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Islamic financial development, institutional environment and economic growth

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Abstract. The emergence of Islamic finance in recent years, and its increasingly important role in the financial industry, has made us real investigators in studying the nature of the relationship that can be established between the development of Islamic finance and economic growth. To this end, we opted for an empirical validation test based on a dynamic panel data model. Our sample consists of 25 Islamic banks from seven countries observed during the period 2007-2014 ; with the data being annual. Our results indicate that: a positive effect of Islamic finance on economic growth, a positive interaction between Islamic finance, government efficiency, rule of law, and regulatory quality. However, we found a negative interaction between Islamic finance, corruption, political stability and Voice and Accountability.

Keywords. Islamic finance, Islamic banks, economic growth

1- Introduction

Islamic finance is one of the most dynamic sectors of the global banking industry. This sector has recently gained prominence because of its distinctive features. The emergence of Islamic finance dates back to 1963 in Egypt, while its importance came to the global system only after the global financial crisis in 2008. Through a wide range of financial products for savings and investment based on the principle of risk sharing and profit or loss, Islamic banks have experienced a flourishing development over the past decades. Their growth rate is now sustained, both in terms of the number of institutions created and the assets held. However, some people continue to believe that the only specificity of Islamic banks is that they do not charge bank interest. For them, this is the only difference between Islamic and conventional banking; whereas it is not only the practice of interest that distinguishes the two models. Islamic banking, which is based on Sharia principles, has other distinctive features compared to its conventional counterpart. Indeed, it is these principles that really influence the strategy of Islamic banking and which are at the origin of the appearance in the world of finance of a very particular financial intermediation. In the light of this development of Islamic banks and the wide range of their products, it would be interesting to study in depth the contribution of Islamic financial development in terms of economic growth. This is a critical issue for both developed and developing countries in terms of whether Islamic finance, as ethical finance, can contribute to the development of the real economy.

The debate regarding the relationship between finance and economic growth has received considerable attention in the economic literature. For many authors, a developed financial system enables the mobilisation of savings, encourages investors and ensures the allocation of capital to the most productive projects. This in turn stimulates economic growth. King and Levine (1993), Garther and Rose (1994), Levine and Zervos (1998) and Levine et al (2000) have shown that the financial development of capital markets affects economic growth through the improvement of productivity and capital efficiency.

In this paper, we seek to solve the following problem:

To what extent does the development of Islamic finance affect economic growth?

In order to answer this question, we will use the following methodology: Review the literature on the subject, try to validate the proposed relationship through a series of empirical investigations.

2- Literature review

Empirical studies regarding the relationship between Islamic financial development and economic growth are relatively few. Among the conducted studies, some focused on a single country, others preferred to cover more than one country.

In this context, Furquani and Mulyany (2009) examine the dynamic interaction between Islamic banks and economic growth in Malaysia using the Co-integration test and the VECM model, on quarterly data, for the period 1997-2005. Their results show that in the short run, Islamic bank financing does not stimulate growth in Malaysia. In contrast, in the long-term, the total amount of Islamic finance is positively correlated with economic growth. The authors also argue that there is evidence of a unidirectional relationship between the development of Islamic finance and economic growth. This result supports the "demand following" hypothesis which states that financial development follows economic growth.

Abduh, M. and al (2012) also investigated the long-term and short-term relationship between Islamic financial development and conventional financing and economic growth in Bahrain using quarterly data from 2000 to 2010. The authors use the Johanson-Juseluis co-integration test and the VECM model. The difference between this study and other studies is that the first one aims at comparing Islamic and conventional finance in terms of stimulating economic growth in Bahrain. The results show that in the long term both Islamic and conventional financial development are positively correlated with economic growth, with the main difference being that in the case of Islamic finance, the relationship found between Islamic financial development and economic growth is bidirectional. This result indicates that Islamic finance stimulates growth and that growth in turn propels Islamic finance in Bahrain.

In their turn, Abduh and Omar (2012) investigated the short- and long-term relationship between Islamic banking development and economic growth in Indonesia during the period 2003-2010. The authors used the cointegration test and the error correction model developed in the ARDL. The variable "total Islamic financing" has been used in this study as an indicator of Islamic finance. As a proxy for the real economy, the authors use GDP and gross fixed capital formation. The results show that in the long run Islamic financial development is positively correlated with economic growth and capital accumulation. They also indicate that the direction of causality between financial development and economic growth is bi-directional, proving that the development of Islamic banks stimulates growth and that growth in turn propels Islamic banking development in Indonesia. The authors state that Islamic banks in Indonesia perform effective financial intermediation.

