The Impact of Corruption on the Economic Growth of Selected Arab Countries for the Period 2000-2017

Dina Ahmed Omar[a], Zakariya Hassan Hussein Abu dames[b], [a]Iraq / Northern Technical University / Technical Institute / Nineveh, [b]Jordan/ Researcher of political, international and regional affairs, Email: [a]Dinaahmadomar1972@gmail.com, [b]zak_abudames@yahoo.com

This study examines the impact of corruption on the economic growth of selected Arab countries (Iraq, Qatar, Saudi Arabia, Jordan, Egypt and Algeria) during the period 2000-2017 by using the two-stage least squares method. In this study we reviewed the concept, types, causes and effects of corruption on economic variables, which in turn affects all other variables in these countries, the most important of which are political and social. This is a study of global corruption indicators and their various effects on economic growth in these countries. The results of the study concluded that the corruption witnessed by Arab countries has affected their economic growth, and the results of the causal test showed that there is a causal relationship between corruption and economic growth. We found that corruption has had a clear impact on economic growth in these countries.

Key words: *Corruption, economic growth.*

Introduction

No country is free of corruption, and this varies in clear and measurable proportions from one country to another. Interest in this phenomenon has increased in recent decades due to the degree of its breadth, as illegal activities and practices have increased and developed, taking forms and dimensions that require concern from their expansion to a degree that threatens many societies. This happens regardless of whether the society is developing or advanced in its systemic structure, social security, political stability, economic prosperity and sustainable development.

Research Problem: The research problem is summed up by the aggravation of corruption in Arab countries, which has had devastating effects on various aspects of life, including

investment and economic growth, as well as the direction of the causal relationship between corruption and economic growth within these countries.

Research Objective: The research aims to measure the impact of corruption on economic growth by formulating a model that measures the causal relationships between variables using the two-stage least squares method (2SLS).

The Research Hypothesis: The research is based on the hypothesis that corruption determines economic growth in Arab countries.

Research Methodology: In order to test the hypothesis of the research, an applied study was conducted using a descriptive and quantitative analysis according to the experimental approach for the period 2000-2017 for selected Arab countries (Iraq, Qatar, Saudi Arabia, Jordan, the Arab Republic of Egypt and Algeria), which are the countries that were available for them. Data used the two-stage least squares method (2SLS).

The Importance of the Research: The importance of the research comes from the growing phenomenon of corruption, especially in Arab countries, and the important location it occupies in their economies, which makes it an obstacle to achieving economic development or economic progress.

Previous Studies: Several studies dealt with the impact of corruption on economic growth:

-1A study (Borlea, Achim and Miron, 2017) for European Union countries during the period 2005-2014. The study showed how corruption and the shadow economy affect economic growth, and the scientific results of this study confirmed a high and positive relationship between corruption and the shadow economy. Therefore, the level of higher corruption involves a higher level of the shadow economy with regard to the impact of corruption and the shadow economy on economic growth. A high and negative relationship has been found and this means that corruption and the shadow economy negatively affect economic growth.
 -2A study: Qudah, Arb and Eleuch revealed the relationship between corruption and economic growth for 10 countries that were classified as the least corrupt countries in the world, including Tunisia during the period 1995-2014 using the classification of transparency using (share) Per capita GDP, life expectancy, school enrolment, and unemployment (applying the α model). For Tunisia, a gap was found between real and expected GDP per capita, which represented the cost of corruption.
-3: The study by Hogdge, Shankar, Rao and Duhs (2009) aimed to clarify the transmission channels through which corruption indirectly affects economic growth. The results indicate that corruption impedes economic growth through its harmful effects on investment in physical capital and capital Human and political instability. At the same time, the study found that

corruption encourages growth by reducing government consumption, and to a lesser extent increasing commercial openness. In general, the overall negative impact of corruption was estimated from these channels. The study also showed that the negative impact of corruption on economic growth is diminishing in economies with the levels of security rule slot.

