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THE CAUSALITY BETWEEN CORRUPTION AND HUMAN DEVELOPMENT IN MENA COUNTRIES: A PANEL DATA ANALYSIS

Amrane Becherair
HIGH NATIONAL SCHOOL OF STATISTICS AND APPLIED ECONOMICS

Mourad Tahtane
MEDEA UNIVERSITY

ABSTRACT

The present paper investigates the relationship between Corruption and Human Development based on the notion of causality in the context of panel data. In Middle East and North Africa countries during 1996-2012. We find that, clearly negative correlation between corruption and human development in each of the years, this impact be more intensify in 2012 (46.30%), which indicates the deterioration in the status of governance compared to 1996 (17.10%) and increase in the impact of corruption on human development in the MENA World. The empirical results suggest that Human development causes corruption in MENA countries (prob=0.0508). Hence, causality here is unidirectional. Results show that, corruption causes human development indirectly through political stability Political and health expenditure channels. In the end, The MENA countries must develop a national anti-corruption strategy.

Keywords: Human development, MENA countries, corruption, panel data Analysis, Granger causality.

JEL Classification : D73 ; O15 ; C12 ; C23.

Introduction

The study of corruption is now a serious subject in the development discourse. Wolfensohn, the former president of the World Bank argues that corruption has become "the largest single inhibitor of equitable economic development." We can really go a good way toward understanding development failures by understanding the effect of corruption; it is, in a global world, a question of economic development, big money and huge risk taking. According to the international financial institutions, corruption undermines legitimacy of the political system. It limits the delivery and quality of public service. It is very costly to economic growth and investments, as it increases the costs of doing public and private business. It clouds the business environment with uncertainty, and distorts the regulatory and legal framework on which business needs to rely.

Corruption is often viewed as exacerbating conditions of poverty (low income, poor health and education status, vulnerability to shocks and other characteristics) in countries already struggling with the strains of economic growth and democratic transition. Corruption flouts rules of fairness and gives some people advantages that others do not have. Corruption is persistent; there is little evidence that countries can escape the curse of corruption easily – or at all.

Moreover, effects of corruption extended to all countries, Nobel Prize –winning economist Amartya Sen wrote in 2009 that lack of transparency in the global financial system was among the main factors contributing to the financial crisis that began in 2008. However, its impact becomes more hamper in developing countries; corruption delays the transmission operation and distorts the business environment. Many researches and discussions have made corruption in MENA countries the main reason behind the crashes of the political and economic development process. This made from paying attention to this disease and the highlighting of the corruption effects very important.

Recently and after 1990s, a phenomenon broadly referred to as corruption has attracted a great deal of attention. In countries developed and developing, large or small, market-oriented or otherwise. Analysis of corruption is an important field in contemporary economic research. In the recent years, researchers and university professors, as well as international organizations, such as the International Monetary Fund (IMF) and the International Bank for Reconstruction and Development (IBRD) have classify the various forms of corruption, in order to make corruption into an analytically useful concept for social sciences.

The main purpose of this paper is to improve the understanding of the relationship between corruption and human development based on the notion of causality in the context of Panel data. By answering the following questions:

(i)   Does corruption causes human development or vice-versa in the MENA region.

(ii)   Does corruption causes human development indirectly through political stability Political, foreign direct investment or health expenditure channels.

The research adopted the descriptive analytical approach in the presentation of the phenomenon's, also relied on empirical analysis using Pearson correlation and causality testing besides an econometrics analysis by modeling panel data on sample of seventeen Middle East and North Africa countries.

Theoretical Arguments

Definitions of Corruption

The term corruption comes from a special form of the Latin verb to break, rumpere – which implies that something is badly broken. This something might be a moral or ethical code or, more often, an administrative rule or a law. Kempe, Ronald Hope Sr. Bornwell C, Chikulo. (2000, p. 18).

Corruption is an elusive concept. Every definition has problems, and each lacking in some aspect. A few years ago, the question of definition absorbed a large proportion of the time spent on discussions of corruption at conferences and meetings. However, like an elephant, even though it may be difficult to describe, it is generally not difficult to recognize when observed. In most cases, though not all, different observers would agree on whether a particular behavior connotes corruption. Unfortunately, the behavior is often difficult to observe directly because, typically, acts of corruption do not take place in broad daylight. Vito, Tanzi. (1998, p.8).

