04 (3.33)	0.98 (3.04)
PR		-0.20 (-2.11)		-0.15 (-1.57)	
CL			-0.31 (-2.46)		-0.19 (-1.48)

The human capital coefficient shows that an additional year of education would have increased growth of 1.12%. The introduction of governance indicators in specifications (2) and (3) has been accompanied by an increase of the coefficient of the FDI while the coefficient of the private domestic investment has remained almost constant. This can mean that foreign investors prefer to invest in countries which have good governance and that the domestic investors are more able to cope with the bad governance. The coefficient of the indicator of civil liberties (CL) is higher than that of political rights (PR) because the first has a direct relationship with investment.

[5] Values in parentheses are t-Statistic.

[6] Due to the multi-collinearity problem (CL and PR), detected by the Klein test, a regression that takes into account the two indicators of governance is biased.

In the last two specifications, the introduction of the human capital indicator made the governance indicators coefficients insignificant. This can be explained by the interdependency between the indicator of human capital and that of governance. To prove the interdependency between governance and human capital, we assume that the latter may have an important effect on the evolution of the first. Under this assumption, the coefficient of civil liberties can be written as follows: $\beta_{CL} = \beta_0 + \eta\ HS$.

The estimation results are:

$$GY = 1.84 - 0.18\ G/GDP + 0.10\ FDI/GDP + 0.08\ INV/GDP + 0.10\ GX - 0.52\ CL + 0.28\ HS{*}CL$$
$$(2.25)(-4.80) \quad (2.40) \quad (4.18) \quad (11.58) \quad (-3.78) \quad (3.77)$$

This result shows that the effect of governance on growth depends on human capital endowment. Its total effect on growth is composed of a direct effect (from CL) and a conjugate one with human capital (HS * CL). The taking in consideration of the role of human capital has amplified the effect of governance on growth. Compared to regression (3), the last specification shows an increase of about 60% of the effect of civil liberties on growth (the new coefficient is (-0.52) against (- 0.31) in the regression (3)).

The positive sign of the conjugate effect suggests that the human capital endowment limits the adverse effects of the bad governance on economic growth. Since the absolute value of the coefficient of the direct effect is greater than the coefficient of the conjugate effect, bad governance would still have a negative effect on growth, even in the presence of sufficient human capital. The latter occurs only to limit the negative effects of bad governance.

5. Conclusion

The international financial crisis had negative economic effects and a high human cost in developing countries. This cost is manifested by worsening problems of unemployment and poverty and by a deterioration of the human development indicators. The combination of socio-economic crisis effects and the bad governance has made the social climate very fragile. In some Arab countries, this situation has caused social movements. These movements aimed to establish institutions promoting good governance. Theoretically, this allows accelerating growth. The empirical study, covering a sample of 51 developing countries during the period 1980-2009, concluded that good governance is able to encourage the FDI and to stimulate the growth. However, this effect is dependent on human capital endowment, which is able to improve the quality of governance. In countries which have a bad quality of governance, human capital can limit its adverse effects on growth.

References

[1] Abella M. and Ducanes G. (2009), "The effect of the global economic crisis on Asian migrant workers and governments responses", [Online] Available at: http://www.ilo.org/wcmsp5/groups/public/@asia/@ro-bangkok/documents/meetingdocument/wcms_101731.pdf (March 31, 2012).

[2] Acemoglu D. (1997), "Training and innovation in an imperfect labour market", *Review of Economic Studies*, 64(3): 445-464.

[3] Acemoglu D., Johnson S. and Robinson J. (2004), "Institutions as the fundamental of long-run growth", NBER Working Paper, n°10481. [Online] Available at: http://www.nber.org/papers/w10481 (March 31, 2012).

[4] African Development Bank (2011), "Révolution tunisienne : enjeux et perspectives économiques", Economic Note, March 11, 2011. [Online] Available at: http://www.afdb.org/fileadmin/uploads/afdb/Documents/Publications/North%20Africa%20Quaterly%20Analytical%20Fran%C3%A7ais%20ok_North%20Africa%20Quaterly%20Analytical.pdf (March 31, 2012).