-4: The study by Farida (2000) aimed to explain the direct and indirect effects of corruption on economic growth in Lebanon. The study showed that corruption hinders economic growth or reduces capital productivity and reduces the impact of government spending on growth using a new classic model, as the results indicate corruption does not change the impact of foreign aid on production. It means that the marginal benefit resulting from reducing corruption exceeds almost any other political measure. Unless corruption is reduced in Lebanon, efforts to improve private and public investment will have little impact on per capita gross domestic product.

-5: The study by Udo, Prince and John (2018) seeks to show the effect of corruption on economic growth in Nigeria for the period 1999-2016 using the classic linear regression model (CLRM). The results of the study concluded that corruption undermines economic growth and sustainability.

Definition of Corruption

The World Bank defines corruption as the use of an office to achieve private benefits or the misuse of the public and official job for the benefit of a private interest.

As for Transparency International, it defines corruption as abusing power for its own benefit.

Corruption is also known as the abuse of power granted by public entities for private gain (Pinho and Vieira, 2018, 3).

All tariffs agreed on the purpose or goal of corruption, which is to obtain private gain or personal benefit.

Corruption is the behaviour of the public or private service owner, which damages the economic construction of the country through these economic resources, increasing burdens on the public budget, reducing efficiency of economic performance, or misallocating resources with the intent to achieve personal benefits, material or non-material, at the expense of the public interest (Saadoun, 2017, 8).

The Relationship between Corruption and Economic Growth:

Most studies agree that corruption has a negative impact on growth. It was found through a pilot study of 97 countries in 1997 that countries with high corruption (low corruption

perception index) tend to have a low per capita share of GDP and a low rate of growth And the correlation coefficient appeared in these countries between corruption and growth (-0.80) and found that a decrease in the level of corruption by 2 points raises the growth rate 0.5 points.

This negative relationship between corruption and growth is embodied through the negative impact that corruption has on investment and thus when corruption negatively affects investment, it necessarily reduces growth (Daoudi, Al-Dulaimi, 2012, 209).

According to traditional economic theory, corruption impedes economic growth by extracting the proceeds (investment in surplus) economically, which negatively affects this growth, both for domestic or foreign entrepreneurs. This is proven by an experimental study that indicates an inverse relationship between corruption and investment. Corruption discourages foreign direct investment and reduces infrastructure resources for the production process, services and anti-poverty programs.

There are those who see the opposite. Corruption, in their view, improves economic welfare and economic efficiency.

It can actually drive economic growth, or at least not hinder it by facilitating domestic investment or achieving high returns through tax treatment. Evidence of this is the experience of Southeast Asia, which has proven that the intensity of corruption does not necessarily mean an inverse relationship between corruption and economic growth (Al-Jabri, 2018, 16-17).

There are those who see corruption as a straightforward activity that can be beneficial for growth through two types of mechanisms: the first by avoiding delays and bureaucratic procedures, and the second by increasing the incentive and high efficiency of the beneficiaries of corruption from government employees (Kadaoui, Al-Dulaimi, 2012, 209).

Most empirical studies looking at the direct relationship between corruption and economic growth have found that the rate of economic growth has slowed down due to corruption, and the problem associated with this type of research is the trend of causality between corruption and economic growth. Lambsdorff (1999 in a literature review) says that a low per capita of gross domestic product can cause great corruption, while the opposite may be true.

Solow-Barro also studied the relationship between corruption and economic growth using the corruption index and found a negative correlation between corruption and the average annual growth rate during the period 1960-1985 in 70 countries using the Lucas model.
Brunett provided evidence that corruption has little negative impact on growth in a less effective environment than government. With fragile rule of law, however, corruption becomes more harmful to economic growth.

Earling and Lowe (1999) also claimed that the rate of economic growth was lower due to corruption, which is the result of a higher level of government intervention (Pulok, 2012, 9).

Barreto (2001) demonstrated that there is a direct positive relationship between growth and corruption in East Asian countries, which maintained a good growth rate of GDP despite the significant level of corruption observed.

The negative impact of corruption on economic and political development also tends to divert government spending away from social situations towards building unnecessary projects or low-quality investments.

