Institutional Quality and Economic Development: Focus on the Moroccan Case

Younes EL Khattab[1], Mounia Bettah[2], Chourouk Moudine[3]

[1,2]*Professor – Researcher, PHD Student Faculty of Juridical, Economic and Social Sciences*
Mohammedia - Morocco
[3]*Professor – Researcher National School of Business and Management*
Casablanca - Morocco
Corresponding Author: Chourouk Moudine

Abstract*: Over the last decades, the world economy has undergone profound changes, producing a heterogeneous trajectory in terms of growth rate and development dynamics. Economic studies that have looked into this issue have revealed that institutional quality has an undeniable role in economic development, to the extent that a country's explicit and implicit standards of behavior condition its economic performance. Thus, the initiation of a rapid process of economic catch-up requires the establishment of an institutional framework that takes into account the specificities of a society and explicit and implicit norms of behavior that condition economic behavior.*

This study is part of the same analysis and attempts to highlight institutional quality's important role in explaining economic performance. The analysis was based on the exploitation of a set of databases, in order to determine the institutional variables that explain the level of development.

Keywords*: Institutional Quality, Economic growth, Development level, Intangible Capital*

I. Introduction

Over the last decades, the global economy has experienced deep changes, producing a heterogeneous trajectory in terms of growth rate and development dynamics. Some countries with low per capita income in the sixties have initiated a rapid process of economic catch-up and managed to improve their living standards which converged progressively towards the international standards.

This heterogeneity was the subject of many studies that explained development gap between countries essentially by institutional variables. Thus, the initiation of a rapid process of economic catch-up requires the establishment of an institutional framework that takes into account the specificities of a society as well as the explicit and implicit behavioral norms that condition economic behavior. According to those studies, countries with similar attributes in terms of geographical position, natural resources and trade openness don't necessarily reach comparable levels of income. The observed gaps were mainly explained by institutional divergence.

Institutional quality plays a crucial role in economic development since it is an important component of a country's wealth alongside with other elements like innovation, know-how and sociopolitical stability. Accumulating this wealth and streamlining its management lead to the acceleration of economic development.

II. Institutional Quality Contribution to Economic Development
2.1 Predominance of institutions' role in economic growth

One of development economics' major concerns is to understand the income gap between countries with similar economic and geographical attributes. Factors such as trade openness, natural resources, geographical position and proximity to area with intense economic activity were often cited to explain economic performance. Nevertheless, those elements fail to provide an explanation of performance reached by the Japanese and South Korean economies which don't have a real geographical or natural advantage.

Since the 90's, economists included other key variables in their studies with a special focus on the institutional quality. Indeed, institutions' role is considered by some authors (North, 1994) as a key factor of growth, especially the aspects related to property rights protection, regulation structure and judicial institutions independence. In light of this, we can assume that explicit and implicit behavioral norms of a country condition undeniably its economic performance.

In order to validate our hypothesis, we use a Multiple Linear Regression Model (autoregressive OLS) in which economic growth is linked to a set of variables used as proxies for geography, commercial integration

---

and institutional quality. This regression is based on a sample of 44 countries having various income levels: high income (20 countries), upper-middle income (13 countries) and lower-middle income (11 countries)[1].The estimated regression equation is as below:

$$DL_t = 3{,}56 + 0{,}16\ IQ_t + 0{,}02\ DE_t - 3*10^{-4}CI - 0{,}5\ AR\ (1) + \varepsilon_t$$

- *The development level* (DL) is measured by the GDP per capita at Purchasing Power Parity (PPP) (constant 2011 USD). (World Development Indicators from the World Bank).
- *Institutional quality* (IQ) is approximated by a synthetic indicator resulting from Principal Component Analysis (PCA) based on the Institutional Profile Database 2012 (IPD). It's the score of the first factorial axis that includes nearly 50% of informational content.
- The variable used as a proxy for geographical factor is the *distance from the equator* (DE) measured by the absolute value of the country's capital latitude, expressed in degree (Dollar-Kraay database from the World Bank). Notice that natural resources are considered to be concentrated in the countries close to the equator.
- *Commercial integration* (CI) is represented by the goods and services trade openness indicator (UNCTAD). Since data is not available for all countries, an average is calculated over 2003-2010.

