THE CORRUPTION PERCEPTIONS IMPACT ON THE ARABIC ECONOMIC DEVELOPMENT. A STANDARD STUDY USING PANEL DATA FROM (2021- 2018)

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Received: 22/04/2020/ **Accepted**: 02/12/2020 / **Published:** 20/09/2021
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ABSTRACT

The present study aims to analyze the impact of corruption on economic development in the Arab States based on annual data between 2012- 2018. Moreover, certain standard analyses were used to achieve this goal including the use of the Panel cross-sectional time series models on the Corruption Perception Index (CPI) as independent variables and per capita GDP as a dependent variable. The study concluded that corruption had a negative impact on economic development, with several differences and disparities in the degree to which economic development among the Arab States is affected by, as result of several factors namely: the nature of the governmental system, where the monarchy was the most stable which distinguished the Gulf States from the rest of the Arab States, in addition to the deteriorating security situation in some Arab States that has exacerbated this phenomenon.

KEYWORDS

Economic Development, Panel Model, Arab States, Corruption Perception index

JEL CLASSIFICATION: C23, O10, D73.

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تأثير مدركات الفساد على التنمية الإقتصادية في الدول العربية
دراسة قياسية باستخدام بيانات بانل للفترة (2012–2018)

ملخص

تهدف هذه الدراسة إلى تحليل أثر الفساد على التنمية الاقتصادية في الدول العربية بالاعتماد على بيانات سنوية للفترة الممتدة بين (2012-2018)، لإدراك هذا الهدف تم استخدام التحليل القياسي باستخدام نماذج السلاسل الزمنية المقطعية بانل على مؤشر مدركات الفساد (CPI) كمتغيرات مستقلة ونصيب الفرد من الناتج المحلي الإجمالي كمتغير تابع.

خلصت الدراسة إلى أن الفساد له تأثير سلبي على التنمية الاقتصادية، مع وجود اختلاف وتفاوت في درجة تأثير الفساد على التنمية الاقتصادية بين الدول العربية، مرتبط بعدة عوامل منها تمايز الدول العربية من حيث طبيعة أنظمة الحكم فيها، فالحكم الملكي كان أكثرها استقرارا وهو ما ميز دول الخليج عن باقي الدول العربية، كما أن الوضع الأمني المتردي في بعض الدول العربية أدى إلى استفحال هذه الظاهرة وتفشيها.

كلمات مفتاحية

مؤشر مدركات الفساد الاقتصادي، تنمية اقتصادية، نموذج بانل، دول عربية.

تصنيف جال: C23, O10, D73

L'IMPACT DES PERCEPTIONS DE LA CORRUPTION SUR LE DEVELOPPEMENT ECONOMIQUE DANS LES PAYS ARABES -ETUDE STANDARD UTILISANT UN MODELE DE DONNEES DE PANEL DURANT LA PERIODE (2012-2018)

RÉSUMÉ

Cette étude vise à analyser l'impact de la corruption sur le développement économique dans les États arabes sur la base de données annuelle entre 2012 et 2018. De plus, certaines analyses standard ont été utilisées pour atteindre cet objectif, notamment l'utilisation des modèles de séries chronologiques transversales du Panel, sur l'indice de perception de la corruption (IPC) en tant que variables indépendantes et le PIB par habitant comme une variable dépendante. L'étude a conclu que la corruption avait un impact négatif sur le développement économique entre les États arabes qui est affecté par un certain nombre de différences et de disparités, en raison de plusieurs facteurs à savoir : la nature du système gouvernemental où la monarchie qui était la plus stable; distinguant les États du Golfe du reste des États arabes, en plus de la détérioration de la situation sécuritaire dans certains pays arabes qui a exacerbé ce phénomène.

MOTS CLÉS :

Indicateur de corruption économique, développement économique, Données du panel, pays arabes, systèmes politiques.

JEL CLASSIFICATION: C23, O10, D73.

INTRODUCTION

The economic corruption is regarded as one of the most controversial, serious, and even dangerous phenomena facing the economies of the world, in addition to being the subject of broad economic and political debates.

The prevalence of this phenomenon in the world's economies, especially the developing countries is seen as one of the most important causes of the economic problems, its underdevelopment, and also an obstacle to the economic recovery which is reflected in the transfer of resources and possibilities from the public to the private interest by the governors, additionally It is regarded as a major obstacle to the development process and economic growth.

Furthermore, as the other developing economies, the Arab ones are suffering from widespread corruption in many areas within the economic activity, especially with its fiscal surpluses and the huge financial resources, the understanding of this phenomenon through measurement, analysis, and the use of indicators from international and specialized bodies, including the Transparency International Corruption Awareness Index, to measure the degree of corruption in the world became necessary, henceforth, its effects on the economic development are examined and discussed in this research paper.