Definitions of corruption can be discussed at length without necessarily providing an actual value added to the reader. Because of these difficulties many social scientists simply shy away from any explicit definition of corruption. Pellegrini, Lorenzo (2011, p.14), while others have started to avoid definition of corruption, claiming that most cases of corruption are unambiguously perceived by most observers. This is somewhat along the lines of Weber's (1920: 30) definition of the spirit of capitalism. He rejects a definition and claims that this term is composed by the various fragments and conceptions provided in his subsequent writing. Lambsdorff, Johann Graf (2007, pp.15, 16).

Corruption is a multifaceted concept that escapes monolithic characterizations. Corruption, as defined in the dictionary, epitomizes moral decay, is intrinsically bad and subject of unconditional condemnation: it is the "impairment of integrity,

virtue, or moral principle". In search for definitions fit for the purpose of social sciences, alternative—and arguably more morally neutral and less comprehensive—definitions have been developed.

A social science approach will benefit from a definition of corruption that does not have a strong moral component because of the benefits of focusing on a set of behaviors (in this case corrupt behaviors) without being able to condemn them a priori. Morally charged definitions—for example—would make it very difficult to analyze the writings of those authors that argue that corruption satisfies societal needs and ultimately has beneficial effects on social welfare (e.g. Huntington 1968). A related issue is that the class of phenomena characterized as "corrupt" should be kept at an analytically manageable size. In many contexts, morally defined corruption becomes a catch-all derogatory word and a definition of corruption that would include phenomena that are of very different natures would render such definition useless. In general, issues that are very diverse relate to different analytical tools in different ways and a definition of corruption that is too inclusive runs the risk of being meaningless. Overall, the task of identifying the definition of corruption is not an easy undertaking because of the emotions the concept inspires and the fact that several different definitions exist.

It is often difficult to understand what exactly different authors have in mind when they discuss corruption. Many times, it is only from their analysis and conclusions that are possible to appreciate what characterization of corruption they are using. The diversity of approaches to corruption underpins the diverse definitions; the earliest approach being the legalistic one (Williams 1999). According to this approach, corruption is simply defined as the breaching of legal codes—defining public duties—in order to obtain personal advantages. However, the usefulness of this definition is disputable once the prominence of power in defining the law and the indeterminacy of the legal codes is recognized. The point was forcefully made by the schools of critical legal studies and legal realism. The first school emphasized how powerful interests can influence the development of legal codes, use them to justify the status quo and further pursue their welfare. In light of these considerations, legal provisions are a dubious benchmark for defining corrupt acts, and the fact that certain behavior is not defined as corruption in legal codes might be better interpreted as an indicator of the influence of powerful interests rather than that of lack of corruption.
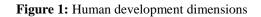
Eventually, the measure had to be withdrawn because of the public outcry that followed its approval by the government. If the proponents of this legislation had succeeded, according to criminal law bribing political parties in order to obtain personal advantages would not be classified as corruption anymore. This case exemplifies how misleading the reference to legal codes can be: the enactment of
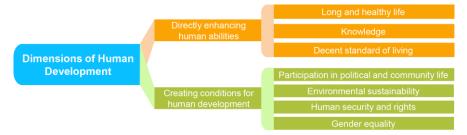
such regulation rather than causing a decrease in corruption might better be classified as a display of institutionalized corruption. Pellegrini, Lorenzo (2011. pp 15, 16).

Finally, a definition of corruption based on legal codes is problematic for comparative analysis when legal codes differ across countries and as a result, we are comparing different phenomena. Just as an example of such differences in the legal characterization of corruption, in the United States, lobbying is a legal practice, enterprises can legitimately invest in it, and these expenditures enter their balance sheet as any other. In most European countries, the same practices fall under the rubric of corruption and are legally sanctioned. On the other hand, in the United States it is illegal for congress' members to hire one's spouse to help in the congressional work, while in many European parliaments that practice is common. Thus, it appears that the diversity of legal codes renders them a dubious benchmark for comparison across countries. Pellegrini, Lorenzo (2011. pp 16, 17).

What is human development?

2015 marks 25 years since the first Human Development Report introduced a new approach for advancing human wellbeing. Human development – or the human development approach - is about expanding the richness of human life, rather than simply the richness of the economy in which human beings live. An approach is focused on people and their opportunities and choices.