According to the econometric results obtained using Eviews, the exogenous variables explain 64% of the development level variation. With elasticity of 16%, institutional quality increases considerably the GDP per capita while elasticity of GDP with respect to geographical factors is only 2%. Commercial integration[2] has a minor impact on income level since proximity to markets is no longer a decisive determinant of trade relationships. As example, China manages to export its products to all corners of the globe with low cost.
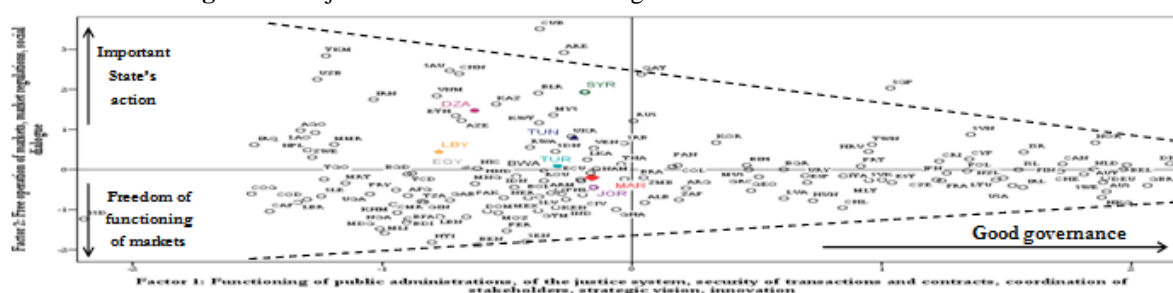
These results confirm the important positive impact of institutional quality on the countries development level. Thus, quantitative accumulation of production factors is not the only variable explaining the income level disparities between countries, but there is another key element to take into account which is the institutional quality that streamlines the use of resources.

2.2 Governance indicators analysis (IPD 2012)

Governance indicators analysis is based on a larger size sample of 142 countries[3] and 109 institutional indicators from the aggregated version of IPD database which includes 130 indicators[4].

A principal component analysis (PCA) is used to determine the countries' major institutional characteristics that impact significantly their income level. According to the PCA results, the factorial plane on which the countries are projected includes two main factorial axes that cover 61% of the database informational content (figure 1).

Figure 1: Projection of countries according to the first two factors of the PCA

Source: Authors, using 2012 IPD

Notice that the KMO index of this analysis (≈0,95, value approximating 1) shows the existence of a statistically acceptable factorial solution.

Table 1: KMO index and Bartlett test

Kaiser-Meyer-Olkin measure of sampling adequacy		0,947
Bartlett's test sphericity	Approx. Khi-Square	6399,565
	Degree of freesom	1081
	Level of significance	0,000

Source : Authors, using SPSS

---

[1]The statistics related to our sample are from the CEPII's Institutional Profile Database (2012).
[2]Residuals explain 36% of development level variations. Those residuals may include other economic variables.
[3]High income (43 countries), upper-middle income (38), lower-middle income (32) and low income (29).
[4]Since data isn't available for the studied countries' major part, 21 variables were dropped from the analysis.

The horizontal axis obtained from factorial planeexplains more than 50% of the total variance. It incorporates institutional variables related to rules formalization:

- Countries with well-functioning institutions are projected on the right side of the axis. Their institutional performance stem from the enforcement and respect of formal rules related notably to property rights protection, public administration effectiveness and judicial independence. This group includes high income developed countries characterized by their private sector's adaptation and innovation skills, the transparency of their firms and economic policies as well as their citizen's participation in political and social decision making process.
- Countries projected on the left side of the axis are those suffering from problems of low enforcement, corruptionand obstacles to social development as well as informal and child labour. This group is made mainly of sub-Saharan Africa countries.

The vertical axis covers 11% of the total informational content and includes institutional variables related to the extent of state interventionism and markets functioning.