Taking into consideration the previous information, the following question arises:

What is the nature of the corruption index and economic development relation in the Arab States?

There is a statistically significant relationship between the Corruption Perception Index and the economic development in the Arab States.

There is no difference in the impact of the corruption phenomenon on economic development in the Arab States.

This research aims to:

Analyze and examine the corruption phenomenon in the Arab States and identify its different effects on economic development.

Analyze and examine the corruption's effects on economic development and identify the relationship between them;

Determining the relation between the Corruption Perception Index (CPI) and the economic development in the Arab States.

1- PREVIOUS STUDIES

Suhaila Mansouran, The Economic Corruption and Its Impact on Economic Growth, an Analytical Economic Study, Algeria case study, Doctorate thesis in economics, Economics Analysis, University of Algeria, 2013-2014.

This research contributed to the study of economic corruption and its impact on economic growth, through identifying corruption economically and in distributive justice of national income that results in weak incentive to invest, which reduces economic resources in society. Consequently, the study resulted in the fact that:

Economic corruption reduces the State's capacity to meet its citizens' needs and priorities since the poor get denied their fair share of economic resources

Fighting economic corruption is related to reforming and changing the State's role, in addition to its conduct of public affairs because both are regarded as two sides of the same coin.

The necessity to reform the banking system and adopt a systematic, scientific and practical policy to promote transparency, and freedom of information to Participate in the Fight against Dirty Money Laundering.

The sample study of this research was limited to Algeria, where the Corruption Perception Index (CPI) was not used to analyze the relationship of corruption and how it affects economic development, but just to use the analytical approach for the examination of the problem.

Khaled Ayada Nazal Alimat, the Implications of Corruption on the Economic Development, Jordan Case Study, Doctoral Thesis in

Economic Sciences, Economic Analysis Branch, University of Algiers 3, Class of 2014-2015.

This study examined the corruption phenomenon in all its forms and manifestations, which was regarded as an obstacle to economic and social development, and similar to other countries Jordan is also rapidly affected by the economic developments and fluctuations, that caused imbalances which resulted in the widespread of corruption. Therefore, the study resulted in:

A bidirectional causality link between the corruption index and political and economic stability, in addition to a positive, direct proportion relation between the corruption index and economic growth.

Corruption is closely connected to economic and political stability since corruption is the main engine of economic and political volatility in Jordan.

Corruption distorts the government's spending composition away from the operation and maintenance needed for new types of equipment; it also distorts public expenditures away from health and education.

This study was limited to the Jordan case study and was surpassed by a sample study from the Arab States. Equally important, it did not rely on corruption indicators measurement, including CPI, in determining how economic development is affected by corruption in the Arab States.

The Marwa Attaf Abu Aauda Study, The Effect of Governance and Corruption on Tax Revenues, "Econometrics Case Study on Palestine (1996-2013), Presented to complete the master's degree requirements in the economic development at the Islamic University School of Commerce of Gaza, 2015.

This study aimed at measuring the effect of governance and corruption on tax revenues and ensuring its development through the anti-corruption movements and the commitment to apply the appropriate standards of good governance, in addition to identifying the aspects of good governance, the fight against corruption, and the evolution of tax revenues in Palestine coupled with the examination of

the relationship between controlling good governance indicators and tax returns during the period (1996-2013), depending on the published good governance indicators' World Bank data. Consequently, the study resulted in the following:

Taxation revenue is strongly bounded to the good governance level

The Low participation and tax transparency have increased the frequency of tax evasion

There is a two-way influence relationship between the anti-corruption index and both the level of government effectiveness, accountability and participation, and the volume of tax revenue.

Weak indicators of good governance signify that there is a weak political structure of the Palestinian Authority, low political will, and public awareness.

Nabil Aman Ndikeu Njoya, Corruption and Economic Growth in Cameron: the direct and indirect effects through the spending distribution of public expenditure. Prepared at the research unit, in the economics and management research center, faculty of economics, doctoral school, and human sciences of organizations 2017.

This research addressed the phenomenon of corruption in Cameroon, which is a country that is committed to a development strategy, yet faces economic growth difficulties and corruption. Increasing the strategy efficiency, therefore, requires strategies and competencies knowledge impeding the development of corruption. Accordingly, the aim of the study was to perform a theoretical and empirical analysis of the corruption effects on Cameron's economic growth.

Among the study's findings are the following results:

Corruption increases the public investment share as a result of which the largest profitability goes to corruption actors.

