

## The impact of financial development on the economic growth of selected Arab countries

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### ABSTRACT

Financial development has become a subject of great interest in the Arab countries. This development plays an important role in mobilizing domestic savings and directing it towards investment channels, according to its ability to employ capital on the one hand, and its linkage to market, on other hand the rise of phenomenon of assessment of foreign exchange rates and interest rates at the international level, which has often led to the absence of any obstacles to capital flows in a variety of credit tools and savings and foreign currencies, especially that the financial development following the economic developments and the expansion of consumer and investment spending. The research investigates an effect of financial development on the economic growth in selected Arab countries (Jordan, Egypt, Algeria, Tunisia, Saudi Arabia and Bahrain) during the period 2000-2017.

**Keywords:** Financial Development , Growth , Economic , Mobilizing Savings

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### 1. Introduction

The development of financial has an influential and positive role in economic growth if the appropriate environment is available for its launch, through mobilizing financial resources and directing them towards the best investments that support the development process. Consequently, the events of financial development in Arab countries on the path of reform and economic modernization and orientation towards a social market economy require the establishment of the necessary infrastructure for it. It also requires that the government adapts its economic policy in general and its financial policy in particular.

The problem of study is summarized by a lack of an appropriate environment for financial development in the Arab countries, which makes it insufficient to influence economic growth. This is for reasons related to the nature of the economies of these countries. And the decline of foreign reserves, and therefore the success of such policies requires an appropriate climate that contributes to their success.

The study aims to identify the effect of financial development in activating economic growth and to identify reality of the state of financial development and the steps taken in the path of reform, change and development, and then an empirical measurement of the effect of the factors controlling financial development on economic growth.

The hypothesis of study is that financial development in the Arab countries still has little impact on economic growth.

#### 1.1. Previous studies

Many studies dealt with the effect of financial development on economic growth. The study of Abdel-Al and Alaween [1] tested the relationship between the development of the financial and banking sector on the one hand and its repercussions on economic growth on the other hand, for six countries in the Middle East and North Africa during the period (1987-2007) where it was adopted. In essence, this study deals with the study of financial development from its various aspects and its relationship to economic growth through the use of

bank credit, capital, traded value and turnover rate. The results of the study showed that all measures of financial and banking development are statistically significant and affect economic growth.

The Murad study [2], came to uncover the connection between monetary turn of events and monetary development for (10) nations in the Middle East and North Africa area during the period (1980-2006) utilizing board models that blend time series information and cross-segment information, which neglected to find a significant connection between monetary turn of events and financial development in the referenced nations. This is the aftereffect of certain variables, remembering the prevailing job of public foundations for the portion of credit in numerous nations of the district, and the primary job of the public area in their monetary and monetary design.

The investigation of Al-Shaddoud and Al-Saidi [3], expected to analyze the causal connection between monetary profundity and financial development in Iraq for the period (1990-2010) utilizing Granger causality, to decide the course of the connection between the two factors to the monetary profundity, while the monetary profundity didn't in a general sense influence financial development.

The study [4], in the period (1989-2008) directed on the Kingdom of Saudi Arabia utilizing the common least squares technique intended to show the connection between monetary turn of events and financial development, and presumed that there is a relationship between monetary turn of events (credit market, securities exchange monetary) and financial development over the long haul, and has an adverse consequence for the time being.

A study [5], that arrangements with breaking down the connection between monetary turn of events and monetary development in Iraq and its normal job in the future through testing the quarterly time series for various monetary factors (bank resources, bank credit, number of exchanged offers and market capitalization) with total national output during the period (2004-2012) and the test outcomes showed that there is a drawn out connection between the factors under study, as the monetary factors ethically affect financial development.

The study of Mandiefe [6]. This review looks to check the short and long haul advancement of the monetary area on monetary development, just as to confirm the monetary improvement hole that isolates Cameroon and an arising country like South Africa, where the blunder adjustment model was utilized, and it was noticed that there is a relationship Long-term connection between bank stores and financial development in Cameroon, while there is a transient connection between bank stores and financial development in South Africa for the period (1990-2002).

## **1.2. Defining financial development**

Financial development is the quantitative and qualitative improvements in providing financial services in an efficient manner between lenders and borrowers through the development of financial institutions of all shapes and types (general and specialized commercial banks, insurance companies, financial markets and other financial institutions) [7].

## **1.3. Financial sector and economic growth**

The financial sector, with both financial institutions and financial markets, is particularly important in local economies, as well as being one of the basic service activities that provide job opportunities and provide added value by providing a range of financial services. These ideas have been of interest to researchers since the beginning of the last century through the writings of the pioneers of finance. Schumpeter is one of the first to scientifically establish the role of financial services and their contribution to economic activity, including a wide range of services, such as mobilizing savings, financing investment, project evaluation, risk management, and facilitating financial and investment transactions, Where they are all basic and necessary services in order to link technological innovation and economic growth .

