

## Islamic Financial Development between Investment and Economic Growth in the MENA Region and East Asia and the Pacific

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**Abstract:** The purpose of this paper is to study, in the first place, the theoretical relationship between Islamic financial development, investment and economic growth. Second, we empirically try to discover the interaction between "Islamic financial development, investment and economic growth". Our empirical study highlights the direct effects of Islamic financial development on growth and investment. Finally, we also clarify the indirect effects of Islamic financial development on growth through Investment and vice versa, also on other socio-economic indicators over the period from 1990 to 2018, while using the model with simultaneous equations for the MENA region and East Asia and the Pacific.

**Keywords:** Islamic Financial Development, investment, Economic Growth, Simultaneous equations Models.

**JEL classification:** C23, E44, O16.

### I. INTRODUCTION

Recently, Islamic financial development has become freer and goes beyond the genesis phase. The geographical distribution of this type of financial market is shared almost 70% of assets held in the Gulf countries, 20% in Asia such as Malaysia and Indonesia, 10% in Europe as in London and in the United States<sup>1</sup>. Indeed, the emergence of Islamic finance to global financial systems legitimizes the essential questioning of its role as financial intermediation, as an alternative to conventional finance and as a driver of economic growth which still remain. to check. Thus, to analyze the link between Islamic financial development and economic growth, we will have to consider the relationship between the financial aspect (finance) and the real aspect (economy) and also the mechanisms through which finance influences the economy economic growth. In this context, Beck and Levine (2004) test the relationship between the development of the stock market, the development of the banking sector and economic growth. The authors show that the financial development indicator (the ratio of stock market development and deposit bank credit to the private sector to (GDP)<sup>2</sup> is not significantly correlated with economic growth, while the indicator of stock market development is significantly correlated with growth. On the other hand, we find the work of Aizenman (2002) or those of Basu and Srinivasan (2002) who, based on empirical work carried out on African countries, including the countries of North Africa, emphasize the aspect decisive for investors of a favorable environment limiting risks and increasing the profitability of investments thanks to macroeconomic stability. Lim (2002), Blonigen (2005), Froot and Stein (1991), Stevens (1998) and Klein and Rosengren (1994) also confirm the specific importance of macroeconomic stability measured by the mobility of growth. However, the idea that the financial system can stimulate economic growth dates back to Schumpeter (1911). The author asserts that the services provided by banks such as savings mobilization, project appraisal, risk management, ease of transactions can foster technological innovations and, consequently, economic growth. Banks are not content to transform the characteristics of the savings of which they are custodians; they create through credit a bank deposit for the benefit of the borrower. We propose, within the framework of this article, to answer our main question: "To what extent Islamic financial development contributes to the dynamics through investments of economic growth? ". To do this, first we will try to develop an innovative contribution based on a review of the theoretical literature clarifying the mechanism of the Islamic financial system and its economic and institutional approaches in relation to macroeconomic indicators. Then, we will propose a review of the literature which will deal with the contributions of the authors in this field of work and then we will examine another review of the empirical literature to answer the question of the central issue.

<sup>1</sup> Outlook (2008): "Islamic Finance", *Standard&Poor's*

<sup>2</sup> Beck et Levine (2004), for his contribution intitulz: "Stock markets, banks, and growth: Panel evidence". *Journal of Banking & Finance*; P.P. 423-442.

Finally, we will empirically study "the interplay between Islamic finance, investment and economic growth". We will use a methodology known as "Channel Methodology" recently developed by Lorentzen, McMillan and Wacziarg (2008)<sup>3</sup>. This methodology, which is based on a system of simultaneous equations used to describe the impact of Islamic financial development on some determinants of economic growth, namely investments, the human factor, etc. It will make it possible to know how Islamic finance stimulates growth for the study region during the period (1990-2018).

## II. LITERATURE PAPER

### 1. Interaction between finance and economic growth

#### a. Causality study between finance and economic growth

In the early nineties, research on the relationship between financial development and economic growth gained renewed interest mainly as a result of the work of Greenwood & Jovanovic (1990), Bencienga & Smith (1991), King & Levine (1993a, 1993b), Pagano (1993), Gartler & Rose (1994), Bencivenga & al (1995), Degregorio & Guidotti (1995), de Fuente & Marin (1996), Levine & Zervos (1998a), Levine & al (2000), Xu (2000) and Christopoulos & Tsionas (2004).