- Countries projected on the upper part of the axis are marked by the government central role in economic, political and social regulations, particularly Cuba, UAE and China.
- Countries projected on the lower part of the axis are characterized by a limited state interventionism. Governments in those countries promote freedom of information, liberty to create new organizations, well-functioning social mobility and social cohesion. This group includes especially Haiti, Benin, Mali and Senegal.
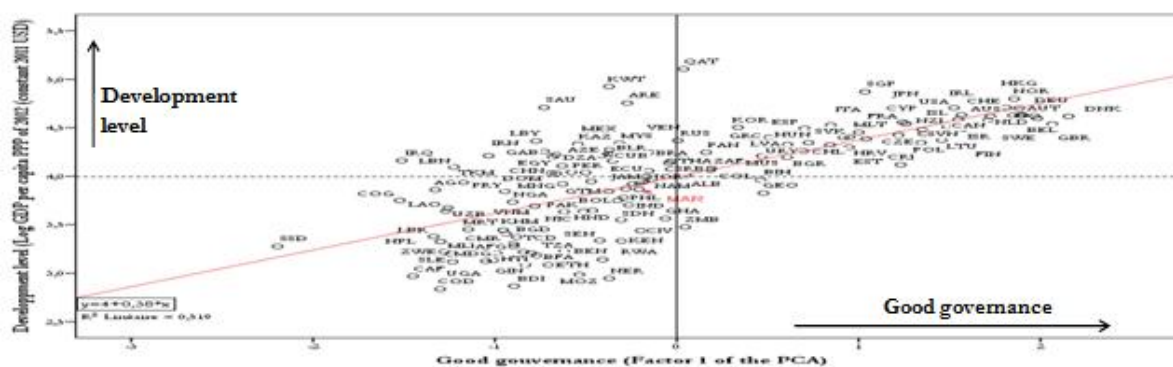
III. Relationship Between Good Governance And Development Level: Focus On The Moroccan Case

3.1. Correlation between good governance and development level

The horizontal axis indicates a strong correlation between governance and development level. Throughout this axis, formal rules enforcement, transparency and private sector development are strongly linked the countries development level. Developed countries projected on the right side of the axis are gathered around well-established systems of good governance, whereas developing countries, placed on the left side of the axis, are characterized by more heterogeneous profiles.

In order to confirm this hypothesis, we focus on the relationship between good governance and development level. In this study, the plane on which the sample is projected includes the first PCA factorial axis used as a good governance indicator (placed on abscissa axis) and the development level expressed in log of GDP per capita at (PPP) (constant 2011 USD) (placed on ordinate axis).

Figure 2: Relationship between good governance and development level

Source: Authors, using 2012 IPD and World Bank's WDI

Figure2 confirms the previous conclusions about the short-term relationship between institutional quality and development level. Indeed, the regression straight line shows clearly that transparent and formalized governance system improves substantially the income level. Notice that, despite their governance system fragility, some countries such as Saudi Arabia, UAE and Kuwait manage to reach a high development level, thanks to the importance of their natural resources.

Unlike the new institutional economics approach which explains medium/long term economic performance by the emergence of effective institutions [NORTH, 1994 and KAUFFMAN, 1999], many recent research works have called into question the relationship between good governance and medium/long term growth which is measured by the GDP/cap average growth calculated over a long period. In this regard, KHAN

[2004 and 2006] as well as MEISEL and OULD AOUDIA [2007] reject the existence of a mechanical relationship between good governance reforms and long term growth.

In order to analyze the relationship between good governance and medium/long term growth, the sample is projected on a plane that includes the PCA principal factor (placed on abscissa axis) and the average growth of GDP/cap (PPP) calculated over the period 2000-2012 (placed on ordinate axis).