The study by M.Aloqool, R.Okab&M.Bashayreh(2014) was conducted to explore the relationship between the development of Islamic finance and economic growth in Jordan, during the period 1980-2012, by focusing on Granger causality effects, in the context of a VECM model. Total Islamic financing and total Islamic bank deposits are the variables used by the authors as a measure of Islamic finance development.

The results of this study indicate that in the short run, there is no significant causal relationship between Islamic financial development and growth. However, in the long run, there is a bidirectional causal relationship between growth and Islamic banking finance, which confirms the positive contribution of Islamic banks in Jordan to economic growth. But the relationship appears to be unidirectional between growth and Islamic bank deposits, moving from growth to deposits. The authors suggest that this relationship reflects the excess liquidity problem that Islamic banking in Jordan suffers from.

Ayachi& Al (2013) also assessed the long-term relationship between Islamic finance and economic growth. Their sample consists of 15 countries, observed over five successive four-year sub-periods from 1990 to 2009. To measure the development of the Islamic financial sector, the authors use three indicators: financial depth, which is the liquid liabilities of the financial system divided by GDP; the total value of financing that meets Islamic requirements divided by GDP; and the volume of aggregate banking activity reflected by retail and wholesale activity divided by GDP. The econometric results, based on the Generalized Method of Moments (GMM), show that Islamic financial deepening has a negative impact on economic growth, but this impact is very small. However, the ratios of Islamic finance to GDP and investment to GDP have a positive impact on economic growth. The authors conclude that the values of the coefficients associated with these variables do not support the hypothesis that Islamic finance plays an important role as an engine of growth in the Schumpeter sense.

Based on a sample of 52 developing, low- and middle-income countries observed over the period 1990-2010, P.Iman and K.Kpodar (2015) empirically assess the impact of Islamic finance on growth. The authors use a standard growth model, including variables to measure the development of the financial system as a whole and that of Islamic banks in addition to the control variables typically used in growth studies. Thus, the authors measure the development of Islamic banking activity using three indicators: total loans to the private sector divided by GDP, the ratio of Islamic bank assets to GDP, and the ratio of deposits in Islamic banks to GDP. To achieve their objectives, the authors use a variety of econometric techniques, including pooling estimation, fixed-effects estimators to control for country-specific effects and generalized method of moments (GMM) estimators. The results from the different econometric estimations show that countries with Islamic banking activity and measurable growth grow faster than other countries.

BakhitaHgh (2017) developed a study that creates a model to interpret the relationship between Islamic financing modes, economic growth and financial stability. The objective of this study is to identify which Islamic financing modes should be encouraged by policy makers, to ensure financial stability and stimulate economic growth. The author uses Pearson regression to measure the causal relationship between GDP and the performance of Islamic banks as represented by Islamic financing modes.

The econometric results show that there is a negative causal relationship between the financing modes "Musharaka, Istisna, mudaraba and GDP". The author concludes that all Islamic financing modes except Musharaba and Murabaha minimize the financial soundness of Islamic banks and boost the growth rate at the same time. The same author adds that the best mode of financing capable of ensuring financial stability and increasing GDP at the same time

is the Istisna contract. The author suggests that the decision makers of Islamic banks should encourage Istisna mode of financing, decrease the amount of lending through Murabah modes of financing, and find the appropriate financial tool that ensures financial soundness and simultaneously stimulates growth.

Mtiraoui A and Zneidi M (2020) use the simultaneous equation model to study the effect of Islamic finance on investment and economic growth. The main question of their study is whether the development of Islamic finance supports growth through investment in the MENA region; and in East Asia is specific during the period 1990 -2018. The authors used five (05) indicators to estimate the development of Islamic finance:

- The share of Islamic banking assets which measures the penetration rate of Islamic banks in the total system
- The share of Islamic bank deposits which measures the penetration rate of Islamic bank deposits in the total banking system.
- The overall penetration rate measured by the average between the penetration rate of Islamic banking assets and that of Islamic banking deposits
- Credit to the private sectors: the authors calculate the rate of credit to the private sectors of Islamic banks using the penetration rate of Islamic banking assets and the total credit to the private sectors (Islamic and conventional banks)
- The share of credit to private sectors by Islamic banks in GDP.