They show that the financial development of capital markets affects economic growth through the improvement of the productivity and efficiency of capital. Based on a review of the innovative literature, the development of the financial system is positively linked to economic growth. This idea has not been confirmed by other authors like Aghion & al (2005), Trabelsi (2002), Benhabib & Spiegel (2000), Beck & Levine (2001), Liu & Hsu (2006) and Luintel & Khan (1999). Moreover, some works have looked at the meaning of causality between the financial sphere (financial aspect) and the economic sphere (real aspect). Authors assert a bidirectional causality such as Demetriades & Hussein (1996), Calderon & Liu, (2003) consisting in saying that economic growth induces the development of the financial system.

In addition, the development of Islamic finance appears as a means of prohibiting in relation to the main world Islamic financiers such as the case of the regions of South-East Pacific and the Gulf, whose fundamental principles of Islamic finance are diversified, namely the prohibition of interest-bearing loans (*Riba*)<sup>4</sup>, the prohibition of excessive risk (Algharar), backing with real assets, participation in losses and profits, the prohibition on selling what we do not have, the prohibition of illicit activities and the prohibition of deferred exchanges of standard values.

#### b. Islamic finance stimulates economic growth

In this work, the literature will discuss the role of Islamic finance also seems to play a role in economic development through the mobilization of savings<sup>5</sup>.

Indeed, Khan and Mirakhor (1994)<sup>6</sup> complete this vision by showing that Islamic monetary policy takes place in a framework where all the classic tools are available to the monetary authorities. Ben Naceur and al. (2015)<sup>7</sup> believe that "while physical access to financial services has grown faster in member countries of the Organization of Islamic Cooperation, the use of these services has not increased as rapidly." The ban on (*Riba*) brings the incentives of lenders and borrowers closer together, reducing moral hazard. In addition, this ban at the same time makes it possible to encourage investments that would not be made otherwise and thus stimulate growth while cushioning shocks in countries that are exposed to significant shocks.

Moreover, according to Demircuc-Kunt et al. (2013), The differences in behavior between the Muslim and non-Muslim populations of 64 countries show that 24% of Muslim adults declared having a bank account compared to 44% of non-Muslims

<sup>3</sup> Lorentzen, McMillan et Wacziarg (2008) : "Death and development ". *Journal of Economic Growth*; June 2008, Volume 13, Issue 2, pp 81-124.

<sup>4</sup> The fundamental principle of the Islamic religion according to the theorist of Islamic economics Sayyid Abul Ala Maududi

<sup>5</sup> Zaher, T. S. et Hassan M. K. (2001): "A Comparative Literature Survey Of Islamic Finance And Banking ", *Financial Markets, Institutions & Instruments*, V. 10, No. 4, pp: 155-195

<sup>6</sup> Khan M. S. et Mirakhor A. (1994): " Monetary Management In An Islamic Economy », *Journal of King Abdulaziz University: Islamic Economics*. Vol. 6 ? pp : 3-21.

<sup>7</sup> Ben Naceur et al. (2015), "Does Basel Compliance Matter for Bank Performance?," *IMF Working Papers 15/100, International Monetary Fund*.

given the principle of profit and loss sharing, to a system less predisposed to crises and also confirmed by Cihak and Hesse (2008), Hasan and Dridi (2010).

However, the Islamic banking system prohibits so-called speculative products whose contracts and operations are subject to a great deal of uncertainty. In this case, derivatives are almost deemed unacceptable under "Sharia" because they are speculative. The central question is does the development of Islamic finance support growth through investment for the MENA region and East Asia and the Pacific?

Islamic finance was becoming the symbol of Muslim capitalism based on some traditional values. The contribution to international financial exchanges that has an effect on the financial system and on growth through the existence of Islamic banks (representing investment in the MENA region and Asia Pacific).

## 2. Determinants of investment for the study region

The determinants of investments as identified in the literature are numerous as evidenced by the work of Bénassy et al (2001), Dupuch et al (2004) and Peter Nunnenkamp (2002), who identify the potential determinants of the most significant investments. tested in empirical work. However, the object of this study is to focus on two types of determinants relating to macroeconomic stability as understood by certain fundamentals of the host economy (growth and the stability of growth, the business climate, political stability,...).