Figure 3: Relationship between good governance and medium/long term growth
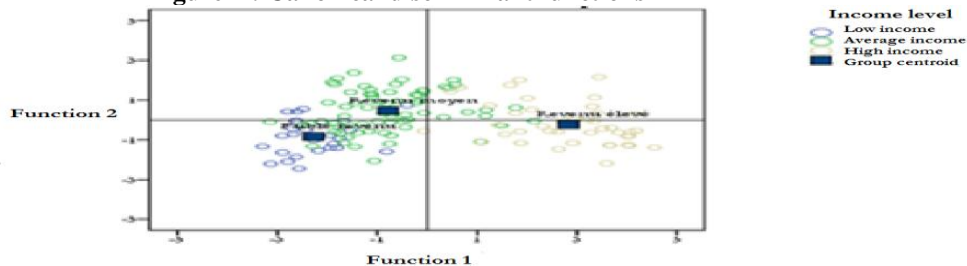

Source: Authors, using 2012 IPD and World Bank's WDI

Figure 3 shows the weak relationship between good governance and medium-long term growth and the divergence of economic performance in countries with a relatively similar institutional level (below average). Some developing countries grow faster without reaching the good governance standards.

To explain these income disparities, three groups of countries were first established according to their income level: low-income, middle-income and high-income countries[5]. A discriminant function analysis (DFA) is made, in order to identify the institutional variables which specify the most each group of countries. Thus, two discriminant functions are identified.

Figure 4 : Canonical discriminant functions

Source: Authors, using SPSS Software

Statistical tests relating to the DFA show the relevance of the results obtained. In fact, the Box test statistic is large and the Fisher test significance level is close to 0.

Table 2: Box's test results

Box's M	142.909
F Approx.	3.149
ddl1	42
ddl2	24555.078
Sig.	.000

Source: Authors, using SPSS Software

The identification of the variables that define the two discriminant functions is based on the analysis of the structure matrix which displays the correlation coefficients between the introduced institutional variables

---

[5]This distribution of country groups is based on the World Bank classification.

and these discriminant functions. According to the results of this matrix, the first function is strongly correlated with the indicators relating to institutional solidarity, the importance of informal work, public support for innovation, the intensity of internal conflicts and the functioning of political institutions, while the second function is correlated to the Credit Policy's indicator, which implemented by the public authorities.

Table 3: Structure matrix

Institutional variables	Functions	
	1	2
A906 : Institutional solidarity	0,707*	0,431
D402 : Importance of informal work	-0,685*	0,246
B501 : Public support for innovation	0,502*	0,296
A203 : Internal conflicts	-0,441*	0,400
A100 : Functioning of political institutions	0,397*	-0,005
C401 : Credit policy	-0,149	0,688*

*largest absolute correlation between each variable and any discriminant function.

Source: Authors, using SPSS Software

"Institutional solidarity" is defined in the IPD database as the share of the population covered by institutional solidarity (provided by the State or other public or private institutions) relating to illness, disability, unemployment and retirement.
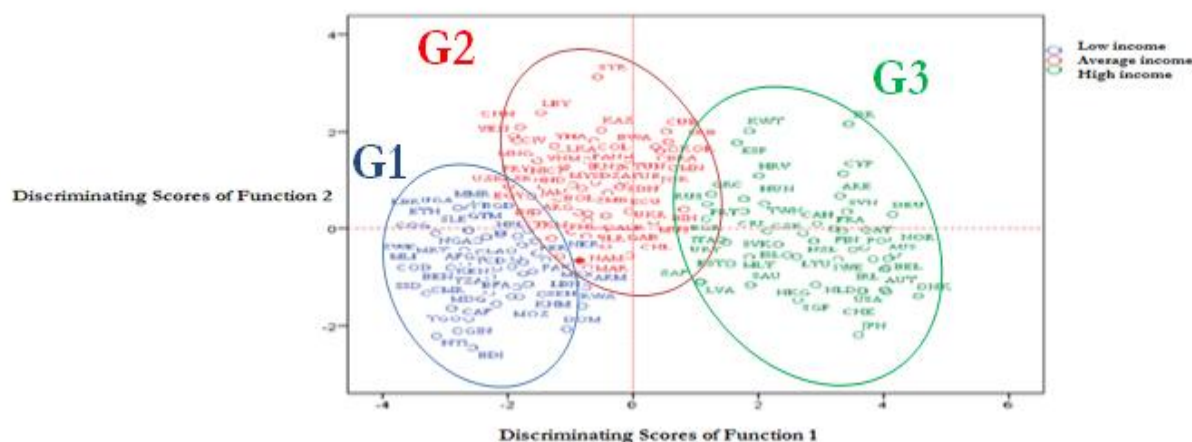
The indicator "internal conflicts" measures the intensity of ethnic, religious, regional and social internal conflicts or conflicts related to land issues and to the violence of the population towards public officials (administrations, police, public transport, health, etc.).