Rock Dupontin (2004) also concluded that the size of states, policies of corruption, the industrial regulation of corruption, the amount of state power and the long-term strategy of corrupt officials are important determinants that will influence the relationship between corruption and economic growth (Abdirahman, Wassawa, Matavu, 2018, 9).

The above studies indicate that there is a causal relationship between corruption and economic growth, and that its trend is from corruption to growth.

In general, it can be said that corruption has harmful effects on economic growth, and there is no scientific argument or scope to justify its occurrence.

Types of Corruption

Corruption has different forms, shapes, manifestations and categories, which are administrative, economic, political, social, and moral.

They may, however, be divided into three categories: professional, commercial and financial. For the multiplicity of these forms and varieties and their overlap, only some of them will be checked (Alimat, 2015,99).

Corruption According to Size

Corruption according to this criterion can be classified into large corruption and small corruption.

1- Great corruption: Great corruption is the type of corruption practice that takes place at the highest levels in administration and authority (government) and is linked to large financial deals, violations of laws and inflation.

2- Small Corruption: It is related to the behaviour of small employees and officials with the small size of the money in circulation, such as bribery, benefits and required work in return, which are of little importance, such as mediation in employment, speedy completion of business and granting licenses and their funds (Phino and Vieira, 2018, 4).

Corruption according to the field in which it is active and can be classified according to this criterion to:

1- Political Corruption: Political corruption is defined as every bad exploitation of the public position, or public resources. It is distinct from the corruption of the private sector, because it involves the behaviour of an office holder that has three powers: the executive, legislative, judicial, in national, administrative, and local bodies.

Political corruption is an unlawful use of available public political resources, which includes wealth and income, the use of coercive means, jobs, and others from a party that occupies that position or monitors those resources, to serve individual, private, or group family goals, and to bring in personal benefits that may be financial, or related to power. When the practices of political corruption multiply, the forms expressed and indicative indications of it are represented.

2- Economic corruption: Economic corruption is defined by the exploitative practices of economic monopolies and business sectors for the benefit of elites, and the achievement of private economic interests at the expense of society's interest. This is done as a result of the absence of monitoring and weak controls and rules. Economic corruption results from the concentration of economic power in monopolistic entities that have a large size in a decision-making process (Huiyun, Phooiyee, Aiping, Chewyun and Meikin, 2015, 4).

Corruption according to the nature of the deviation:

1- Financial corruption: It is related to the corruption of financial institutions such as banks, investment and insurance companies, and the stock market, when these institutions use the available resources to serve special interests and neglect the application of professional rules and regulations, and the use of exciting sites for some people to obtain benefits for them at the expense of others.

2- Administrative corruption: This corruption is the exploitation of small public officials for their jobs to achieve special benefits, or it is that type of corruption that affects the administration in terms of negligence, indifference, favouritism, the obstruction of interests, extortion, fraud, and administrative transgressions of an employee's personal interests. Administrative corruption is divided into:

A. Passive Corruption: It is the acceptance and delivery of benefits and bribes.

B. Positive corruption: It is to give and receive benefits and bribes, or to receive them (Olimat, 2015,99).

Implications for corruption:

1- Investment:

Investment is one of the most sensitive economic variables to corruption, as corruption affects investment in different ways, specifically in relation to the size and composition of foreign direct investment, the amount of public investment, and finally the nature of government spending and agreement (programs) projects.

Numerous experimental studies have revealed the negative and moral impact of corruption on the national investment rate, and there are important negative effects on the flow and structure of foreign direct investment, as a high level of corruption by one reduces the flow of foreign direct investment (11%), so the reduction is detrimental to growth. Foreign direct investment stimulates economic growth by transferring technology and improving the productivity of local investment and providing the necessary capital for skilled work. In addition, foreign direct investment is heading in countries with high corruption towards joint ventures, which detract from the rate of national investment (Smarzynska & Wei, 2000,5).