### ➤ *The degree of trade openness: The attraction of FDI is also dependent on the degree*

Integration into the world economy. The openness of an economy is measured by the ratio of imports and exports to GDP, it takes into account the fact that more open economies tend to be more vulnerable to the loss of access to external financing according to Agénor (2001).

Thus, the decrease in the levels of restrictions on foreign trade transactions tends to increase horizontal FDI in host countries. However, vertical FDI which is seen as an investment that does not seek the market; in this case, multinational firms prefer to settle in more open economies.

### ➤ *Human capital: The cost of labor is an important determinant*<sup>8</sup>

IDE. In fact, human capital has long been viewed as a determining factor in economic growth. It also affects growth through its interaction with FDI.

### ➤ *Political stability and the quality of governance*

Several countries have achieved an effective and efficient good governance system through the various corporate governance reforms. These reforms have played an important role in the growth of FDI in recent years, as reported by the United Nations Conference on Trade and Development (UNCTAD, 2006)<sup>9</sup>.

## III. ESTIMATION METHODOLOGY

We introduce three types of variables in our model. First, the growth variable, which depends on the model. We then orient the indicators of financial development. Finally, we introduce a conditional information matrix to control the variables that affect long-term economic growth.

### 1. Sample and period

#### a. Sample<sup>10</sup>

Our region is a sample which is made up of 16 countries namely Bahrain, United Arab Emirates, Jordan, Kuwait, Qatar, Saudi Arabia, Indonesia, Malaysia, Tunisia, Turkey, Morocco, Egypt, Sudan, Iran, Algeria, Yemen. Our sample is made up of 16 countries spread over the MENA region and East Asia and the Pacific, we have established a database of strictly international macroeconomic data available in "World Bank CD"

#### b. Period

<sup>8</sup> Mtiraoui, A. (2009) : "Openness, human capital and economic growth in MENA: Theoretical foundations and application to dynamic panel data". <https://scholar.google.com/citations?user=f1rE19gAAAAJ&hl=en>

<sup>9</sup> CNUCED (2006): "Strengthening the three pillars of UNCTAD". Trade and development.

<sup>10</sup> Rym Ayachi Ammar, Mehrez Ben Slama et Dhafer Saidane (2013) : "La pratique actuelle des banques islamiques favorise-t-elle la croissance ?". Etudes en Economie Islamique, Vol.6, No 1&2, p.p. 12

The sample of countries selected is made up of 16 MENA countries and East Asia and Pacific: 5 countries from Africa, 8 Gulf countries, 2 countries from East Asia and the Pacific and 1 country mediterranean. Depending on data availability, our study period extends from 1990 to 2018 over a period of 29 years<sup>11</sup>. The great diversity in terms of geography and in terms of country performance increases the robustness of our analyzes.

**2. Definitions and measures of variables**

**a. Growth Indicator:** We chose the denoted GDP per capita growth rate (**GDP**) (Levine et al., 2000, Beck et al., 2000, and Beck and Levine, 2004).

**b. Investment Indicator:** Abu-Bader and Abu-Qarn (2008) include the Investment / GDP Ratio to determine whether financial development affects economic growth by improving efficiency or, indirectly, by increasing investment resources noted INV (Invest / GDP).

- *Control variables:* We have retained as control variables, for this work, the ratio of public expenditure / GDP (GC) as an indicator of macroeconomic stability (Easterly and Robelo (1993) and Fisher (1993)), the ratio of trade value (export + import) / GDP to capture the degree of openness (Sachs and Warver (1995)) noted (TRADE) and the tertiary enrollment rate to control the accumulation of human capital noted (HK) and foreign direct investment (FDI)

- *Dummy variables (DV):* We use this nature of variables (dummy variable: **DV**) because our study region is formed by countries that apply Islamic finance and others not. Let us denote 1 for the countries practicing Islamic finance and 0 for the others.