Figure 1: Human development dimensions

Source: "Human Development Report 2015: Work for Human Development"

Human development focuses on improving the lives people lead rather than assuming that economic growth will lead, automatically, to greater wellbeing for all. Income growth is seen as a means to development, rather than an end in itself.

Human development is about giving people more freedom to live lives they value. In effect, this means developing people's abilities and giving them a chance to use them. For example, educating a girl would build her skills, but it is of little use if she is denied access to jobs, or does not have the right skills for the local labor market. Three foundations for human development are to live a long, healthy and creative life, to be knowledgeable, and to have access to resources needed for a decent standard of living. Many other things are important too, especially in helping to create the right conditions for human development, and some of these are in the table below. Once the basics of human development are achieved, they open up opportunities for progress in other aspects of life.

Human development is, fundamentally, about more choice. It is about providing people with opportunities, not insisting that they make use of them. No one can guarantee human happiness, and the choices people make are their own concern. The process of development – human development - should at least create an environment for people, individually and collectively, to develop to their full potential and to have a reasonable chance of leading productive and creative lives that they value.

As the international community seeks to define a new development agenda post-2015, the human development approach remains useful to articulating the objectives of development and improving people's well-being by ensuring an equitable, sustainable and stable planet. Human Development Report (2015)

The Human Development Index (HDI) is a composite index focusing on three basic dimensions of human development: to lead a long and healthy life, measured by life expectancy at birth; the ability to acquire knowledge, measured by mean years of schooling and expected years of schooling; and the ability to achieve a decent standard of living, measured by gross national income per capita. The HDI has an upper limit of 1.0. To measure human development more comprehensively, the Human Development Report also presents four other composite indices. The Inequality adjusted HDI discounts the HDI according to the extent of inequality. The Gender Development Index compares female and male HDI values. The Gender Inequality Index highlights women's empowerment. In addition, the Multidimensional Poverty Index measures non-income dimensions of poverty. Human Development Report Office (2015, p.3)

Does corruption affect the human development? If so, how? Do less corrupt countries tend to have a higher level of human development than more corrupt countries? There are a number of reasons why human development may be affected by corruption. As the literature review indicates, corruption can indirectly affect human development by lowering economic growth and incentives to invest.

Different empirical studies show that corruption influences the resources spent on education and health. Mauro (1998) finds that corruption reduces government expenditure on education and health. Mauro claims that public officials do not want to spend more on education and health because those spending programs offer less opportunity for rent seeking. Similarly, Gupta, Davoodi, and Alonso-Terme (1998: 29) show that corruption reduces the level of social spending, fosters education inequality, lowers secondary schooling, and causes unequal distribution of land. Moreover, they find that corruption increases income inequality: a one-standard deviation increase in the growth rate of corruption reduces income growth of the poor by 7.8 percentage points per year. Rose-Ackerman (1997: 33) argues, "Corruption also tends to distort the allocation of economic benefits, favoring the haves over the have-nots leading to a less equitable income distribution. A share of the country's wealth is distributed to insiders and corrupt bidders, contributing to inequalities in wealth." Selçuk Akçay (2006, pp. 33, 34)

Corruption and Human Development in Mena Countries

The HDI value for the Arab region remained lower than the world (average) throughout the period from 1980 to 2013. The HDI for Arab States improved from 0.492 in 1980 to 0.682 in 2013, with an average annual growth rate of 1.14%, 1.05%, and 0.85%, recorded in between the time-period 1980-90, 1990-2000 and 2000-13, respectively. If we consider the human development achievements of recent years, then it can be seen from figure 1 that the Arab region has remained above the South Asia or the Sub-Saharan Africa on the indicator of overall HDI. However, the regional HDI has remained far from achieving the levels attained by the East-Asian and the Pacific region or Latin American and Caribbean nations. If we focus on the HDI trends over time, the region did better than South Asia or sub-Saharan Africa in all the years between 1980 and 2013.