Third: The relationship between financial development and economic growth:

The relationship between financial development and economic growth has received a degree of attention in the economic literature, and the controversy centered on the direction of the causal relationship between money and growth, and that the first studies had emerged after the issuance of quantitative research conducted by Cold Smith (G. The significance of financial institutions in mobilizing the savings needed by the growth

process, and he concluded that financing through banks and stock markets has positive effects on economic growth, especially in the long run, and this conclusion was supported by other studies such as the study of Hicks (1969), as the financial system played a key role in moving the industrialization process in England by facilitating the mobilization of capital to finance large projects, while the study of Lucas, the owner of the school of rational expectations to reduce the importance of this relationship, as he sees that financial factors often play a negative role in periods of economic growth based on this indicates that the financial sector is responsible for stimulating crises that hinder growth [3].

Economists' opinions are different about the theoretical relationship between financial development and economic growth, and three hypotheses emerged in this framework as a result of this difference. As for the third trend, it sees that there is a two-way causal relationship between financial development and economic growth, and the following will focus on the first opinion or the so-called supply leadership hypothesis.

These economists affirm that financial deepening is a prerequisite for economic growth, considering that financial sector institutions can work to enhance economic efficiency, create liquidity, attract savings, accumulate capital, and transfer resources from traditional weak sectors to more developed sectors, and allocate them to investments that generate return. More productive in the sense of optimal allocation of investments, which in turn leads to an increase in GDP rates [9]

Financial development leads to stimulating and raising the rate of economic growth, especially in countries that have large banking and financial institutions that can provide various facilities, in addition to countries that enjoy high liquidity in the stock markets can grow at greater rates than those countries that it has less liquidity, and therefore the greater the development of the financial sector leads to the expansion of the growth of the real sector [8].

*Financial Deepening:* It is the expansion of the volume or activity of the total bank deposits to the gross domestic product, which implicitly assumes the existence of intermediate and reasonably developed financial institutions.

Some studies indicate that countries that enjoy a high level of financial development achieve faster growth of 7% annually than those whose financial institutions suffer from weakness, and this casts doubt on the existence of this type of relationship in developing countries that suffer from many problems at the level of their financial systems.

This hypothesis has given positive results for the impact of financial deepening on economic growth in the real sector. The relationship between them is based on the existence of a developed financial sector capable of performing its functions effectively and efficiently, allowing efficient distribution of available economic resources, accumulation of human and material capital, and accelerating technological progress. Also, enhancing the efficiency of financial intermediaries in the economy, it is positively reflected on the cost of obtaining information, speculation costs, and control costs. This climate also encourages investment as it contributes to exploiting investment opportunities available to institutions and meets their various financing needs, affects directing savings in the economy, improves financial control in institutions, and raises the degree of hedging risks, facilitating the exchange of goods and services, and these functions in their entirety contribute to achieving economic growth [10].

## **2. Methodology**

In order to test the research hypothesis, an applied study was conducted using descriptive and quantitative analysis according to the experimental method for the period (2000-2017) for selected Arab countries (Jordan, Bahrain, Saudi Arabia, Tunisia, the Arab Republic of Egypt and Algeria), which are the countries that were available from Data using the panel data method in quantitative analysis.

The significance of research: The significance of research comes from the fact that it is consistent with the broad and exceptional interest in the subject of financial development, as well as at a time when wide and serious discussions are taking place about evaluating the effectiveness of financial development and its impact on economic growth.

## 2.1. Data sources and time period

The publications of the World Bank were relied upon to obtain the appropriate data for the variables used in the research, which include many Arab countries whose data are available in the issuance of international organizations and bodies. Harmonious data were obtained for six countries (Jordan, Bahrain, Saudi Arabia, Tunisia, and the Arab Republic of (Egypt). and (Algeria) for the period (2000-2017). The panel data method was used.

## 2.2. Standard Model Description

Based on previous empirical studies on the relationship between financial development and economic growth, we have adopted the model to explore the impact of financial development on economic growth.

$$GDP = a_0 + b_1 FDI + b_2 CR + b_3 M2 + b_4 S \text{-----}(1)$$

whereas:

GDP = per capita GDP.

FDI/GDP = Foreign Direct Investment as a percentage of GDP.

CR/GDP = Credit granted to the private sector as a percentage of GDP.

M2/GDP = money supply in its broad sense, M2 as a percentage of GDP.

S/GDP = saving as a percentage of GDP.

In building the model, the type of tests and the methodology used to determine the relationships between the model variables was based on the economic theory, as well as the previous reference studies on the subject of our research.