**c. Financial development indicator<sup>12</sup>**

- *Development of Islamic Finance (IDF):* In their 1998 study, Levine and Zervos add the measurement of the development of the banking sector to cross-sectional studies of growth. According to these authors, this measure is equal to the Islamic bank credit of the private sector divided by the **GDP** denoted **IFD** (**Fin is** / **GDP**): Qard Hasan, Mourabahah, Ijarah, Moudarabah, Moucharakah, Salam, Istisna ‘. ).

In addition, several authors such as Levine and Zervos (1998), Rousseau and Wachtel (2000), Beck and Levine (2004) show that the level of development of the banking sector, measured by credit activity, is significantly positive and correlated with the growth.

**d. Institutional indicator**

- *Governance quality index (IQG):* After calculating the governance quality index. This synthetic indicator is formed following the use of **PCA**. The governance quality index is composed of the capacity for advocacy and expression, (**VA**), The effectiveness of public action (**GE**), The quality of regulations (**RQ**)

- **Political stability noted (PS):** IMGs are not used by the World Bank Group to allocate resources. The impact of institutional factors namely political stability noted (PS) and realized by Kaufman D. Kraay A. and Mastruzzi M. (2003).

**3. Islamic financial development, investment and growth**

**a. Simultaneous Equation Model<sup>13</sup>**

In order to respond to our basic problem which is that of the direct and indirect impact of the development of Islamic finance on investment, on other macroeconomic indicators and therefore on economic growth. We will estimate the simultaneous equation model as we will specify it later. The model to be estimated answers, in a mathematical way, the following three equations:

**\*The Islamic finance Equation:**  $F_{i,t} = \delta_0 + \delta_1 Y_{i,t} + \delta_2 I_{i,t} + \sum_{i=3}^4 \delta_i R_{i,t} + \omega_{i,t}$  (A)

**\*The Investment Equation:**  $I_{i,t} = \beta_0 + \beta_1 Y_{i,t} + \beta_2 F_{i,t} + \sum_{i=3}^4 \beta_i G_{i,t} + \mu_{i,t}$  (B)

**\*The Economic Growth Equation:**  $Y_{i,t} = \alpha_0 + \alpha_1 I_{i,t} + \alpha_2 F_{i,t} + \sum_{i=3}^4 \alpha_i X_{i,t} + \varepsilon_{i,t}$  (C)

In a simple way, these equations become like this:

$$IFD_{i,t} = \delta_0 + \delta_1 GDP_{i,t} + \delta_2 INV_{i,t} + \delta_3 DV_{i,t} + \delta_4 IQG_{i,t} + \omega_{i,t} \quad (A')$$

<sup>11</sup> <http://region-developpement.univ-tln.fr/fr/pdf/R32/%5B3%5D%20E1%20Ghak-Zarrouk.pdf>

<sup>12</sup> Several authors such as Mankiw, Gurley, and Schwa have used the Financial Depth indicator denoted by Depth in their empirical work.

<sup>13</sup> Lorentzen, McMillan et Wacziarg (2008) ; “Death and development “. *Journal of Economic Growth*; June 2008, Volume 13, Issue 2, pp 81–124.

$$INV_{i,t} = \beta_0 + \beta_1 GDP_{i,t} + \beta_2 IDF_{i,t} + \beta_3 PS_{i,t} + \beta_4 FDI_{i,t} + \beta_5 HK_{i,t} + \mu_{i,t} \quad (B')$$

$$GDP_{i,t} = \alpha_0 + \alpha_1 INV_{i,t} + \alpha_2 IDF_{i,t} + \alpha_3 TRADE_{i,t} + \alpha_4 GC_{i,t} + \varepsilon_{i,t} \quad (C')$$

When  $(i = 1 \dots 16; N = 464; t = 1 \dots 29)$

With ;

$$F_{i,t} = IDF_{i,t}$$

$$I_{i,t} = INV_{i,t}$$

$$Y_{i,t} = GDP_{i,t}$$

$X_{i,t} = CV_{i,t}$ : Vector of exogenous variables ( $TRADE_{i,t}$  and  $GC_{i,t}$ ).

$G_{i,t}$ : Vector of standards variables ( $PS_{i,t}$ ,  $FDI_{i,t}$  and  $HK_{i,t}$ ).

$R_{i,t} = IQG_{i,t}$  and  $DV_{i,t}$ : Dummy variable takes 1 for the countries practicing the IDF and 0 for the others.