2- Government spending:

Corruption distorts elements of government expenditures, as bribed government officials and politicians are expected to waste more public resources on spending items that are easy to extort large bribes, such as the trend towards spending on military equipment and supplies, especially civil aircraft. The priority of public spending is from the community's point of view, such as sporting activities and clubs, and ignore many important activities such as spending on the agricultural and industrial sector. That is, the focus of spending will be towards the elements in which bribery, currencies, and suspicious transactions abound, which affects the composition of government spending and increases the costs of existing projects that will be established again and thus will weaken investment incentives in them.

3- The Tax Sector:

The spread of corruption in the tax field helps to provide tax returns that show an unrealistic tax base for these individuals so that they can show a low ability compared to their real ability. This means that corruption violates the principle of tax justice compared to some of those who submit valid declarations, and the principle of horizontal justice requires the treatment of individuals with ability equal to equal payment. Tax evasion causes the disruption of state revenues and the delay in building and operating public projects, with the government not being

able to fulfil its financial obligations, which increases the problem of deficits in the public budget.

Likewise, a violation of the principle of tax justice results in a violation of the principle of social justice in the distribution of public burdens. All these practices result in false decrease in tax energy and economic policy to achieve its goals in terms of economic growth and public financing, as well as the provision of social services because the decision-maker cannot place the amount of government revenue against government spending on the basis of false tax capacity (Al-Haiti, 22-22-2016).

3- Economic Efficiency:
The process of profiting by illicit means such as bribery and favouritism allows companies to obtain undue financial advantages and thus eliminate competition between them. Promoting the monopoly of the few, this drives many producers out of the markets because they are unable to face these monopolistic conditions.

3- The State Budget:
Corruption affects both sides of the state's general budget, so it affects the revenue side through tax and customs evasion. One of the most widespread forms of corruption leads to a reduction in the state's public revenue and then an increase in the state's budget deficit.

It also affects expenditures as corrupt people from decision-makers go to large-scale and cost projects such as mega construction and armament operations, which are always ambiguous and lack control in the magnitude of their payments, which facilitates illegal profit operations. In return, spending on basic services such as education, health, and scientific research is reduced.

4- Hidden Economy:
Numerous studies indicate that there is a strong correlation between the extent of corruption and the large size of the hidden economy. Any illegal and unlicensed economic activity always practices its activities under the guise of political bureaucracy that exists through corruption. The economic thinker Friedman believes that corruption is the main determinant of the scale of hidden economy activity.

5- Poverty and inequality in distribution:
Corruption significantly increases poverty rates and inequality in the distribution of income and wealth. A World Bank study in 2000 indicates that poor families spend more of their income on bribery than rich families do, as is the case with companies, and that corruption is the main reason for owning 20% of the world's population and about 80% of the economic resources. It also indicates that the decrease in corruption by one unit increases the share of the poorest 10% of the population by 0.046% as a percentage of the national product.

6- Economic growth:

Corruption affects negatively on economic growth, directly and indirectly. All the aforementioned variables of poverty and economic efficiency as well as other variables are tantamount to transmission channels. The impact of corruption on economic growth has been indicated by many studies. The World Bank indicates that corruption is reduced by one unit and increases the Economic growth rate by 0.21%. Corruption reduces the level of GDP by:

1- Changing incentives and prices that cause ineffective allocation of scarce resources.
2 - Reducing investment not only due to increased risk by inserting non-investment into the legal framework but also a decrease in opportunities for entrepreneurs where they can obtain less income for a higher level of uncertainty (Pinho and Vieira, 2018,3)

Data Sources and Time Duration

The World Bank publications were relied upon to obtain data suitable for the variables used in the research, which includes many Arab countries whose data are available in the issuance of international organisations and bodies. Consistent data was obtained for six countries (Iraq, Qatar, Saudi Arabia, Jordan, Egypt And Algeria) for the period 2000-2017. We used the form of immediate equations. This model is based on the economic theory of the determinants of the index of global corruption indicators for the purpose of measuring the relationship between economic growth and indicators of global corruption:

Standard Form Description:

First: Measuring the relationship between corruption and economic growth

Based on previous empirical studies on the relationship between corruption and economic growth, and based on the previous discussion on the causal relationship between corruption and economic growth, we used a form of immediate equations. This model is based on the economic theory that the determinants of economic growth indicators is evidence for measuring the relationship between corruption and economic growth:

$Yg = CPI + E / Y + S / Y$
$CPI = GDP + + Open + INF / Y + GE / Y + S / Y$

whereas:
GDP growth rate.
CPI: Indicators of Global Corruption.
Ratio of exports to GNP.
The ratio of savings to gross national product.