## 2.3. Research variables

The search variables included are the GDP growth equation: It includes foreign direct investment as a percentage of GDP, credit granted to the private sector as a percentage of GDP, money supply in its broad sense as a percentage of GDP, savings as a percentage of GDP.

Third, the unit root test

This test aims to determine the extent to which the research variables are quiescent, and in the event that these variables contain a unit root, the differences must be taken to make them static. The test was conducted twice, the first by estimating the Fisher regression, which contains a categorical and a general trend, and this is the most comprehensive model, and the second is a regression procedure with a categorical only. This method is summarized by conducting the test first using the first model that contains a categorical and general trend. If we cannot reject the null hypothesis, we must consider whether the presence of the general trend affected the test, by testing whether the parameter of the general trend is equal to zero. If it is equal to zero, we move on to the test procedure, categorically only.

Unit root tests for panel data:

There are several ways to test the unit root, the most important and most accurate is the (Fisher) test developed by (Maddala), as it depends on integrating different significant levels to test the stability of time-series variables consisting of paired data (P-Panel), it depends on the values calculated from the P-Panel test (ADF) or (PP) for each cross-section separately, then taking the significant levels (P-values) for these tests and then calculating the statistical calculation of (Fisher) according to the following formula:

$$\lambda = -2 \sum_{i=1}^n \log \pi_i \dots \dots \dots (3 - 19)$$

So:

(Fisher) test:  $\lambda \lambda$

Significance level of the cross section i:  $\pi_i$

$$-2 \sum_{i=1}^n \log \pi_i - 2 \sum_{i=1}^n \log \pi_i$$

It has a distribution with 2 degrees of freedom, (Maddala & Wu, 1999,636). The test is  $\lambda \lambda$  based on the logarithm sum of ( $\rho$ ) values.

The (Fisher) test can be used when random errors are related across cross-sections but it does not fully address the problem. Part of the errors remain related to each other but at decreasing rates as the number of years increases (T) and the number of cross sections (N) decreases.

Therefore, (Maddala) and (Wu) developed (Fisher) test by using (Bootstrap) method to get out of the problem of cross-sectional random errors and to get better empirical distributions for (Fisher test) and as a result get more accurate and less biased estimated results (Maddala & Wu, 1999).

The null hypothesis and the alternative hypothesis for this test are as follows:

$$i) \quad H_0: \rho_i = 0 \quad H_0: \rho_i = 0 \quad to \quad \neq \rho_i \rho_i: H_1 H_1 0 \quad at \text{ least } (i) \text{ one}$$

The null hypothesis means that all cross sections of the paired data have unstable time series (suffering from a unit root), while the alternative hypothesis means that there are at least some cross sections with stable time series.

### 3. Results

The (Fisher) test was based on the (PP) test for time series because it is the most accurate stability test. The following tables show the estimation results:

Table (1) Results of the (Fisher-PP) test of the economic growth equation for the period 2000-2017

first difference(I <sub>(1)</sub> )		original difference(I <sub>(0)</sub> )		Variables
fixed with direction	Fixed	fixed with direction	Fixed	
-----	-----	351.425 (0.000)	122.320 (0.000)	FDI
-----	-----	30.655 (0.001)	76.732 (0.018)	CR
-----	-----	15.178 (0.030)	82.313 (0.200)	M2
48.311 (0.050)	65.611 (0.040)	62.511 (0.040)	98.611 (0.230)	S

Reference: Presented by the researcher based on the results of the Eviews10 program.

- The numbers in parentheses represent the probabilities (P-Values) for the (Fisher-PP) test and the acceptable level of significance is (5%) or less.
- The significant variables at the level (I<sub>(0)</sub>) do not have the unit root calculated for the first differences (I<sub>(1)</sub>)

From Table (1) that foreign direct investment as a percentage of gross domestic product (FDI), credit to the private sector as a percentage of GDP, and money supply in its broad sense as a percentage of GDP is stable in the original difference (I(0)) At the level of significance (5%), whether by constant or constant and trend, as the probability values for it are less than (0.05), while saving as a percentage of GDP (S) (stabilizes after taking the first differences for it and when the constant or constant and trend.

#### 3.1. The behavior of the model variables

1- Foreign direct investment as a percentage of GDP:

It is considered one of the most important channels in which financial development affects economic growth, as investment increases, both domestic and foreign, by taking advantage of credit facilities and reducing the

percentage of banking risk provided by the developed financial system, which leads to increased production and use of resources, increased income and economic growth. We expect the effect to be direct.

2- Broad money supply, M2 as a percentage of GDP:

It includes monetary liquidity in the hands of the public and demand deposits (current). We expect the money supply to have a positive impact on the rate of GDP growth.