$\varepsilon_{i,t}$ ,  $\mu_{i,t}$  and  $\omega_{i,t}$  are respectively the random variables of equations A, B and C.

### b. Modèle à équations simultanées en données du panel<sup>14</sup>

We assumed Y as an endogenous variable which was explained by a set of exogenous variables and a random disturbance (residue).

Indeed, the economic events, which have become a little complex, are described by a set of variables, but their modeling requires by equations, connecting these economic quantities, we choose the ordinary least squares method and we then speak of the simultaneous equation model to show the direct and indirect effects of the development of Islamic finance on the macroeconomic components, namely investment and growth.

We specify the endogenous variables, which are determined by the exogenous variables in the model. Then the modeling is done by three phases namely:

- Design, that is, writing or specifying the model.
- Estimation of the model's equations, using appropriate techniques.

This work has strongly influenced the direction followed by econometric theory for many years. For a history of the recent development of econometrics, see Morgan (1990). There are a large number of studies on this theoretical field, and many works which are at different levels. Two interesting review articles are those of Hausman (1983), who deals with traditional literature, and Phillips (1983), who deals with the more specific field of small-sample theory in models of simultaneous equations, a topic we will not address at all.

#### 1. Endogenous problem

The study of several economic models such as growth, corruption and human capital requires taking into account the problem of endogeneity as long as the tested variables interact simultaneously. The estimation methods that can be used in this context of simultaneous equation models depend on the criteria for identifying the model to be estimated and the endogenous problem.

#### 2. REG3 method (Three-Stage least squares)

By the **reg3** command, the *STATA15.1* software estimates a system of structural equations, some containing endogenous variables among the explanatory variables. The estimation is performed by the three-level least squares method (3SLS) or by an iterated 3SLS method. Linear constraints can be specified. As a rule, endogenous regressors are dependent variables on other equations of the system. In addition, **reg3** can also estimate systems of equations by apparently uncorrelated regression (SURE), multivariate regression (MVREG) and equation by equation (ordinary least squares) or two-level least squares (2SLS). In 3SLS or 2SLS estimation, a structural equation is defined as one of the equations specified in the system. The dependent variable will have its usual interpretation as the left variable in an equation and has an associated perturbation term.

#### 3. The preliminary tests

The main compulsory hypothesis tests will be done for the estimation of models in simultaneous equations, a series of usual econometric tests will be directed towards the composition of the equations and the variables of the estimated model. First, there are the stationarity, collinearity tests. We then move on to the presentation of the main results obtained, their interpretations and their debates by comparison with previous studies.

<sup>14</sup>Look Koutsouyiannis (1986) : pages 332-335 ou aussi le manuel d'économétrie de Bourbonnais, 6ème édition, Chapitre 8, « Introduction aux modèles à équations simultanées », pages 203-236

#### a. Stationarity tests

These types of 1st generation tests affecting panel data are the tests of Levin and Lin (1992); Pesaran (1997); and K. Hadri (2000). This being the case, it is important to point out that for the first generation tests, they are only applicable on the balanced panels, that is to say without missing data, as is the case for our variables.

So using the Pesaran test (1997), we find that all the variables used are all stationary in level.

#### b. Collinearity study between independent variables

The problem of bivariate multicollinearity arises when two independent variables are strongly correlated, whereas multivariate multicollinearity arises if several independent variables are correlated. The shapes of the models to be estimated in our case therefore remain dependent on the results of the multi-collinearity tests that we will apply on the data constituting the basis of this study relating to our sample.

#### 4. Multi-collinearity problem and model selection

- Principle: The explanatory variables are highly correlated with the explained variable.
- *Klein's test*: This is not a statistical test in the sense of a test of hypotheses but simply a criterion of presumption of multi-collinearity.

There is an appearance of multi-collinearity if the coefficient of determination of the complete model ( $R^2$ ) is less than the correlation coefficients ( $r^2_{xi, xj}$ ) and we have to compare the R to the correlation coefficients ( $r_{xi, xj}$ ) that appear in the matrix correlation coefficients.

- *Farrar and Glauber test*: Since the empirical value of  $\chi^2$  is greater than at the value read from the table, there is an assumption of multi-collinearity.