[5] Aghion P. and Howitt P. (2000), "Théorie de la croissance endogène", Dunod, New York.

[6] Arab human development report (2002), [Online] Available at: http://www.arab-hdr.org/publications/other/ahdr/ahdr2002e.pdf (March 31, 2012).

[7] Bahloul M. (2005), "Gouvernance, réformes et compétitivité globale", Conférence on Governance, private investment and development, Tunisia, November 2005.

[8] Barro R. and Lee J. (2011), "Educational attainment for female population, 1950-2010", [Online] Available at: http://graduateinstitute.ch/md4stata/datasets/educ_attain.html (March 31, 2012).

[9] Barro R. and Sala-i-Martin X. (1995), "Economic growth", McGraw-Hill, London.

[10] Benabdennour A., El Weriemmi M. and Ould sidi mouhamed M. (2011), "La crise financière internationale et la gouvernance économique et politique: quels enjeux pour les pays Maghrébins", International conference organized by the CEMAFI (Nice) and the University of Peoples' Friendship (Moscow), Nice, May 2011.

[11] Daguzan J. (2011), "La crise arabe : de la crise économique à la révolution politique", *Maghreb-Machrek*, n°206.

[12] Dessus S. (1998), "Ouverture et productivité à Taiwan", *Economie Internationale*, n°73.

[13] Didier, Hevia and Schmukler (2010), "How resilient were developing countries to the global crisis?", In: Latin American and Caribbean Economic Association (LACEA) & Latin American Meeting of the Econometric Society (LAMES), 2011 Parallel Meetings,10 - 12 November 2011, Santiago, Chile.

[14] El Weriemmi Malek. (2000), "Libéralisation des échanges extérieurs, croissance, salaries et emploi en Tunisie", CEMAFI, University of Nice Sophia Antipolis.

[15] Freedom House (2011), "Freedom in the World countries ratings", [Online] Available at: http://www.freedomhouse.org/report-types/freedom-world (March 31, 2012).

[16] Haddar M. (2005), "Institutions et investissement privé", Conference on Governance, private investment and development, Tunisia, November 2005.

[17] Hall R. and Jones C. (1999), "Why do some countries produce so much more output per worker than others?", *Quarterly Journal of Economics*, 114 (1): 83-116.

[18] IMF (2009a), "Perspectives de l'économie mondiale: crise et reprise", April 2009.

[19] IMF (2009b), "Finances et développement", 46 (1), March 2009.

[20] IMF (2007), "Government Financial Statistics".

[21] International Labor Organisation (2010), "Rapport mondial sur les salaires", [Online] Available at: http://www.ilo.org/wcmsp5/groups/public/@dgreports/@dcomm/@publ/ documents/publication/wcms_146706.pdf (March 31, 2012).

[22] International Labor Organization (2010a), "Global employment trends for youth", [Online] Available at: http://www.ilo.org/wcmsp5/groups/public/-ed_emp/-emp_elm/-trends/documents/publication/wcms_143349.pdf (March 31, 2012).

[23] International Labor Organization (2010b), "Rapport sur le travail dans le monde 2010 : d'une crise à l'autre", [Online] Available at: http://www.ilo.org/public/french/bureau/inst/research/summary_f.pdf (March 31, 2012).

[24] International Labor Organization (2009), "Conséquences de la crise économique sur les marchés du travail", Information document for the G8 social summit.

[25] Kaufmann D., Kraay A. and Mastruzzi M. (2009), "Governance matters VIII: aggregate and individual governance indicators 1996–2008", World Bank, Policy Research Working Paper, n°4978.

[26] Khanna, Newhouse and Paci (2010), "Fewer jobs or smaller paychecks? labor market impacts of the recent crisis in middle-income countries", Economic Premise, Note 11, World Bank.

[27] Maddison A. (1995), "Monitoring the world economy", OECD, Paris.