= Gross national product.
= Estimated GDP growth rate.
The ratio of inflation to gross national product.
= Degree of commercial openness.
The ratio of government spending to gross national product.
The ratio of savings to gross national product.

The model proposed above has been diagnosed with a diagnostic test (*) (Identification). It was found that the model is an overhead diagnosis. Based on this we will use the Tow Stag Least Square method for the purpose of solving the immediate equations model of our research as it gives the best unbiased linear estimates (Koutsoyiannis, 1977, 384-385).

1- Local inflation rate (INF): the annual change rate in the implicit reducer of the GDP Implicit clarifies the rate of change of local prices in the economy as a whole. This variable is obtained by dividing the country's gross domestic product in constant prices as measured in local currency by the gross domestic product in constant prices measured in local currency with the product of division divided by 100.
2- The degree of commercial openness (Open) is the sum of exports and imports of the country for goods and services in constant prices, measured in US dollars divided by GDP, multiplying and then dividing by 100.
3- Government spending (GE): The amount of government spending as a proportion of gross domestic product.

The second equation:

- Gross domestic product:

We expect the GDP to have a positive impact on indicators of corruption in Arab countries, as the corruption index is a measure of the capabilities and education of individuals. It is known that the health and education of individuals and increasing their income increases the volume of productivity.

Estimated GDP growth rate:

We expect the gross national product to have a positive impact on the global corruption index.

- Economic openness:

We expect that economic openness will have a positive impact on the indicators of corruption in Arab countries.

Inflation rate of gross national product:
We expect inflation to have a negative impact on indicators of corruption in Arab countries where the price level is high, due to the instability of economic policy.

Ratio of government spending to gross national product:

We expect that there will be two effects of government spending on indicators of corruption. The first is a direct impact on indicators of corruption in Arab countries where government spending is directed towards health and education and a negative impact in countries where government spending is directed towards other purposes.

Ratio of saving to gross national product:

We expect that the effect of local savings on corruption indicators will be a direct effect, as local savings lead to increased investment and production, job creation, productivity and per capita income, and thus an increase in indicators of corruption, especially for oil states.

Implementing the proposed model for a sample of Arab countries for the period (2000-2017).

The model was applied to a sample of Arab countries, namely Iraq, Qatar, Saudi Arabia, Jordan, the Arab Republic of Egypt and Algeria, using the statistical analysis model for the economic growth equation and the corruption equation and the two-stage method of squares to show the relationship between economic growth and corruption. Table 1 as follows:

Table 1: Results of estimating the human development equation using the S. L. 2. S method in the sample countries during the period 2000-2017 Iraq

EG	a0	CPI	SR	EX	F	R2	D.W			
	4.18 (1.61)	0.0357 (2.34)	– 0.173 (-1.23)	0.126 (0.80)	0.58	10.9	1.51			
CPI	**a0**	**GDP**	$\hat{Y}g$	**Open**	**INF**	**GE**	**SR**	**F**	**R2**	**D.W**
	1– 322 (-1.77)	143 (3.74)	18.5 (0.84)	1.13 (0.22)	5.61 (1.44)	9.1 0.55) (	– 23.2 (-1.78)	3.03	68.5	2.52

Qatar

Yg	a_0	CPI	SR	EX	F	R2	D.W			
	2.95 (1.52)	− 0.01596 (-2.53)	0.122 (1.58)	− 0.0437 (- 0.85)	2.50	37.3	2.33			
CPI	a_0	GDP	$\hat{Y}g$	Open	INF	GE	SR	F	R2	D.W
	89 (0.14)	− 8.8 (- 2.73)	− 689 (- 3.08)	− 15.6 (2.52)	0.55 (0.22)	44.7 (2.53)	74.0 (3.22)	8.923	48.5	1.90