#### c. Problem of identifying the model equations

The conditions for identifying a model are determined equation by equation. Three scenarios can arise. The model is over-identified When the model is under-identified, it is impossible to estimate its parameters and the modeling must be re-specified. The conditions for identifying a model are the subject of a sometimes complex development. In what follows, we will limit our analysis to the study of simple rules that are, in practice, applied in the first place. The most widely applied identification conditions are order conditions and rank conditions.

- *The necessary conditions: Order conditions*: In our case, we note for the model to be studied, that all the equations are over-identified. Indeed, we have three endogenous variables in the model (ie  $W = 3$ ) "IFD", "INV" and "GDP", and five exogenous variables: "TRAD", "FDI", "GC", "PS", "VD", "IQG" and "HK" (ie  $K = 7$ )
- *The first equation has four exclusion restrictions and no constraint restrictions.*

By applying the identification conditions, the variables appearing in the Islamic Finance Development (DFI) equation:  $W = 1$ ,  $K = 4$  and  $r = 0$  with  $W$  is the number of endogenous variables appearing in an equation and  $K$  is the number of exogenous variables in an equation. So let:  $W - W' + K - K' = 3 - 1 + 7 - 4 = 5 > W - 1 = 3 - 1 = 2$ , the first equation is therefore over-identified. The second equation has five exclusion restrictions but no constraint restrictions. We therefore have:  $W = 3$ ,  $K = 7$ ,  $W' = 1$ ,  $K' = 5$  and  $r = 0$ , which gives us:  $W - W' + K - K' = 3 - 1 + 7 - 5 = 4 > W - 1 = 2$ , this equation is therefore over-identified. The third equation has six exclusion restrictions but no constraint restrictions. So we have  $W = 3$ ,  $K = 6$ ,  $W' = 1$ ,  $K' = 4$  and  $r = 0$ , which implies  $W - W' + K - K' = 3 - 1 + 6 - 5 = 3 > W - 1 = 2$ , the third equation is therefore over-identified. Since in our model all the equations are over-identified, the model will therefore be over-identified.

- *Sufficient conditions: Rank conditions*

If the order conditions are verified, it is also necessary to verify the rank conditions (sufficient conditions). However, in practice, they prove to be difficult, if not sometimes impossible, to implement. This is what prompts us to limit our analysis to the level of verifying the order conditions qualified as necessary conditions.

In total, the three equations which form our model are over-identified. The necessary conditions and the rank conditions are largely sufficient to estimate the simultaneous equation model.

## IV. PRESENTATION AND DISCUSSION OF RESULTS

**Table N°3:** Analysis of the results of the regression model relating to the simultaneous equation model (Reg3).

Variables	IFD		INV	GDP
Constant	(0.127)*	(10.208)		(2.135)**
	1.92	1.33		2.06
IFG	-----	(77.204)***		(14.616)***
			3.01	3.33
INV	(0.014)***	-----		(0.195)*
	6.65			1.95
GDP	(0.056)**	(4.481)**		-----
	2.56	2.79		
IQG	(0.0727)*	-----		-----
	1.72			
DV	(0.0470)**		-----	-----
	2.11			
FDI	-----		(0.680)*	-----
			1.78	
KH	-----		(-0.013)	-----
			-0.37	
PS	-----	-----		(-1.514)**
				-2.11
TRADE	-----	-----		(0.175)
				0.59
GC	-----	-----		(1.103)**
				2.15
Observations	464		464	464
Probability	0.000		0.000	0.000
R <sup>2</sup>	0.359		0.411	0.467

Note: The terms in parentheses correspond to t-Student and \*, \*\*, \*\*\*: significant at a threshold of 10%, 5% and 1% respectively.

## V. DISCUSSION AND INTERPRETATION OF RESULTS

We can recall that the aim of this study is to test "the interaction between Islamic financial development (IFD), investment (INV) and growth (GDP) in the MENA region and East Asia and the Pacific". The indicators used have direct and indirect effects on growth (GDP) and on other variables while applying a model to simultaneous equations over the period from (1990-2018).