Increasing one point of corruption leads to an increase of more than 16% of the allocation for public investment expenditure

Corruption reduces the share of public operating expenses due to its low profitability to corruption actors

Increasing one point of corruption measured by the ICRG index leads to a 45% reduction in public investment expenditures allocations

Corruption in Cameron causes distortions in the distribution of public spending

The Increase in the public share investment spending as a result of corruption

Corruption stimulates public investment spending

The level of corruption measurements in this study is based on the ICRG index limited to the Cameron State case study, in addition to measuring its impact on the economic development through its impact on expenditure allocations in public investment. As well as, a more modern, transparent, and formal corruption indicator is used and produced by Transparency International which is the Corruption Perception Index (CPI) and its impact on economic development represented by per capita GDP, for all Arab States.

2- THEORETICAL BACKGROUND:

2.1- Economic corruption definition:

2.1.1. Corruption Definition

Syntactically: According to the Arabic lexicons, it is the opposite of Reconciliation, and it is defined as the invalidity of something, for example: if it was said that something is corrupted, it means that it is null and diminished. Another definition by Ibn-Manzur, in "Lisan Al Arab" section el-fasad: "Corruption is the opposite of reconciliation... and if people got corrupted, it means they no longer get in touch with their family or relatives..." (Ibn-Manzur , 2003).

It is also defined in Al-Wassit dictionary as: "the damage, disruption, disturbance, and malfunction, to demonstrate: if it's said that something is corrupted, it means that it's misused, and some treatment is required to fix its defects and malfunction. (Al- Wassit, 1973).

Semantically: Corruption from an Islamic point of view: There is a range of economic corruption definitions between the Islamic economists and scholars among them:

"What was regarded as original and legal project, is not in its characteristics or description, and is the synonym of invalidity according to al-imam al shafi'i.

"Losing sight of the right path and how to do things properly, which is against the monotheistic religions, it is against the reform and rightfulness, including all kinds of damages or destructions related to species, or the different environmental elements" (abd al-sami'i, 2009, p 81).

Corruption from certain international organizations point of view: it was important to certain international organizations to identify the appropriate definition of economic corruption, especially banks Being the most concerned and affected like the World Bank (Nadikeu, 2017).

Transparency International Definition: It is the abuse of public power or civil services for private gain directly or indirectly for personal purposes based on nepotism. (Ben Marzouk &Abdou, 2009)

International Monetary Fund definition: Corruption is the misuse of civil services for private gain, it usually occurs when staff members accept, request, blackmail, or bribe to facilitate a contract or conduct public bidding. (Malika, 2004)

World Bank definition: Abuse of job by accepting, requesting, extortion, or bribing to facilitate a contract or public tender procedure... it can also occur through the use of civil services without resorting to bribery by hiring relatives or stealing state funds directly. (Abd al Fadil, 2004)

2.1.2. Corruption Characteristics

Secrecy: Corruption is carried out in complete secrecy, through fraud and deception methods, involving illegal and immoral activities.

Possible Involvement of Many Parties: where there might be interest and benefit relations between the parties involved in corruption as well as those involved in covering up.

Administrative Backwardness Association: Corruption often depends on certain administrative bureaucracy manifestations, such as delays

in transactions, or absenteeism, time abuse, neuroticism with clients; these problems can help the corruption widespread.

Rapid Deployment: The most important thing about corruption is the speed at which it spreads. It's like a disease that infects the administrative system members and spreads gradually if there is an environment that helps.

2.1.3- Economic Corruption forms and Features:

Corruption takes many forms and features that can destroy and subvert the economic system. The most important features can be found in the following cases: (Ben Azouz, 2007)

Bribery: Syntactically: refers to the action of taking, asking or giving any kind of bribery. The bribery is a forbidden act according to Islam[1].

Semantically: refers to what is given to invalidate a right or visa versa, it can be defined as "any kind of payment given illegally to obtain something, whether it is one's right or not. (Abd al-Sami'i, 2009).

Overall, it is regarded as an economic resonant phenomenon for the macroeconomic variables with disastrous consequences on the society;

Embezzlement and theft: Embezzlement is defined as the employee's tampering with the public money because of the job authority, which results in breaking the trust. Embezzlement is actually also called theft which is a condemned behavior in al Islam[2]

Negligence and Misuse of money: it is interpreted as the deliberate neglect of the equipment and tools used in the work and the failure to come on time or even meet the deadlines.

Mediation and Influence Peddling: is seen as a tool used by an individual or group of people to gain access to a person with decision-making power to achieve personal interest outside labour regulations

[1] "And eat not up your property among yourselves in vanity, nor seek by it to gain the hearing of the judges that ye may knowingly devour a portion of the property of others wrongfully". (Surat Al-baqara , verse 188).