[28] Meisel N. and Ould Aoudia J. (2007), "La bonne gouvernance : est-elle une Bonne Stratégie de Développement?", Working Papers DGTPE n°2007/11. [Online] Available at: http://www.cepii. fr/institutions/11_2007.pdf (March 31, 2012).

[29] Rajan R. and Zingales L. (2006), "The persistence of underdevelopment: institutions, human capital or constituencies? ", NBER Working Paper, n°12093.

[30] United Nations (2009), "Situations et perspectives de l'économie mondiale".

[31] World Bank (2011a), "World Development Indicators", [Online] Available at: http://data.worldbank.org/data-catalog/world-development-indicators (March 31, 2012).

[32] World Bank (2011b), "Des perspectives de croissance solidaire s'offrent aux pays de la région MENA", Press Release, n°2011/501/MNA, May 24, 2011. [Online] Available at: http://web.worldbank.org/WBSITE/EXTERNAL/ACCUEILEXTN/NEWSFRENCH/0,,contentMDK:22925016~pagePK:64257043~piPK:437376~theSitePK:1074931,00.html (March 31, 2012).

[33] World Bank (2010a), "Poverty reduction and economic management", Economic premise, n°7.

[34] World Bank (2010b), "Les pays en développement à la recouse de l'économie mondiale", Press Release, n°2011/096/PREM, September 27, 2010.

[35] World Bank (2009a), "Perspectives pour l'économie mondiale", June 22, 2009.

[36] World Bank (2009b), "Les turbulences économiques mondiales ont d'importantes répercussions sur les flux de capitaux vers les pays en développement", Press Release, n°2009/414/DEC, June 22, 2009.

[37] World Bank (2009c), "La crise économique et les objectifs du développement pour le millénaire", [Online] Available at: http://web.worldbank.org/Wbsite/external/Accueilextn/Newsfrench/0,,contentMDK:22155655~pagePK:64257043~piPK:437376~theSitePK:1074931,00.html (March 31, 2012).

[38] World Bank (2009d), "Global crisis prompts big rise in World Bank health and education financing - AIDS drugs could be in short supply", Press Release, n°2009/324/HDN, April 24, 2009.

[39] World Bank (2009e), "Rapport de suivi mondial", [Online] Available at: http://siteresources.worldbank.org/INTGLOMONREP2009/Resources/GMR2009-French_ovw.pdf (March 31, 2012).

[40] World Bank (2006), "Rapport sur le développement dans le monde", [Online] Available at: http://siteresources.worldbank.org/INTWDR2006/Resources/wdr2006_outline_fr.pdf (March 31, 2012).

[41] World Bank (2005), "Gouvernance et développement au Maghreb", Note presented at the roundtable organized by the World Bank and the Tunisian government.

[42] World Bank and IMF (2010), "Dans quelle mesure les pays en développement ont-ils résisté à la crise mondiale ?", Development Committee, September 30, 2010. [Online] Available at: http://siteresources.worldbank.org/INTFREDEVCOMM/Documentation/22730845/DC2010-0015(F)IDAResilience.pdf (March 31, 2012).

Appendix: List of the 51 countries in the sample

1. Alegria	18. Iran	35. Philippines
2. Bangladesh	19. Jordan	36. Republic Arab of Egypt
3. Benin	20. Kenya	37. Republic Arab Syrian
4. Bolivia	21. Lesotho	38. Republic Dominican
5. Botswana	22. Malawi	39. Ruanda
6. Brazil	23. Mali	40. Salvador
7. Cameroon	24. Mauritania	41. Senegal
8. Chile	25. Mauritius	42. South Africa
9. Ivory Coast	26. Mexico	43. Sudan
10. Costa-Rica	27. Morocco	44. Thailand
11. Democratic republic of Congo	28. Mozambique	45. Togo
12. Ecuador	29. Nicaragua	46. Trinidad and Tobago
13. Gabon	30. Niger	47. Tunisia
14. Guatemala	31. Pakistan	48. Uganda
15. Honduras	32. Panama	49. Uruguay
16. India	33. Paraguay	50. Venezuela
17. Indonesia	34. Peru	51. Zambia