Saudi Arabia

Yg	a_0	CPI	SR	EX	F	R2	D.W			
	55.3 (1.80)	0.0113 (3.41)	− 0.343 (- 1.59)	− 0.0116 (- 0.13)	2.14	54.3	3.12			
CPI	a_0	GDP	$\hat{Y}g$	Open	INF	GE	SR	F	R2	D.W
	-31221 (- 2.77)	388 (2.64)	13254 (2.53)	19.2 (0.93)	-61.0 (- 1.84)	− 85.6 (- 1.94)	896 (2.55)	9.03	74.5	2.51

Jordan

Yg	a_0	CPI	SR	EX	F	R2	D.W			
	− 8.61 (3.61)	0.0243 (1.24)	0.255 (3.00)	0.312 (3.22)	5.02	55.0	1.50			
CPI	a_0	GDP	$\hat{Y}g$	Open	INF	GE	SR	F	R2	D.W
	− 2122 (- 0.92)	4.21 (3.25)	− 12.2 (0.80)	− 4.6 (- 0.13)	5.47 (1.55)	96.6 (1.36)	− 8.6 (- 0.20)	1.52	65.1	2.50

The Egyptian Arabic Republic

Yg	a_0	CPI	SR	EX	F	R2	D.W			
	1.411 (0.31)	0.00254– (2.21)	0.825 (1.54)	− 0.0318 (- 0.22)	8.61	35.9	1.51			
CPI	a_0	GDP	$\hat{Y}g$	Open	INF	GE	SR	F	R2	D.W
	2332 (2.57)	− 4.32 (- 1.65)	− 721 (- 5.49)	− 10.7 (1.58)	− 0.79 (- 0.51)	− 2.39 (- 0.33)	178 (2.81)	58.94	39.3	1.51

Algeria

Yg	a_0	CPI	SR	EX	F	R2	D.W			
	23.421 (0.24)	0.01534– (2.47)	0.926 (1.59)	− 0.0248 (- 2.22)	12.61	48.9	1.52			
CPI	a_0	GDP	$\hat{Y}g$	Open	INF	GE	SR	F	R2	D.W
	2188 (3.33)	− 6.32 (- 1.55)	− 782 (- 5.66)	− 14.7 (- 1.69)	− 0.80 (- 2.51)	− 2.56 (- 1.33)	297 (2.51)	84.94	38.3	1.50

Table 1 shows the results of estimating the equation of the gross national product growth rate and the method of ordinary least squares (OLS) and the equation of indicators of global corruption in the two-stage least squares method (2. SL S). We notice from Table 1 that the first equation is the rate of growth of the gross national product. The total notes the negative

impact of the indicators of corruption on the rate of growth in Iraq, Qatar and the Arab Republic of Egypt at the level of 5% significance. The indication of corruption is consistent with the operative of the economic theory that the increase in indicators of corruption leads to a decrease in the rate of growth of national output. However, the effect was positive and morale in Saudi Arabia and Algeria and not significant in Jordan.

As for the second equation, the determinants' equation for corruption indicators using the SL 2 method for the period 2000-2017 that the effect of gross national product was significant and positive on indicators of corruption at the level of significance of 5% in Iraq, Jordan and Egypt. This is consistent with the operative of economic theory, i.e. the higher the gross national product, the higher the growth rates, the better the indicators of corruption. The results also show the impact of the gross national product on corruption indicators is a significant negative in Qatar.

The estimates presented in Table 1 also showed that the impact of the estimated significant gross national product growth on indicators of corruption is at a significance level of 5% in Saudi Arabia, as these are among the oil countries that have experienced stability in economic growth rates and are the countries with high incomes (high income from oil exports). This is due to the varied nature of its economy and to relatively privatisation programs, as well as the impact of the estimated growth rate on indicators of corruption is negatively moral in Qatar, Egypt, Algeria despite its lack of significance in Iraq and Jordan. This means that there is a large role influencing the rate of growth in the National product Total on indicators of corruption in some Arab countries. The estimated growth rate showed a negative moral impact on indicators of corruption in Egypt at a 5% level of significance. This is due to the deterioration of trade exchange rates as a result of the decline in commodity prices, in addition to restrictions imposed on foreign trade In Egypt.