 On the other hand, the Arab states remained lower than the Latin American and Caribbean countries in terms of HDI scores over the years in between 1980 and 2013. The Arab region clearly remained above the East Asia and the Pacific region until 2000, but it started falling behind since 2008.
Inequality exists among economies of the Arab region in various development dimensions, viz., unequal growth, democracy levels, poverty and unemployment. The account of progress in human development for the Middle East countries between 2010 and 2013, which indicates that the HDI improved for all the countries between 2010 and 2013, except for Libyan Arab Jamahiriya for which a deterioration can be noticed. We can also points out that the HDI improvements remained high in Saudi Arabia, Yemen and Djibouti, whereas moderate

improvements is noticed for Morocco, Mauritania, State of Palestine, Sudan, Comoros, Algeria, Kuwait, Lebanon and Tunisia.

The Arab countries also present a disparate representation of HDI achievements in the region. Salehi-Isfahani [2013] reviewed the state of human development in the MENA countries during the last four decades and concluded that regional characteristics, such as, income from oil exports, youth unemployment, low female work participation, affect the standard human development measurement in these countries.

Table 1 reveals that out of the 21 countries in our sample, only five countries (Qatar, Saudi Arabia, United Arab Emirates, Bahrain and Kuwait) are classified as very high human-development countries in 2013. It can be further observed that six countries (Libyan Arab Jamahiriya, Oman, Lebanon, Jordan, Tunisia and Algeria) belong to the high human development category, 5 countries (State of Palestine, Egypt, Syria, Iraq and Morocco) in the medium human development category and remaining five countries (Yemen, Comoros, Mauritania, Sudan and Djibouti) are in the low human development category. It is therefore argued that the range of inequality among Arab countries on the HDI is almost as wide as that observed in the entire world.

People's level of living and social development levels remains disappointing due to the lack of freedom and women's empowerment in the Arab region. The role of basic services provision by the government also assumes importance for improving the HDI of the region mostly characterized by autocratic and monarchic regimes.

The low levels of education, health and human development indicators in the region can also be explained by the willful neglect of the colonial rulers in the Arab societies (Dunbar 2013). It is maintained that the early stages investments undertaken by most Arab governments on social services and the low initial values for HDI made the progress in human development significant until 1990s. However, both improvements in human development and reductions in human poverty were least observed in the Arab LDCs after the 1990s.

The Millennium Development Goal (MDG) targets present an appropriate framework to monitor development progress, and many countries of the region are found to lag behind on MDG targets related to maternal mortality and access to safe water, under-five nutrition and mortality, adult illiteracy and access to sanitation (UNDP 2011).

Table 1: Levels of Human Development in Middle East Countries, 2013.

Low Human Development (< 0.55)	Yemen, Comoros, Mauritania, Sudan, Djibouti. *(5 nations)*

Medium Human Development (< 0.70)	State of Palestine, Egypt, Syria, Iraq, Morocco. *(5 nations)*
High Human Development (< 0.80)	Libyan Arab Jamahiriya, Oman, Lebanon, Jordan, Tunisia and Algeria.*(6 Nations)*
Very High Human Development (Above 0.80)	Qatar, Saudi Arabia, United Arab Emirates, Bahrain and Kuwait. *(5 Nations)*

Source: Derived from UNDP [2013].

Sánchez et al [2013] investigated the issue of financing human development in Africa, Asia and the Middle East, emphasized on restructuring the macroeconomic policies, and increased investments in order to end poverty and inequalities in less developed countries of the Middle East. It is also argued that the pursuit of oil-led growth remained unstable due to the volatility in oil prices and resulted in weak structural foundations in most of the Arab economies. The per capita consumption expenditure in Arab countries did not rise in real terms to allow for any poverty reduction and the income distribution did not show any signs of major improvement. On the contrary, the Arab region remained most vulnerable to increases in poverty because of shocks, such as rising food prices and economic recession.

 The defense expenditure has remained high in all the countries in the Middle East, resulting in lower rates of economic growth in the region (Looney 2013). The failure of job creation, high rates of unemployment of nearly 15% and lower work participation of the female labor force have remained a long-standing problem in the Arab world. Salehi-Isfahani [2012] argued that the earlier practice of linking formal schooling to government jobs has been failing in recent decades due to the shrinkage of public sector jobs and a rapidly rising youth population. These developments in the employment prospects have adversely affected the social and economic mobility of the Middle Eastern societies. As a result, the absorption of the new labor force in new jobs remains a challenge of the region in the present day. Surajit Deb (2015, pp.2, 6)