The "functioning of political institutions" reflects the freedom of elections at the national level, the regularity of electoral processes, the existence of representative political institutions and well-functioning political control institutions, as well as their conformity with formal rules.

The variable "credit policy" provides information about the extent of public authorities' intervention on credit. It reflects, in particular, the share of interest rates administered by the public authorities and the importance of quantitative credit control in the sample countries.

The projection of countries on discriminant functions is presented as follows:

Figure5: Projection of countries in the plane opposing scores of the two discriminant functions
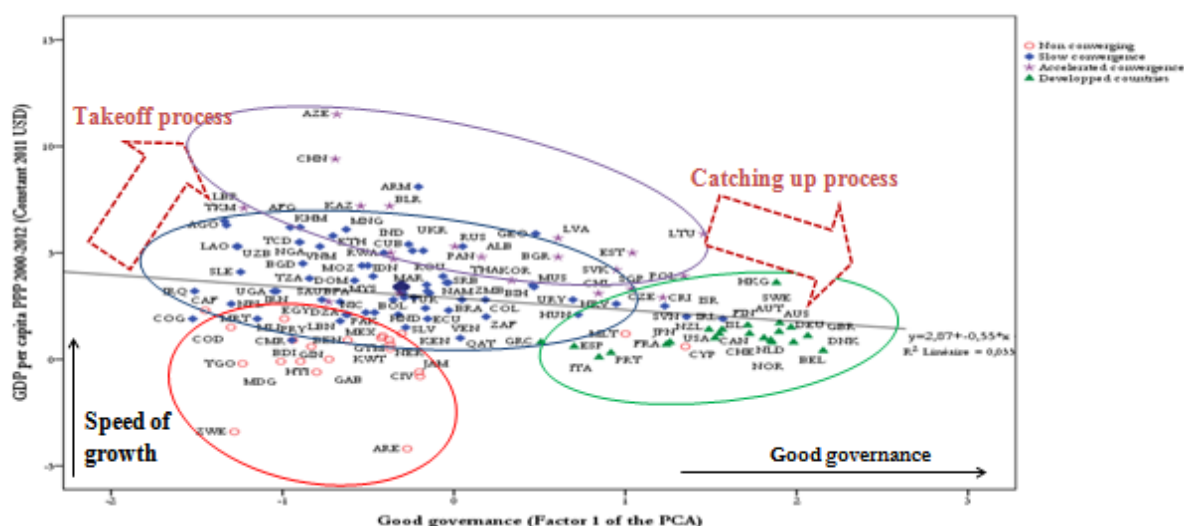

Source: Authors, using SPSS Software

- Notice that the first group of low-income countries, particularly from sub-Saharan Africa, shows low scores on the set of variables that characterizes the two discriminant functions;
- The second group of middle-income countries, including MENA and emerging countries such as China and Brazil, is more affected by the implementation of a government-administered credit policy (such as rates-setting, quantitative control and supervision of credits);
- Nevertheless, the third group of high-income countries, as European Union countries, USA, Australia and Japan, is defined by a strong institutional solidarity, an increased formalization of the labor market, an effective public support for innovation, a control of internal conflicts, and effective political institutions.

It is important to note that, despite the weak correlation between medium-to-long term growth and good governance, countries with sustained economic performance tend to converge in the long term towards the group of developed countries, with high institutional level. To support this finding, countries were ranked according to their convergence level. The latter is approached by the GDP per capita (PPP) growth gaps, calculated over the period 2000-2012, with respect to the average of 24 developed and high-income countries sample.