The estimates shown in Table 1 also showed that trade openness has a positive moral at the level of 5% in Qatar and Egypt. This is because trade openness in these countries was not a major determinant of human development in these countries because it will lead to increased imports, discouraging local industry. In addition to these countries that depend on the export sector, the decline in oil prices during that period led to internal imbalances that led to a budget deficit, and estimates show that trade openness appeared negatively in Iraq and Algeria.

The estimates mentioned in Table 1 also indicate that the rate of inflation was significantly negative at the level of 5% in Bahrain. This is consistent with the operative of economic theory, that is, whenever the rate of inflation rises, it leads to a decrease in indicators of corruption. Despite its lack of significance, the signal emerged as a negative moral in Saudi Arabia and Algeria. The effect was not significant in Qatar, Egypt and Iraq, and a positive morale appeared in Jordan.

The estimates presented in the above table also showed the ratio of government spending to gross national product at a negative level at 5% in Saudi Arabia. This is consistent with the operative of the economic theory that the increase in government spending leads to a reduction in indicators of corruption because this spending is not directed towards economic development, but for other purposes. However, that effect was not significant in Egypt and Algeria, and the estimates provided in the above table indicate that the ratio of government expenditures to gross national product appeared positive in Qatar and Iraq. This means that government spending in these countries does not meet the purpose and is unable to fill the requirements of the country's need for infrastructure spending. Estimates were not significant in Jordan.

From the note of Table 1, it was found that the ratio of saving to gross national product appeared with a positive moral effect on the evidence of corruption indicators at the level of significance of 5% in Qatar, Algeria, Saudi Arabia, and Egypt. This can be due to the large development programs adopted by these countries. Financing is not commensurate with the available savings, which leads to an increase in the need for foreign direct investment to reach the target growth rate due to the weakness of its production devices, the low efficiency of its investments and the low efficiency of operation in it and the increase in the size of the population and the low rates of capital accumulation and savings due to the low level of income. Its financial and monetary policy is high despite the occurrence of an increase in the percentage of savings, as estimates have shown that the percentage of savings has a negative moral impact on indicators of corruption in Jordan and Iraq at a 5% level of significance because the benefits achieved by the private sector are offset by a deficit in the state budget. This means that the government borrows savings from the families sector through banks and spends them as current expenses. Reducing savings will lead to a decrease in investment in corruption indicators.

The estimates presented in Table 1 also indicates that the independent variables used in the model explain 48.5% of the changes in global corruption indicators in Qatar, 77.4% in Jordan, 65.3% in Egypt, 88.5% in Saudi Arabia and 65.1% in Algeria. This means that there is a small percentage of changes that occur in the indicators of global corruption, which these independent variables are not able to explain. We can refer to some of them as political instability, fluctuations in weather conditions, deterioration in the terms of trade and the restrictions imposed by some Arab countries. These variables could not be studied by the researcher and are not included in the estimated model due to the lack of necessary data about them.

Results

The research included analysing the relationship between indicators of global corruption and economic growth for the sample countries, and through the descriptive and analytical study, the research reached the most important conclusions. These are summarized as follows:

1- The research showed a direct opposite relationship between indicators of global corruption and economic growth in most Arab countries, meaning that the increase in indicators of global corruption leads to a decrease in real gross national product, and a decrease in indicators of global corruption leads to an increase in gross domestic product.

2- The results in the first equation showed the equation of the gross national product growth rate, the negative effect of indicators of global corruption on the rate of growth in Iraq, Qatar, and Egypt at a 5% level of significance.