According to Transparency International's Corruption Perceptions Index 2012, the Arab Middle East is a world region in which performance in terms of containing corruption is regular, if not good, rather than bad when compared to other developing areas. There are eight Arab countries that score better than the global average (Qatar, United Arab Emirates, Bahrain, Jordan, Oman, Kuwait, and Saudi Arabia) and ten that score worse (Tunisia, Morocco, Algeria, Egypt, Lebanon, Syria, Yemen, Libya, Iraq, and Sudan). That appears to make corruption in the

average significantly less of a problem in the Middle East than in Eastern Europe and Central Asia as well as in Sub-Saharan Africa. There are certainly other indices according to which the performance of the Middle East (at least before the Arab Spring) has been much worse, particularly in terms of political rights and civil liberties as measured, for instance, by Freedom House. However, since long before the Arab Spring but accelerated by it, "corruption" has been used as a central political slogan of the opposition against ruling authoritarian regimes in the Middle East. Martin Beck (2013, pp.2, 3)

Most Middle East and North African (MENA) countries are considered highly corrupt, but local understandings of acceptable practices and privileges muddy the understanding of what counts. The region as a whole fares poorly on the Transparency International's Corruption Perception Index — in 2015, it received a score of 39 on a 0-to-100 scale, where 100 indicates the absence of corruption. (The global average is 43.) War-torn countries like Syria, Yemen, Iraq, Libya, and Sudan are perceived to be especially corrupt. Although the Gulf monarchies seem to do much better, with Qatar and the United Arab Emirates scoring respectively a rather clean 71 and 72 (the United States scores 76), they may be receiving high ratings largely because they do not draw clear lines between what belongs to the state and what belongs to the ruling family. In such cases, for private gain may go unseen and not even regard the conversion of public goods as corrupt.

Methodology, Model, and Data Description

Description of the data

The theoretical and empirical debate on the effects of corruption on economic development is unsettled. However, the bulk has argued that corruption hurts economic development because it redirects resources in unproductive direction and instills distortions in the whole economy.

To investigate this relationship we will attempt to use an empirical analysis on a selected sample of Middle East and North Africa countries during 1996-2012, starting with Principle Components Analysis for both the first year and last year of the study period, then we will offer summarized picture of the causal trends that have been standing in case of the sample countries. Finally, we will evaluate the impact of corruption on economic development of those countries using a panel data analysis.

Data for this study were obtained from the Worldwide Governance Indicators (WGI, World Bank), United Nations Development Programme and the World Development Indicators (World Bank).

We gathered the data for seventeen Middle Eastern and North African (MENA) countries: Algeria, Bahrain, Egypt, Jordan, Kuwait, Lebanon, Libya, Morocco, Mauritania, Oman, Qatar, Saudi Arabia, Syria, Sudan, Tunisia, United Arab Emirates and Yemen.

In this study, our dependent variable is Human Development Index. A measure developed by the United Nations Development Program to measure countries' degree of development. As explained above Control of Corruption (CORRUP): This variable was obtained from The Worldwide Governance Indicators[1], it captures perceptions of the extent to which public power is exercised for private gain, including both petty and grand forms of corruption, as well as "capture" of the state by elites and private interests.

The WGI (including control of corruption) measures in two ways: in the standard normal units of the governance indicator, ranging from around - 2.5 to 2.5, and in percentile rank terms ranging from zero (lowest) to 100 (highest) among all countries worldwide, percentile ranks indicate the percentage of countries worldwide that rank lower than the indicated country. So that higher values of control of corruption indicate lower corruption and higher governance., Political Stability and Absence of Violence/Terrorism (PS) capturing perceptions of the likelihood that the government will be destabilized or overthrown by unconstitutional or violent means, including politically motivated violence and terrorism. Ranging from -2.5 to 2.5 with higher values indicate better political stability. Kaufmann, Daniel. Kraay, Aart and Mastruzzi, Massimo (2010, p.6), this variable was obtained from The Worldwide Governance Indicators. The share of foreign direct investment to gross domestic product (FDI) and the share of health expenditure to gross domestic product (HEAL).

Empirical Results

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[1] The Worldwide Governance Indicators (WGI) are a long-standing research project to develop cross-country indicators of governance. The WGI consist of six composite indicators of broad dimensions of governance covering over 200 countries since 1996: Voice and Accountability, Political Stability and Absence of Violence/Terrorism, Government Effectiveness, Regulatory Quality, Rule of Law, and Control of Corruption. These indicators are based on several hundred variables obtained from 31 different data sources, capturing.