Figure6 presents a projection of the sample countries on a plane opposing the level of good governance (in the abscissa)[6] and the medium-long term growth (on ordinate), expressed by the growth of GDP per capita (PPP) between 2000 and 2012 (in constant 2011 U.S. dollars).

Figure 6: Relationship between governance, medium-long-term growth and convergence level

Source: Authors, using 2012 IPD and World Bank's WDI

According tofigure6, excepting the group of developed countries (G4), three other groups were identified, namely the group of non-converging countries (G1), the group of countries with slow convergence (G2) and the group of countries with accelerated convergence (G3):

- The G1 group is made up of countries that have not achieved their convergence processes, regardless of their institutional qualities. Indeed, it includes both countries that have failed to launch their economic and institutional take-off processes, such as sub-Saharan African countries, as well as high-income countries that have performed poorly last twelve years, compared to other similar countries at the high institutional level, namely Cyprus and Malta;
- Countries that have successfully completed their economic take-off process (G2 and G3) and achieve higher levels of growth than those achieved by Group 1 and 4 countries. These groups are made up of countries with important natural resources, including China, Russia and Ukraine, and countries which succeed in initiating an important institutional progress, such as the CEECs having benefited from their integration into the European Union ;
- The G4 group aggregates developed countries that have reached a certain economic maturity and continue to improve their governance systems by formalizing the rules of economic, political and social regulation. These include, in particular, developed countries of the OECD.

3.2.1 Morocco's case: Slow economic convergence

As part of the second group of developing countries, Morocco achieved its economic take-off process reaching a GDP/capaverage growth of 2.5% between 2007 and 2017 (2.7% in 2017 against 2.3% in 2007), higher than the world average (1.3%), Tunisia (1.6%), Algeria (1.1%)and Jordan (-0.8%). However, the growth of GDP/cap rate achieved by Morocco remains lower than that of Indonesia (4.2%), Romania (3.7%), Turkey (3.6%) and Malaysia (3.1%).

This economic take-off, as evidenced by Morocco's favorable position on the horizontal axis of the PCA (figure 1), began with the adoption of a set of structural and institutional reforms, starting in the 2000s, aiming particularly at improving production factors performance, consolidating good governance principles, modernizing the infrastructure network, as well as private investment developing.

---

[6]Institutional quality was estimated by the first factorial axis of the principal component analysis (PCA).

On the vertical axis, Morocco is moving towards the countries promoting freedom of information, liberty to create new organizations and well-functioning of social mobility, where the government intervention becomes weaker.

However, Morocco's transition to the group of emerging and developed countries is slow, and remains dependent on the development of some key institutional variables that tend towards greater formalization of the rules. These include the formalization of the labor market, the public support for innovation, the management of internal conflicts, the well-functioning of political institutions and institutional solidarity.

✓ *Dominance of informal sector*

The informal sector accounts for a large share of the labor market in Morocco. According to the results of the National Informal Sector Survey in 2013 (published in October 2016), the 1.68 million informal production units provide a total number of 2,375,922 jobs against 2,216,116 in 2007, an overall growth rate of 7.2%. With such a workforce, the informal sector accounts for 36.3% of total non-agricultural employment.

Thus, it is important to promote a decent and productive work by fighting the proliferation of informal production units, broaden the formal productive fabric through tax incentives, improve good governance, formalize employment and enhance human potential, guarantee fair competition and increase business sustainability to generate additional revenues and to strength government authority.

✓ *Low innovation performance penalizing private investment*

Empirical work shows that countries able to improve their production and exports by engaging in new and more sophisticated economic activities tend to develop more rapidly. Although the 2018global index of innovation ranks Morocco 76th out of 126 countries, gaining 4 places compared to 2017. The country remains weak in terms of innovation. It is outperformed by countries such as the United Arab Emirates 38th, Qatar 51st and Kuwait 60th.

Morocco implemented a set of projects, notably the Morocco Numeric strategy (2013), the creation of the Moroccan Innovation Center (2011), the Morocco Innovation initiative (2009), as well as a one-stop shop for innovative project leaders. However, the sector requires the establishment of a more flexible regulatory framework and an incentive system that devotes more resources to innovation (R & D has a budget averaged 0.7% of GDP[7] compared to 3.1% in Japan and 2.2% in France), as well as the encouragement of a closer and more effective public-private partnership.