[2] "As for the thief, both male and female, cut off their hands. It is the reward of their own deeds, an exemplary punishment from Allah. Allah is Mighty, Wise". (Suraht Al-maaida , verse 38).

and laws. Furthermore, an employee may seek to use his or her position and influence at work to give that to them, accordingly the righteous people will automatically be deprived of their right due to hate or other motives.

Extortion: is identified as the use of physical and psychological, or damaging the reputation and social status of someone by framing him, which results in forcing the blackmailed person to pay.

Discrimination and Favouritism: refers to the abuse of the power, influence or bias of a particular individual or entity contrary to laws and legislation, which is seen as the most important corruption form for its negative economic and social consequences, such as the unfair distribution of the country's resources or filling the vacancy with unqualified employees, resulting in a sense of injustice and social oppression

Forgery: It's an economic crime that refers to different kinds of fraud that fakes facts and information for private benefits. It may be carried out by government officials or active politicians.

Fraud: is used to generate money for personal benefits, using illegal methods to make suspicious transactions.

2.1-4. The Causes of Corruption

Corruption is not only seen as the consequence but also the reason where both the poor economic and political environments are the driving forces, (Belgharsah, 2019). Furthermore, its causes extend to the individual behavioural influences, which include the level of trust in the legal system, the level of happiness, and individual self-well-being, which are inversely linked to the corruption levels. (Sorin & al, 2019)

Moreover, other studies referred to the relationship between corruption and social and cultural factors, emphasizing that personal characteristics and social conditions played an important role in shaping the concept of corruption. In fact, better economic performance reduces the sense of corruption; however, macroeconomic instability and income inequality have the opposite effect. At the micro-level, women, divorced women, the unemployed, private sector employees, or self-employed people are positively linked to the concept of

corruption, marriage, full-time work, membership of religion, and supportive opinion on how democracy works in the State, which has the opposite effect. (Liviu-Stelian & al, 2019)

As a matter of fact, other references suggest that there may be concerns that economies in transition are particularly vulnerable to public corruption because such corruption is encouraged due to lower economic growth or increased government spending. (Adisa & al, 2017). Additionally, other studies also emphasize that the regulations centralization is one of the important causes that increase the degree of economic corruption in States; accordingly, the decentralization has an adverse effect on corruption levels. (Jean & Simon Pierre, 2020).

2.2- Economic Corruption Index

2.2.1. Corruption Control Index

It is a self-contained indicator of governance issued by the World Bank from several sources, which is used to Measure the corruption prevalence among government officials, and the recurrence of irregular additional payments for certain export and import permits and trade licenses, tax assessments, loan applications, measuring the impact of corruption on the business environment, together with the measurement of the political officials' involvement extent in corruption, and the elites tendency to engage in state takeover policies. (Greio, 2018).

2.2.2. World Bank Governance Index

Issued by the World Bank in 1996, where the levels of control over corruption and governance can be found, such as accountability, good governance, and the rule of law, it contains 212 countries at the moment, coupled with the inclusion of six dimensions where governance in a single State is measured and compared over several years. Consequently, the importance of this index is to take into account pre-estimate years indicators that may have effects on the measured year. Equally important, this index also depends on several other indicators for the degree of corruption measurement, where it measures the public accountability indicator, the competitive political

participation extent, the respect of civil liberties degree, as well as freedom of the press and other indicators, which have been monitored and commissioned by several competent authorities and groups. (Saleem & others, 2010)

2.2.3- Corruption Perceptions Index:

The CPI was issued by Transparency International (Anti-Corruption Organization), a non-governmental organization founded in 1993 by a former member of the World Bank, Peter Egan. In fact, this organization publishes the States annual Corruption Index from surveys conducted by private institutes and other governmental organizations. Coupled with the measurement of the corruption awareness degree among officials, workers, and politicians, where the value of its classifications ranges from 10 degrees (i.e. the least corrupt) to 0 degrees (i.e. the most corrupt) in which the survey is concerned with the measurement of the public sector and the use of public employment for profit, and states are arranged in terms of additional informal payments received by some public institutions employees for the purpose of facilitating investment, export, import, market entry and obtaining detailed advantages in borrowing or tax benefits. This index also measures the extent of corruption among public institutions, and the value of this index ranges from zero (maximum corruption) to ten (great integrity i.e. corruption-free), to clarify, whenever the degree is high, the more indicative that the country is corruption-free, and the lower it is, the higher the corruption is. This indicator is impressionistic and perceptive to the degree of corruption and includes both types large and small corruption.