Matrices of Correlation

In the correlation matrix, we will restrict our attention on the impact of the independent variables on the human development index as well as on the correlation between the corruption index and the rest variables

Table 2: Pearson Correlation.

	Variables	HDI	CORRUP	FDI	HEAL	PS
1996	HDI	1	-0.171	0.371	0.079	0.458
	CORRUP	0.171	1	0.208	-0.145	0.662
2012	HDI	1	-0.463	-0.412	-0.503	0.619
	CORRUP	0.463	1	0.245	-0.229	0.759

Source: Author's calculations based on X-L-Stat program.

From the matrices, we note mainly:

   a.   Correlation matrices clearly show the negative impact of corruption on Human development (since the higher Control of Corruption index is better) in each of the years, this impact be more intensify in 2012, which indicates the deterioration in the status of governance compared to 1996 and increase in the impact of corruption on economic development in the Arab World.

   b.   A positive significant correlation between political stability (higher is better) and Human development in both years. The link became stronger in 2012.

   c.   The relationship between the Human Development index and spending on health in the Arab world had been marked by a change in the signal effect of the shift from a positive effect in 1996 to the negative in 2012 (significant at 5% level in both years).

   The Arab countries have been characterized recently with small up in spending on health as a percentage of gross domestic income and as well as a proportion of public spending, but this spending lacked of effectiveness. A World Bank (2010) study said that the average spending on education and health in the Arab world is not enough in term of absolute levels of funding, moreover the MENA health investments do not translate fairly and equitably for all people what made spending in this sector Inefficient.

   d.   The matrices indicate the strong positive correlation between corruption and political instability with a correlation coefficient equals to 0.662 in 1996 and 0.759 in 2012. This confirms that the deteriorating political situation in the Arab world in 2012 largely due to high rates of corruption.

e.   The correlation between corruption (corruption control) and foreign direct investment is negative (positive) in both years meaning that corruption affects the ability of MENA countries to attract foreign direct investment.

f.   The matrices indicate a negative correlation between corruption and health expenditure with a correlation coefficient equals to -0.145 in 1996 and to -0.229 in 2012. These findings seem compatible with what was said, "Corruption can not only increase the size of public expenditure but also change the composition of public expenditure away from vital sectors such as health and education towards sectors which involve greater secrecy and less transparency such as defense". However, this result is consistent in content with what was said. MENA countries suffer from systematic corruption that makes the public funds inheritance, each government member is seeking to raise his share of it. Corruption has increased military spending and skips it to affect health spending; the deteriorating situation of the health sector in MENA countries makes it a fertile ground for corruption applications in three ways:

- Officials resort to approve the budgets of large projects —in extreme cases ''white-elephant projects''— to ensure the absorption of popular anger besides raising their popularity.
- Corruption makes it all right to borrow to finance to the building of a new hospital, but not for the hiring of doctors or nurses or for buying medicines.
- The projects tend to be relatively capital-intensive there force increase willingness of firms to bribe government officials to help them win a contract or tender.

The Granger Causality Test

The Granger causality test is a statistical hypothesis test for determining whether one time series is useful in forecasting another, first proposed in 1969. Ordinarily, regressions reflect "mere" correlations, but Clive Granger argued that causality in economics could be reflected by measuring the ability of predicting the future values of a time series using past values of another time series. Since the question of "true causality" is deeply philosophical, econometricians assert that the Granger test finds only "predictive causality"

Causality is a statistical concept that is based on prediction. According to Granger causality, if a signal X_1 "Granger-causes" (or "G-causes") a signal X_2, then past values of X_1 should contain information that helps predict X_2 beyond the

information contained in past values of X_2 alone. Its mathematical formulation is based on linear regression modeling of stochastic processes (Granger 1969).

Table 3: Direct Granger Causality Test.