Indeed, investment (INV) as an endogenous element that we have to explain, plays a primordial role in growth and which can explain the nature of relationship between Islamic financial development (DFI) and macroeconomic variables. We analyze the effects (direct and also indirect) in our empirical test namely the effects of (IFD) on (GDP), (INV) on (GDP) and also the interaction between the other variables.

First and foremost with regard to the direct effect of Islamic financial development on growth. The results show that the Islamic Financial Development (DFI) indicator is positively (0.056) colored and significant by (5%) with economic growth (GDP).

Therefore, an increase in the indicator (DFI) of (5%) reflects a 3 points increase in the growth rate. This implies that the indicator (DFI) is a catalyst for growth in this region and MENA and Asia Pacific.

According to Patrick Imam, Kangni Kpodar (2015) assert *“that it emerges that despite its relatively modest size compared to all economic activities and the financial system, the development of Islamic finance is positively correlated with economic growth, even controlling for the effect of various growth determinants, such as the depth of the financial sector. The results of our analysis are robust to changes in specifications, samples and time periods.”*

The model estimate shows that there is a significant 1% positive (0.0142) between Islamic financial development (IFD) and investment (INV) reflects an increase in Islamic financial development (IFD) of 7 points when the investment (INV) increases by 1%. This result presents the paradox of the work of Guillaumont et al. (1999), the instability of the investment rate and that of the real exchange rate have a negative effect on macroeconomic indicators. Cependant, nous s’attendons que l’instabilité financière liée aux prix influencés par les prix étrangers et le niveau du taux de change ce qui réduit le rendement d’investissement à savoir (INV).

In this context, the results found show that the quality of governance indicator (IQG) has a positive (0.0727) and significant effect of 10% on the development of Islamic finance (DFI) in our study region to influence on the dynamics of trade openness (TRADE) which has a positive (0.175) and insignificant effect, as a transmission channel despite the existence of political instability (unfavorable for investment (INV), this political instability has a negative impact (-1.514) and significant at (5%) on economic growth (GDP). An increase of (PS) of 0.05 reflects a decrease of 2 points of investment. In this sense, the institutional indicators present are too important in the creation of wealth that stimulates economic growth. According to what corroborates with the work of Kaufman, Kraay and Mastruzzi (2003), six indicators remain priorities to take into account favorable climates for economic growth. In fact, numerous publications have found evidence of a positive effect of political stability. Barro (1991) and Barro and Sala-i-Martin (1995) include a measure of political revolutions and assassinations, but it is not always meaningful. Alesina et al. (1996) analyze the effect of coups d’état and conclude that it is negative for countries and periods where such unconstitutional changes of government have occurred. Alesina and Perotti (1996) study the influence of a composite measure of political instability on investment and find the expected negative effect. Svensson (1998) finds a negative effect of instability on investment. In addition, the results show that investment (INV) has a positive and significant effect of (1%) on the growth rate (GDP). This found result collaborates with the work of Marouane Alaya et al. (2009)<sup>15</sup>, *« The question of the conditions for FDI to foster the growth of host economies is essential. By promoting policies to attract foreign investment, developing countries are in fact betting that the FDI they wish to receive could activate their economic growth and technological catch-up. But these policies, which have a significant social cost in terms of tax revenues or increased competition, only produce economic benefits under certain conditions. »*. The authors have shown the favorable conditions for foreign direct investment (FDI) to promote growth through the quality of governance (IQG).

Finally, a positive (0.0727 \* 14.61599) and significant (10% \* 1%) indirect effect of the latter indicator (IQG) on the growth rate (GDP) necessary and favorable to attract foreign capital (FDI) in a context of economic openness for our study region. Paradoxically, political stability (PS) has an indirect negative (-1.514 \* .1959165) and significant (10% \* 5%) impact on economic growth (GDP). This result is confirmed by the review of the literature.

## VI. CONCLUSION

To answer certain questions linked to the empirical results reported in the new literature. This work focuses on the assessment of the role of one of the indicators the investment in the development of Islamic finance for the creation of wealth and the acceleration of economic growth.