Furthermore, in 2003 this indicator included a ranking of 133 States based on their people view on the transactions of their officials, using the same measurement (as was mentioned before), where the scores rise according to the degree of corruption, i.e. 0 degree is the worst and 10 degree is the best of all.

On the other hand, the 2018 CPI index adopted in this study is based on 13 corruption surveys and assessments conducted by experts

to determine the extent of corruption in the public sector in 180 States and territories, ranging between 0 (the most corrupt) and 100 (great integrity). (Cartter Tony, 2009)

2.3- Corruption Impact on the economic development

2.3.1. The economic development definition

The term development differs in meaning between the group of scholars, depending on their background, educational degree, and point of view. It is known as: "The process by which the transition from an underdevelopment state to a more developed one, where many radical and fundamental changes in the economic structure are required. (Ajamiya and others, 2007).

It is also defined as "a long-term economic policy for economic growth, i.e. a process by which the real national income of the economy increases over a long period of time and if the development rate is higher than the population growth rate, then the real per capita income will rise. (Bakry, 1986)

In the most straightforward definition, Economic development is an economic strategy aimed at raising material capabilities in line with the economic system without negatively affecting other economic aspects.

2.3.2. Economic Development Index

One of the most important economic development indicators used in this study is GDP per capita, i.e. average GDP per capita, after dividing GDP by current prices on population. In fact, International organizations use multiple measures to assess the economic development of the world's States, one of which is GDP per capita. this index actually reflects the individual's ability to access consumer goods and services, additionally, the importance of the GDP per capita index lies in the fact that it is one of the indicators measuring the level of social welfare of the State citizens because the GDP per capita is usually used to compare countries, and its rise is an indication that there is economic growth or development.

2.3-3. The economic corruption Impact on economic development

Many negative consequences on the economic development are caused by corruption, including: (Al-Zahir, 2013)

Failure to attract foreign investment, loss of the domestic capital because Corruption interferes with a free competitive environment, which is a prerequisite for attracting both domestic and external investment, resulting in a lack of job opportunities provisions which generally lead to the increase of unemployment and poverty.

Resources Waste due to the overlap of personal interests with public development projects, and the corruption large cost on the public treasury as a result of the public revenue waste.

Failure to obtain foreign assistance as a result of the political system's reputation.

Immigration of the economic elite due to the lack of recognition, patronage and favouritism while recruiting.

2.4- Methodology and Instrumentation

2.4.1. Study methodology

A- Sample study: Considering that this study aimed to examine the entire 22 Arab States' situation, in some States; however the limitations of variables and the lack of availability or completeness of some of them prevented all States from being included. The study therefore only included 20 Arab States: Algeria, Bahrain, Saudi Arabia, Saudi Arabia, Arab Emirates, Egypt, Morocco, Tunisia, Iraq, Qatar, Lebanon, Jordan, Kuwait, Oman, Comoros, Sudan, Libya, Somalia, Mauritania except for Syria and Palestine. Moreover, the study period took place in the last seven years, from 2012 to 2018, because the availability of data in most Arab States was considered during this period.

B- Study Instrumentation: Panel data analysis Basic models: cross-sectional time-series Data is defined by the data set that combines the characteristics of both Cross-sectional and time-series data. Where the former i.e. Cross-sectional, describe the behavior of many subjects or sectional units at a certain period of time, and the latter i.e. Time series

data describe one subject's single behavior over a given period of time. (Al-Jammal, 2012). Additionally, the panel model description differs according to the time period, i.e. if it was the same for all individuals, the panel model is called "balanced," but if it varies from one individual to another, it is "unbalanced".

Equally important, the modern method proposes the basic formula for the panel data regression as presented by W. Greene in 1993, (H.Greene, 2012, p. 74) where the panel model includes three main forms: the pooled regression model, fixed-effects model, and random-effects model.

If N refers to section views measured in T period of times, then the panel data model is defined by the following formula:

$$\mathbf{y_{it}} = \boldsymbol{B_0} + \sum_{\boldsymbol{j=1}}^{\boldsymbol{k}} \boldsymbol{B_j}\ \boldsymbol{X_{j\,(it)}} + \boldsymbol{\varepsilon_{it}}\ \ \boldsymbol{i = 1, 2, \ldots\ldots, N} \quad \boldsymbol{t = 1, 2, \ldots., T}$$

Study Analysis Tests

Restricted Fisher Test (F): was used to trade-off between the Pooled Regression Model and the fixed effects model, the hypotheses of this test is formed as follows: the Pooled Regression Model is the appropriate one; the fixed effects model is also suitable.

$$\boldsymbol{F(N-1, NT-N-K)} = \frac{\frac{(R^2_{FEM} - R^2_{PRM})}{(N-1)}}{\frac{(1-(R^2_{FEM})}{(NT-N-K)}}$$

Where:

R FEM: Represents the determinant factor of the fixed effects model

PRM R: represents the determinant factor of the Pooled Regression Model.