Number of Lags	P=1		P=2		P=3	
OBS	272		255		238	
Null Hypothesis	F-Stat	Prob	F-Stat	Prob.	F-Stat	Prob.
Corrupt does not granger cause HDI.	1.22	0.26	1.70	0.18	1.31	0.26
HDI does not granger cause corrupt	5.40	0.02**	0.95	0.38	2.63	0.05*
FDI does not granger cause HDI	1.52	0.21	4.30	0.01**	2.27	0.08*
HDI does not granger cause FDI	2.28	0.13	1.10	0.33	0.97	0.40
PS does not granger cause HDI	3.23	0.07*	2.23	0.10	1.33	0.26
HDI does not granger cause PS	6.88	0.009***	1.83	0.16	4.69	0.003***
HEAL does not granger cause HDI	0.12	0.72	2.76	0.06**	2.21	0.08*
HDI does not granger cause HEAL	9.49	0.002***	4.10	0.01**	2.29	0.07*

Source: Author's calculations based on Eviews program.

From the table's values and regarding to *Prob* and *F-Statistic* of direct causality, we can say:

The results from the two specifications are that human development does not cause human corruption. Rather, Corruption causes human development in MENA countries at 5%. Hence, causality here is unidirectional. Past information on

economic performance can help improve prediction of corruption level. Indeed, field evidence demonstrates that as countries get richer, they are subject to less corruption ceteris paribus and poor countries are subject to more corruption. Knowing a country's economic performance overtime could provide an insight of its corruption status. We could refer this result to some features of MENA human development.

It is well known that natural resource abundance can be a curse for economic development rather than a blessing. The oil revenues have encouraged patronage, fuelled corruption and undermined state institutions. Specifically, a prevailing consensus exists that oil wealth promotes authoritarianism, with governments centralizing power to maintain control of the revenues. Johnson, Elizabeth. Martini, Maira (2012, p.3).

MENA countries as well as all oil and mineral dependent states have a set of economic problems that might normally lead to for calls for government action that provide more opportunities to corruption. The naive wages in most of MENA countries affect the viability of taking bribes and raise the level of corruption in the region.

Unemployment is a complex problems facing the Arab world, the unemployment rate is between 15-20% compared to the world rate 6% with about 25 million unemployed from the total workforce equals to 120 million workers. The high school and college graduates have to wait to find their first job. Youth wait a long time for their first job, often stretching to several years. The scarcity of employment opportunities in the Arab world made from nepotism and favoritism one of the few ways to win a job. Djavad, Salehi-Isfahani (2010, P. 2)

Table 4: Indirect Granger Causality Test.

Number of Lags	P=1		P=2		P=3	
OBS	272		255		238	
Null Hypothesis	F-Stat	Prob	F-Stat	Prob.	F-Stat	Prob.
PS does not granger cause CORRUP	8.37	0.004***	0.72	0.48	0.59	0.61
CORRUP does not granger cause PS	6.69	0.01**	2.98	0.052*	2.94	0.03**
HEAL does not granger cause corrupt	0.65	0.42	0.08*	0.91	0.40	0.75
corrupt does not granger cause HEAL	1.70	0.19	0.98	0.37	0.93	0.42
FDI does not granger cause corrupt.	0.002**	0.96	0.18	0.82	0.32	0.80
corrupt does not granger cause FDI	0.67	0.41	0.47	0.62	0.87	0.45

Source: Author's calculations based on Eviews program.

From the table's values and regarding to *Prob* and *F-Statistic* of indirect causality (channels), we can say:
The political stability causes human development. Rather, human development causes political stability at 1% significant level. Past information on economic performance can help improve prediction of political stability level.
Human Development characterized by higher incomes, which should make people approve of the government. Hence, human development generates stability. Human development and political stability are deeply interconnected. The relationship between economic growth and stability refers to the manner in which government can lead to economic growth. Poor economic performance may lead to government collapse and political unrest, it usually means that the government is misusing or

mismanaging the country's resources: resources are not being used to their full capacity, or in a manner whereby human development could be maximized.
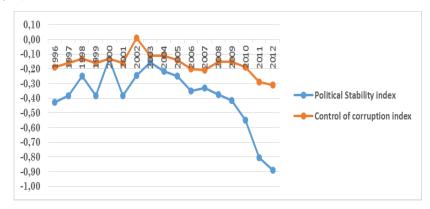
Many economic factors were behind the Arab political instability (unfair income distribution, widespread poverty, unemployment…). For years, autocratic governments either totally rejected demands for reform or took only temporary and insufficient measures. Rising food inflation forced millions of the poor to live at or below subsistence levels. In 2012 the highest 20 percent income group in Tunisia received 47.9 percent of the country's total income, while the lowest 20 percent received 5.9 percent of total income in 2009. In Egypt, those rates were 40.3 percent and 9.4 percent, respectively. In Syria, the top 20 percent received 43.9 percent, while the lowest 20 percent received 7.7 percent. Finally, in Yemen those rates were 45.3 percent and 7.2 percent, respectively. Algeria Economic Forum (2013)