3- The results in the second equation show the determinants of global corruption indicators, and that the effect of gross national product was significant and positive on indicators of global corruption at a 5% level of significance in Iraq, Jordan, and Egypt. A negative moral emerged in Qatar, and was not significant in Algeria.

4- It was found that the effect of the estimated gross national product growth rate was significant and positive on the evidence of global corruption indicators at a 5% level of significance in Saudi Arabia, an insignificant appearance in Algeria, a negative moral in Qatar, Egypt and Algeria, and an unimportant appearance in Iraq and Jordan.

5- The results showed that the effect of commercial openness was significant and positive on the evidence of global corruption indicators at a 5% level of significance in Saudi Arabia and Egypt. No significance emerged in Jordan and Iraq, and a significant negative was found in Qatar and Algeria.

6- The results of the standard analysis showed that the inflation rate was negative and morale on the indicators of corruption in Saudi Arabia and Algeria. This is consistent with the operative of economic theory, and a positive moral emerged in Iraq, Jordan and Qatar, and a negative, unimportant appearance in Egypt.

7 - The estimates showed that the coefficient of the volume of government spending was moral and negative in Saudi Arabia, and it appeared morally and positively in Iraq and Qatar, and non-moral negative in Algeria and non-positive in Jordan.

8- The estimates are indications that the effect of saving was significant and positive on indicators of corruption in Qatar, Algeria, Saudi Arabia and Egypt, but the effect was significant and negative in Iraq and Jordan.

9-The percentage of Arab countries, especially Saudi Arabia and Bahrain, has risen within the indicators of global corruption. This is due to the narrowing of the gap between corruption and economic growth as a result of interest in health, education and ownership of resources, which reflects positively on corruption in social and humanitarian terms. GNP is of no use unless it is accompanied by an employment of these resources.

10- The degree of corruption varies between Arab countries due to the different factors governing them.

11- Corruption is hindering development due to its negative repercussions on state revenues and rates.

12-Domestic and foreign investment as impairing economic growth is a reflection of bribery.

13-The social and economic cost of projects increases their cost and weakens their returns.

14-Corruption leads to money escaping outside the country at a time when this money was supposed to be used to set up development projects that serve individuals by providing them with job opportunities.

Recommendations

1- Calling upon states to provide greater transparency in the various laws and organisations, whether economic, political, judicial or administrative, and to limit their spread, and to work to remedy their weaknesses, which would reduce corruption.

2- The fight against corruption is the main key to providing the necessary financing and the administrative and technical expertise necessary for the continuation of economic development. Thus, spreading a culture of transparency by providing information to all, fighting corruption and spreading that culture in the different educational stages and clarifying the dangerous effects of corruption on society is imperative.

3- Directing studies towards researching the nature of the relationship between indicators of global corruption and economic growth.

4- Achieving tangible progress in combating corruption in countries with particularly bad institutions, as corruption is the most important variable in the interpretation of changes in per capita GDP in this group of countries. On the other hand, taking serious steps towards institutional development is a necessary policy for minimising the impact of corruption on per capita GDP.

REFERENCES

Abdullah bin Hassen, A.-J. (2018). Economic corruption is its types, its causes, its effects and its treatment.

Amouri, H.K. (1988). Econometric Methods, First Edition, Higher Education Press and Scientific Research, Baghdad.

Kenza, S. (2017). The Impact of Corruption on Economic Growth in Algeria during the period (1995-2015), Master Thesis, Al-Arabi Bin Mahidi University, College of Economic Sciences, Commercial Sciences and Management Sciences.

Koutsoyianns, A. (1997). Theory of Econometric ,Second Edition, The Macmillan Press Ltd.London.

Smarzynska, B. K. & Wei, S. J. (2000). Corruption and the Composition of Foreign Direct Investment, WB Discussion Paper No. 2360.

Syrian, Y. H. A.-H. (2016). Administrative and financial corruption and their devastating effects on investment and economic development in Iraq as a model. Iraqi University, Department of Financial and Banking Sciences.

Talal, M. K. and Fawaz, J. A.-D. (2012). Center for Future Studies, Journal of Future Research, University College of Hadba, No. (40).