K: Number of estimated parameters.

N: number of individuals

T: the period of time.

The calculated value F is compared with the scheduled value F (α,N-1,NT-N-K), in detail, If the calculated value is more than the scheduled value, or the P-value is less than 0.05, the alternative

hypothesis H1then is accepted that is, the fixed effects model is the appropriate model for the study data and vice versa.

Hausman test (1978): is used, where there is a fundamental difference between fixed and random effects, which is the extent to which the individual effect is associated with independent variables, where the null hypothesis is based on the absence of that correlation, at which point both fixed and random effects are consistent, but the random effects are the most efficient. Whereas under the existence of the correlation alternative hypothesis, only the fixed effects capacity is consistent and more efficient. Accordingly, the test's hypotheses are as follow: (Baltagi, 2005).

The random-effects model is appropriate,

The Fixed effects model is suitable.

C- The Study Variables: The three static panel models will be estimated to fit the data of the study, which includes Arab States sections, between 2012 and 2018, therefore, the variables adopted in the study can be identified as follow:

- *Dependent variable:* refers to economic development and is expressed using a variable per capita GDP (GDPP)
- *Independent variable:* Corruption perception Index (CPI)

2.4.2. Study Results Discussion

2.4.2.1. Results

Comparison Means Analysis of variance: was achieved by tracking the Arab States Corruption Perception index, the largest ratio of corruption in the Arab States was 71, which was repeatedly found in Qatar in 2015 and the United Arab Emirates in 2013, however, the lowest index value was 8 in Somalia for four years i.e. from 2015 to 2018. In addition to that, the United Arab Emirates was ranked first Arab in terms of the Corruption Perception index, followed by Qatar and the Sultanate of Oman. Then Somalia, Iraq, the Sudan, and Yemen were ranked after the Arab states. Thereupon, there are differences in the level of the Arab States Corruption index. In this case, a test of Means Comparison Analysis of variance among the Arab States was

used to determine if there are differences, according to the following hypotheses:

The Null Hypothesis: There are no differences in the means of Corruption index among the Arab States during the study period;

The alternative hypothesis: There are differences in the means of the corruption index among the Arab States during the study period.

According to the following Table 01, the level of the statistical significance is 0,000 which is 5% less than the level of statistical significance, thus the alternative hypothesis, i.e. there are differences. In the means of the corruption index among the Arab States during the study period, is accepted.

Table 1. Means Comparison Analysis of variance

ANOVA
CPI

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	35561.571	19	1871.662	238.936	0.000
Within Groups	940.000	120	7.833		
Total	36501.571	139			

Source: by the study researchers based on the Spss26 result analyses

A. Model Estimation:

The model developed as a basis for estimation can be formulated as follow:

$$GDPP_{it} = \alpha + \beta_i CPI_{it} + \varepsilon_{it}$$

Table 2. Static analysis Estimated models of panel data

Variables and correlation	Pooled Regression Model	Fixed Effects Model	Random Effects Model
Fixed	-15273,30**	29463,57**	15497,13**
CPI	809,45**	-460,96**	-64,35
Fisher test (F)	143,23**	177,30**	0,344
Coefficient of determination (R^2)	0,509	0,967	0,0024

Source: by the study researchers based on findings in annexes No. 01.02.03

** Significant at 1%, * significant at 5%,

After estimating the three models i.e. The Pooled Regression Model, the fixed effects model, and the random-effects model, we compare them by choosing the preferred model, using certain statistical tests.

B. Estimated Models Comparison

Fisher Restricted test:

Fisher Scheduled value: Ft ((19,119,5%),5%) Ft(20-1,140-20-1)=1,67

Fisher calculated value: Fc= (0,967 –1*(119)/((19)/(0,967-0,509) = 86,93

H0: Pooled Regression Model is appropriete

H1: Fixed Effects Model is appropriete.

Since the calculated F is higher than the scheduled F, hypothesis 1 i.e. the fixed effects model is appropriate, is accepted.

Hausman Test: is based on the following hypothesis

H0: Random Effects Model is appropriate;

H1: Fixed Effects Model is appropriate,

Table 3. Hausman Test results

Type of test	Test value	p. value
Hausman Test	37,94	0,000

Source: by the study researchers based on findings in annex n: 04

Based on the test results table, and taking into consideration that the significance value is less than 1%, the alternative hypothesis (H1), i.e. the fixed effects model is appropriate is accepted.