From the table (4) it appears that political instability causes corruption and corruption causes political instability at 1%. Hence, causality here is reciprocal. Past information on political instability can help improve prediction of corruption level and vice versa.

Corruption and political stability are really deeply interconnected in MENA countries throughout the period 1996-2012 as shows the figure (2), the control of corruption index have the *same tendency* of political stability index in decrease or even in increase.

Economic hardships can be tolerated if the people believe there is a better future ahead, or feel that the pain is at least somewhat equally distributed. Neither was the case in the Arab world, where the state-led development gave place to crony capitalism that benefited only a small minority. In Egypt, new business elites collaborated with the regime to amass fortunes unimaginable to the majority of the population surviving on $2 a day. In Tunisia, no investment deal was closed without a kick-back to the ruling family. Primoz Manfreda, (2011)

Figure 2: The evolution of control index and political stability index a long 1996-2012.

Source: Author's calculations using Excel program based on WGI data.

The level of corruption in MENA countries is often attributed to the political infrastructure of the state (mainly military dictatorships, autocratic regimes and monarchies), the institutional infrastructure of the public sector (very large public sector, overstaffed with relatively low salaries) and little opportunities for public participation. More specifically, the region is characterized by:

- Strong executives controlling the judicial and legislative branches;
- Relatively weak formal systems of checks and balances, internal and external accountability mechanisms;
- Lack of truly independent institutions to hold public officials accountable;
- Lack of fair and competitive electoral processes;
- Government structures infiltrated by ruling elites and informal patronage;
- Low level of civil liberties, political rights and independence of the media;
- Limited public transparency and disclosure of public information. Johnson, Elizabeth. Martini, Maira (2012. P 3).

 After two lags, we recognize that corruption causes healthcare expenditure. Past information on healthcare, in developing and transitional
Economies corruption lowers the quality of health care, limits the access to Health services and increases health expenditure.

Conclusions

This research adopt the descriptive analytical approach in the presentation of the phenomenon , also relied on empirical analysis using Pearson correlation and Granger causality testing on sample of seventeen middle east and north Africa countries (Algeria, Bahrain, Egypt, Jordan, Kuwait, Lebanon, Libya, Morocco, Mauritania, Oman, Qatar, Saudi Arabia, Syria, Sudan, Tunisia, United Arab Emirates and Yemen) along the period 1996-2012 to investigate the causality between corruption and Human development.

The empirical findings obtained in this study indicate clearly the negative impact of corruption on Human development (since the higher Control of Corruption index is better) in each of the years, this impact be more intensify in 2012, which indicates the deterioration in the status of governance compared to 1996 and increase in the impact of corruption on economic development in the Arab World.

The relationship between the Human Development index and spending on health in the Arab world had been marked by a change in the signal effect of the shift from a positive effect in 1996 to the negative in 2012 (significant at 5% level in both years).

The matrices indicate the strong positive correlation between corruption and political instability with a correlation coefficient equals to 0.662 in 1996 and 0.759 in 2012. This confirms that the deteriorating political situation in the Arab world in 2012 largely due to high rates of corruption.

The matrices indicate a negative (positive) correlation between control of corruption (corruption) and health expenditure with a correlation coefficient equals to   -0.145 in 1996 and to -0.229 in 2012.

The direct causality indicate that, the results from the two specifications are that human development does not cause human corruption. Rather, Corruption causes human development in MENA countries at 5% significant level. Hence, causality here is unidirectional.

The indirect causality between corruption and human development show that political instability causes corruption and corruption causes political instability at 1%. Hence, causality here is reciprocal. Past information on political instability can help improve prediction of corruption level and vice versa. After two lags, we recognize that corruption causes healthcare expenditure. Past information on healthcare, in developing and transitional Economies corruption lowers the quality of health care, limits the access to Health services and increases health expenditure.

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