Indeed, the analysis presented takes as an example the MENA region and East Asia and the Pacific is made up of 16 countries during the period from 1990 to 2018. According to the main results of this article, we notice everything first, the quality of governance remains a mandatory condition to improve and stimulate economic growth. Then, we showed that these conditions relate to several structural factors of developing economies, namely their level of human capital and infrastructure and the degree of trade

<sup>15</sup> Marouane Alaya and al., (2009) : “Under what conditions do FDI stimulate growth? FDI, Growth and Catalysts in Mediterranean Countries”, *Developing Worlds (Volume N ° 148), p. 119-138.*



openness. Then, their degree of political stability. However, the structural factors identified in the literature as complementary to FDI (trade openness, infrastructure spending, human capital, etc.) are generally those that are mobilized in attractiveness policies.

Microeconomic incentive policies which often constitute the heart of attractiveness policies are therefore socially optimal only if they intervene at an already advanced stage of the structural development of an economy, or if they are integrated into broader strategies, aiming to develop in parallel all the factors which are complementary to FDI in determining growth. While they do not generate carry-over effects on the economy as a whole thanks to the complementarities described in this article, they only generate an additional growth of the extensive type and strongly reversible in the case where productive capital falls. would relocate elsewhere.

The policy of attractiveness cannot therefore replace a long-term development strategy, any more than sustainable growth can be supported by foreign investment alone, especially in the presence of Islamic financial development.

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Appendices

Appendice 1: Sample Country Table

MENA countries and East Asia and the Pacific: 5 African countries, 8 Gulf countries, 2 East Asian and the Pacific countries and Mediterranean countries.

Our study region: MENA and East Asia and Pacific			
Gulf countries	African countries	East Asian and the Pacific countries	Mediterranean countries.
-Bahreïn	-Tunisia	-Indonesia	-Turkey
-United Arab Emirates	- Morocco	- Malaysia	
-Jordan			
-Kowaït	-Egypt		
-Qatar	-Sudan		
-Saoudi Arabia	- Algéria		
-Yemen			
-Iran			

Annex 2: The method of calculating the indicator measuring Islamic bank loans (Laurent, 2014)

To calculate the indicator measuring Islamic bank loans, we will follow the approach proposed by (Laurent, 2008) in his thesis entitled "The Influence of Culture on Economic Outcomes: An Exploration of Islamic Finance as a New Transmission Channel".

**Step 1:** Calculation of the share of Islamic banking assets (or deposits) that measures the penetration rate of Islamic banks in the total banking system. The Islamic asset penetration for a country *i* is Calculated as follows:

$$IF_{pend. (the assets)}_i = \frac{Asset(IF)_i}{The assets(Total)_i} \quad (1)$$

With,  $Asset (IF)_i$  the total of Islamic bank assets in US dollars for a country *i* and  $Te assets(Total)_i$  is the total of banking assets (Islamic and conventional) in US dollars for the same country *i*. The penetration rate of Islamic bank deposits is calculated

$$\text{in the same way: } IF_{pend. (deposits)}_i = \frac{deposits(IF)_i}{deposits(Total)_i} \quad (2)$$

With,  $deposits(IF)_i$  the total Islamic bank deposits in US Dollars for a country *i* and  $deposits(Total)_i$  total bank deposits (Islamic and conventional) in US dollars for the same country *i*.

**Step 2:** The overall penetration rate of Islamic banks. We define the overall penetration of Islamic banks in the financial system by means between the last two ratios ((1) and (2)):

$$IF_{Pend.i} = \frac{IF_{Pen (Asset)}_i + IF_{(deposits)}_i}{GDP_i}$$

**Step 3:** We can calculate the indicator of the size of the private Islamic credits (deposit) relating to the domestic economy. We first calculate the private credits of Islamic banks: With the private credits of Islamic banks, penetration rate of Islamic banking assets and the total of private credits (Islamic and conventional). Finally, the ratio of total credit granted to private enterprises by Islamic banks to GDP is:  $CP (IF)_i = IF_{pend. (Actifs)}_i * CP (Total)_i$  (3)

With,  $CP (IF)_i$  private loans from Islamic banks,  $IF_{pend. (Assets)}_i$  penetration rate of Islamic banking assets and  $CP (Total)_i$  the total of private credits (Islamic and conventional). Finally, the ratio of total credit granted to private enterprises by Islamic banks to GDP is:

$$CP/GDP (IF)_i = \frac{CP(IF)_i}{GDP_i}$$