Evaluation of the Fixed Effects Model: Considering that the fixed effects model is most preferable, it will be assessed economically and statistically, based on the results of table (02).

Economically: according to the preferred estimated model, the estimated equation can be formulated as follows:

$$GDPP_{it} = 29463{,}57 - 460{,}96CPI_{it}$$

As has been noted, the Corruption Perception Index is negative, which reflects the inverse relation between corruption and economic development, to clarify, the more corruption increases by one unit, the lower the development represented in the average per capita output

decreases by 460 units. Therefore, It is regarded as a very logical relationship that reflects the corruption's negative role in the country's development, thus the estimated model is economically acceptable.

Statistically

Partial significance: Given the estimated model, each fixed element indicator (C) has a statistical significance at a level of % 5, additionally; the Corruption Perception index had a positive significant impact on the economic development in the Arab countries.

Total significance: depending on the estimated model, Fisher's calculated value is 177.30, which is significant at a level of 5%, indicating that the fully estimated model is significant.

The explanatory power of the model: is defined by the Coefficient of determination index which was 0,967, i.e. very strong, also Indicates that the economic development change is 96.7% due to the listed corruption independent variable, while the remainder (3.3%) is due to other factors that are not included in the model. Under those circumstances, the estimated model is economically and statistically acceptable.

Individual Fixed Effects*:* the following table 4 clarifies the Individual Fixed Effects

Table 4. Fixed individual differences between the Arab States

Individual Fixed Effects	Countries	Number
-8700.184	Algeria	1
14599.24	Bahrain	2
-15570.19	Comoros	3
-11471.54	Djibouti	4
-10649.40	Egypt	5
-15693.25	Iraq	6
-3125.271	Jordan	7
28458.82	Kuwait	8
-8631.457	Lebanon	9
-14374.84	Libya	10
-15020.00	Mauritania	11
-8186.381	Morocco	12
10379.52	Oman	13
72995.24	Qatar	14
14944.92	Saudi Arabia	15
-25145.55	Somalia	16
-21215.54	Sudan	17
-6880.090	Tunisia	18
43374.98	United Arab Emirates	19
-20089.01	Yemen	20

Source: EVIEWS10 program findings

As it can be observed in Table 4, there is a fixed individual impact in Bahrain, Kuwait, Saudi Arabia, Qatar, United Arab Emirates, and Oman, in other words, the Gulf States have identified positive individual effects, in contrast with the remaining Arab States where there was a negative individual effect.

4.4.2.2. Discussion of the Findings

It is clear that there is an inverse relation between corruption and economic development, to clarify, the more corruption increases by one unit, the lower the development represented in the average per capita output decreases by 460 units.

Which is consistent with the findings of Menoran (2014), whose study demonstrated the negative impact of economic corruption on Algeria's economic growth by affecting the distributive equity of national income, leading to a weak incentive to invest, thereby reducing the country's economic resources?

Coupled with, Ndikeu Njoya (2017) study consistency with which was based on the ICRG index to measure the corruption degree in the Kamarun Economic State and its impact on the economic development by affecting the expenditure allocation in public investment. Corruption stimulates public investment spending because it increases the share of public investment as a result of which its profitability goes to corruption responsible.

Moreover, Gulf States have identified positive individual effects, in contrast with the remaining Arab States where there was a negative individual effect that is linked to several factors, such as the governance nature, which differs between a stable monarchy and a more changed republican one. Also, transition periods for politically unstable States that are vulnerable to economic corruption, in particular regarding the laws and legislation, whether for the banking system or laws relating to import, export, competition, production, operation, etc. which was confirmed in the Alimat study (2015), through a bidirectional causality relationship between the corruption index and political and economic stability, in addition to a direct positive proportionality between the corruption index and economic

growth. Corruption is closely linked to economic and political stability since corruption is the main driver of economic and political volatility in Jordan.

It is concluded that the security situation is directly linked to the levels of corruption, as in Iraq, Yemen, and Libya, where it played a significant role in increasing the levels of corruption, as it was mentioned indirectly in Abu Odeh study (2015) which found that there is an impact and influence relationship between the anti-corruption index and all of the level of government effectiveness, accountability and participation and the volume of tax revenues in Egypt.

Finally, this study confirms and generalizes the results of certain cases partial studies from among the Arab countries, each of which has its case, to account for all the factors contributing to the increase in the corruption degree and to confirm its negative impact on the economic development of these countries.