✓ *Weakness of institutional solidarity*

Although Morocco made significant progress addressing the various social deficits, weaknesses still persist particularly in reforms management. Consultation between the various executing agencies, the coordination of their actions and the convergence of their objectives are still poorly developed.

The pension regimes in Morocco remain non-convergent. The diversity and inconsistency of the various pension plans (CNSS, CMR, CIMR and RCAR) affects both the institutional and governance aspects, as each has its own legal framework and its guardianship system. In addition, these regimes are marked by the diversification of the cover plan, which is notoriously insufficient in terms of social security coverage, averaged 40% of the active population[8].

The major challenge for the Moroccan pension system is, in particular, extending social coverage and harmonizing the mode of governance of the different regimes.

✓ *Political institutions functioning problems*

The functioning of political institutions has been continuously improved over the past two decades. Indeed, the reforms carried out concern both the constitutional regulation (3 constitutions in the space of 20 years), the functioning of the parliament and the enhancement of the constitutional status of the actors of democratic life and of the citizen and participative democracy (parties politicians, syndicates, civil society and NGOs).

However, improvements are still needed, such as increasing the transparency of the electoral process to increase the voter turnout and the emergence of a new full executive government, and reviewing and strengthening the powers of the parliament to better meet expectations.

---

[7]2010 figure, according to the latest data from the World Bank "WDI".
[8]The Economic, Social and Environmental Council's report, "Social protection in Morocco: Review, assessment and strengthening security's systems and social assistance ", Self-Referral 34/2018, p. 15.

✓ *Political and economic instability*

Morocco engaged several reforms to strength political and economic country's stability (launch of the national initiative of human development (NIHD), creation of the Consultative Council on Human Rights, etc.). These commitments must, however, should be part of a process of continuity of consolidation.

IV. Conclusion

This study highlights the crucial role of institutional quality to explain the countries' income level. Indeed, the formal rules' degree of application, the transparency and the growth of the private sector are strongly linked to the countries' level of development. As a result, the income levels' differences recorded worldwide must be explained not only by quantitative accumulation of factors of production, but also by institutions' quality. However, the good governance reforms don't constitute the main determinant of growth rate, as they don't mechanically produce long-term growth regimes.

References

[1]. Kaufmann D., Kraay A. and Zoido-Lobaton P. (1999), Governance Matters, World Bank Working Paper N° 2196.
[2]. Dollar D. and Kraay A. (2003), Institutions, Trade, and Growth: Revisiting the Evidence, The World Bank.
[3]. HEC Paris, W. Havas Design+, Ernst & Young and Cap, Nation Good-will Observer, 2012.
[4]. Khan M. (2004), State failure in developing countries and strategies of institutional reform, SOAS working paper, University of London.
[5]. Khan M. (2006), Governance and Anti-Corruption Reforms in Developing Countries: Policies, Evidence and Ways Forward, UNCTAD.
[6]. Meisel N. and Ould Audia J. (2007), La bonne gouvernance est-elle une bonne stratégie de développement ?, Document de travail de la DGTPE, n° 11.
[7]. Meisel N. and Ould Audia J. (2009), Institutional Profiles Database, Trésor-Eco, n°72, 2010.
[8]. North D. C. (1994), Economic Performance through Time, American Economic Review.
[9]. Rodrik D., Subramanian A.and Trebbi F. (2002), Institutions Rule: The Primacy of Institutions over Geography and Integration in Economic Development, NBER Working Paper, n°9305.
[10]. RODRIK D. (2013), Economic structural change vital to successful development, IMF Survey Interview.
[11]. RODRIK D. (2013), The past, present, and future of economic growth, Global Citizen Foundation, working paper n°1, june.
[12]. Sachs J.D. (2003), Les institutions n'expliquent pas tout : Le rôle de la géographie et des ressources naturelles dans le développement ne doit pas être sous-estimé.