3- Credit granted to the private sector as a percentage of GDP:

This indicator is one of the important indicators expressing the efficiency and development of the banking system in any country, and the percentage depends on the importance and contribution of the private sector to economic activity compared to the public sector, and therefore it is directly linked to investment and growth.

It measures the extent to which local banks contribute to granting loans and facilities to the private sector compared to the public sector, and we expect the percentage of credit granted to the private sector to have a positive impact on the rate of GDP growth.

4- Saving as a percentage of GDP:

It represents the willingness and ability of individuals to save to request credit from commercial banks, and we expect that the impact of domestic savings on the growth rate of GDP will be a direct impact, and it is one of the most important channels that financial development affects economic growth, as financial development helps to mobilize savings and direct them towards financial institutions. With the aim of obtaining financial returns, and then converting them into credit, and then financing several investment projects that contribute to production and economic growth.

#### 4. Analysis and discussion

To achieve the goal of research, we will reconcile the equation of the decline of foreign direct investment as a percentage of GDP, loans granted to the private sector as a percentage of GDP, money supply in its broad sense as a percentage of GDP, and savings as a percentage of GDP over GDP growth.

Table 1 shows the results of the regression. The model that was described was estimated using (PANAL DATA) data for the period (2000-2017) and the analysis included six countries, from which the data necessary to conduct the analysis were available:

Table 2. The results of estimating the GDP growth equation for the period 2000-2017

Responses Variable: GDP				
Variables	Coff.	Std.Error	t_stat	Prob
FDI	0.062672	0.021808	2.873794	0.0042
CR	0.112669	0.011059	10.15507	0.0000
M2	0.076986	0.007911	9.731206	0.0000
S	-0.012875	0.008495	1.515567-	0.1301
C	7.787368	0.921929	8.446821	0.0000
N=17 R <sup>2</sup> =62% R <sup>2</sup> .adj=41% F_stat=32%				

Reference: Presented by the researcher based on the results of the Eviews10 program.

From Table (2), the equation of GDP growth by applying the method of ordinary least squares (OLS) for the period 2000-2017 indicates that the effect of foreign direct investment as a percentage of GDP is significant and positive on GDP growth at the level of significance 5% in this group of this is consistent with the economic theory, that is, the more foreign direct investment flows increase, the higher the GDP growth.

The estimations in Table 2 indicate that the credit granted to the private sector as a percentage of the gross domestic product is positively significant at a moral level of 5% in this group of countries. Gross domestic product and this reflects the role of the financial sector in investment, as it indicates the financial development in the banking system.

Table 2 also shows that the money supply in its broad sense as a percentage of GDP appeared positively significant at a morale level of 5% in this group of countries. gross domestic product.

The estimations in Table 2 indicate that saving as a percentage of the gross domestic product is significant negative at a significant level of 5% in this group of countries. Direct financing for development, which made it reluctance to mobilize domestic savings,o which led to the emergence of the inverse relationship between the two variables.

## 5. Conclusions

The study included an analysis of relationship between financial development and economic growth, and through the descriptive and standard analytical study, it reached the most important conclusions that are summarized in the following:

- 1- The results of study showed a positive impact of financial development on economic growth, but this effect decreases when falling into financial and banking crises.
- 2- Financial development affects economic growth through direct and indirect channels that work to transfer the effects of this development towards economic growth, and direct channels are represented in increasing domestic savings and raising the level of productivity, while indirect channels include promoting specialization in production and commitment to better economic policies, and promoting Capital flows and the development of the local financial sector.
- 3- Countries that are characterized by underdeveloped banking habits are likely that the financial deepening will not lead to economic growth, due to the inability of institutions to mobilize savings, manage risks and conduct transactions. Therefore, these channels will weaken the possibility of the poor's access to credit and services on a continuous and direct basis.
- 4- The results showed that the efficient financial system will produce highly efficient financial services that will stimulate economic growth, and thus financial development plays a prominent role in the process of economic development, especially in the Arab countries, which are often in dire need of support to finance their vital projects, especially infrastructure projects.

### 5.1. The implications of the economic policy

- 1- Activating macroeconomic policies aimed at achieving economic stability and promoting growth that will create job opportunities, improve the standard of living, increase the role of the financial sector, raise its efficiency and allow banks to finance profitable projects.
- 2- Providing new systems, applications and methods that make the most of modern technology in providing banking services.
- 3- Working to increase the growth of deposits in order to expand the granting of credit to the private sector.
- 4- Facilitating the process of entering foreign banks in order to encourage the flow of foreign funds.
- 5- Expanding the creation of non-banking financial institutions such as government securities companies and markets, as well as stock markets, in order to address the weakness in the banking sector.

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