CONCLUSION

Corruption is regarded as one of the obstacles to economic development. It primarily targets the State public resources to serve private interests, and it is notably widespread in third world countries, including the Arab States, which suffer from the widespread of this phenomenon, but whose degree varies according to several factors, the most important of which is based on the differentiation of the governance nature i.e. stable monarchy and more changed republican rule due to the changing applied policies at each stage, depending on the government change; the inadequate legislative and legal regulation, whether related to the banking system or laws relating to export, import, competition, production, operation, etc.; also the lack or deterioration of the security situation has a significant role in increasing corruption in these countries.

Under those circumstances, and according to the study results, the study hypotheses answers are as follows:

The first hypothesis stating that corruption had a negative impact on economic development with an inverse relationship. On one hand, and by analyzing and examining the relationship of economic

corruption and economic development theoretically, it was confirmed and established that economic corruption has negative effects on both economic efficiency and economic growth which means that this hypothesis is confirmed and proven right. On the other hand, according to the applied study analysis results, and based on the nature of the corruption variable i.e. Corruption Perception index, there was an inverse relationship with GDP per capita.

The second hypothesis stating that there is no difference in the impact of corruption on the Arab States economic development is proven wrong, as a result of the standard study, where positive fixed individual effects have been identified in the Gulf States including Bahrain, Kuwait, Saudi Arabia, Qatar, United Arab Emirates, and Oman, whereas, in the remaining Arab States, was found an individual negative effect.

Research Prospects

The current study helps the prospects of sizing the degree and impact of other indicators to measure corruption on economic development, as the effect on the indicators of good governance on economic development from different States and is likely to have an impact on economic development, like political stability and absence of violence (PS), voice and accountability (VA), rule of law (RL). In addition, the study sample expansion to cover entire North Africa and Middle East region (MENA region).

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Annexes

annex 2: the Fixed Effects Model annalysis

Dependent Variable: GDPP
Method: Panel Least Squares
Date: 01/20/20 Time: 11:39
Sample: 2012 2018
Periods included: 7
Cross-sections included: 20
Total panel (balanced) observations: 140

Variable	Coefficient	Std. Error	t-Statistic	Prob.
CPI	-460.9649	116.7485	-3.948356	0.0001
C	29463.57	4122.333	7.147304	0.0000

Effects Specification

Cross-section fixed (dummy variables)

R-squared	0.967532	Mean dependent var	13231.02
Adjusted R-squared	0.962075	S.D. dependent var	18380.32
S.E. of regression	3579.444	Akaike info criterion	19.34128
Sum squared resid	1.52E+09	Schwarz criterion	19.78253
Log likelihood	-1332.890	Hannan-Quinn criter.	19.52059
F-statistic	177.3068	Durbin-Watson stat	0.633568
Prob(F-statistic)	0.000000		

SOURCE: based on the 10 EVIEWS result analyses

annex 1: the Pooled Regression Model annalysis

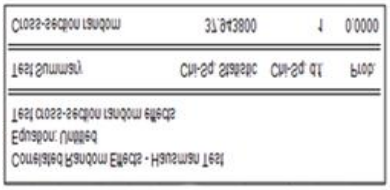
Dependent Variable: GDPP
Method: Panel Least Squares
Date: 01/20/20 Time: 11:37
Sample: 2012 2018
Periods included: 7
Cross-sections included: 20
Total panel (balanced) observations: 140

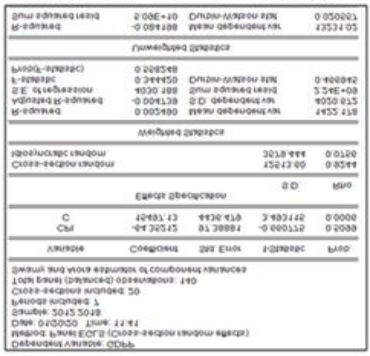
Variable	Coefficient	Std. Error	t-Statistic	Prob.
CPI	809.4532	67.63527	11.96792	0.0000
C	-15273.30	2620.176	-5.829111	0.0000

R-squared	0.509300	Mean dependent var	13231.02
Adjusted R-squared	0.505744	S.D. dependent var	18380.32
S.E. of regression	12921.98	Akaike info criterion	21.78543
Sum squared resid	2.30E+10	Schwarz criterion	21.82745
Log likelihood	-1522.980	Hannan-Quinn criter.	21.80251
F-statistic	143.2310	Durbin-Watson stat	0.111938
Prob(F-statistic)	0.000000		

SOURCE: based on the 10 EVIEWS result analyses

result analyses
SOURCE: based on the 10 EVIEWS





Annex 4: Hausseman test analysis

Annex 3: random effects model

Data resources: The study data Source:(RTe96)

GDPP from the World Bank database in 19/01/2020 (RTe96)

CPI: index website: www.transparency.org/research/cpi/cpi_early/0 in 19/01/2020