The results of this study show that Islamic financial development is a catalyst for economic growth in the studied regions. It positively influences economic growth through the investment channel. The results also show that there is a significant positive effect on the economic growth rate.

The authors also demonstrated that the quality of governance is a favourable condition for foreign direct investment to promote growth. Indeed, the authors emphasize that the quality of governance remains a mandatory condition to improve and stimulate economic growth.

3- Methodology

3-1 Definitions and measures of variables:

To achieve our objective, we will establish an appropriate choice of variables. We use three types of variables in our model. First, a dependent variable Y_i which represents the growth rate of GDP per capita in each country, then the variables of interest ($FI1_{it}$, $FI2_{it}$, $FI3_{it}$, $FI4_{it}$) to measure the development of Islamic finance, and then two categories of explanatory variables, namely the control variables ($X1_{it}$, $X2_{it}$, $X3_{it}$, $X4_{it}$) and the institutional variables ($Gov1_{it}$, $Gov2_{it}$, $Gov3_{it}$, $Gov4_{it}$, $Gov5_{it}$, $Gov6_{it}$)

Since the 1990s, there has been a renewed interest in governance variables and the institutional framework. In fact, for economic strategies and policies to work properly and to achieve the objectives set in advance, it is necessary to prepare a favourable institutional framework. In this context, we have opted for the integration of institutional variables in our model in order to test the effect of these variables on our relationship of interest.

The indicators of Islamic financial development :

The model's variables of interest are as follows:

1- Islamic Finance divided by GDP ($IF1_{it}$): This variable is included in the bankscoop database accounts for all banks combined as total private sector bank loans divided by GDP.

Nevertheless, we use variables that meet the Sharia requirements. This variable consists mainly of the following transactions for Islamic banks: Murabahah and deferred sales, Ijara (leasing and rental purchase) Mudharabah (profit-sharing) and Musharakah (partnership).

2-Total financial assets divided by GDP (FI2it): This indicator measures the size of financial intermediaries and their capacity to fund economic activities. This indicator is used by Kinget Levine (1993) as well as Levine et al (2000).

3-Islamic bank deposit divided by GDP (FI3it): This indicator captures the ability of Islamic banks to mobilise funds.

4-Total liabilities divided by GDP (FI4it): This indicator measures the overall resources available to the Islamic bank to conduct its business.

❖ The control variables :

As an indicator of economic growth, we have chosen the annual growth rate as a percentage of GDP. However, we have retained as a control variable.

1- Inflation (X1i,t): the economic literature has shown that there is a negative relationship between economic growth and inflation. Fisher (1993) shows that inflation reduces economic growth by decreasing investment and productivity growth.

2- Trade openness (X2i,t): this indicator captures the degree of openness of a country. According to growth models, openness to international trade is an important determinant of economic growth.

3- Gross fixed capital formation (X3i,t): retained as an indicator of investment. Indeed, investment is an engine that generates economic growth. Investment acts on the quality of supply and demand through the multiplier effect and, in both cases, it contributes to the increase in economic growth.

❖ Institutional variables:

The quality of economic institutions is an important determinant of economic growth, as it provides a stable economic framework favourable to investment, determines the incentives and constraints to which economic actors are subject, promotes the formation of human capital and thus stimulates economic growth. We have chosen to use D. Kaufman's six governance indicators of institutional quality, namely

- Controlling corruption (Gov1i,t);
- Government effectiveness (Gov 2i,t) ;
- Political stability and absence of violence / terrorism (Gov3i,t) ;
- Regulatory quality (Gov4i,t);
- Rule of law (Gov5i,t) and
- Voice and accountability (Gov6i,t).

3-2 Sample :

Our analysis is based on a panel of bank balance sheets per country. The sample includes 7 countries (Bahrain, Saudi Arabia, United Arab Emirates, Kuwait, Indonesia, Turkey, Qatar). These countries are considered, by the Ernst & Young 2015-2016 report on the competitiveness of Islamic banks, as the driving forces behind the growth of Islamic finance worldwide. The study period is from 2007 to 2014. In total, our sample contains 25 banks.

3-3 The model

In this section, we attempt to empirically assess the impact of Islamic finance on economic growth. Our model is a dynamic panel data model with GMM as the appropriate estimation method. We will use a standard economic growth model with a set of variables of interest that approximately measure the Islamic financial development, as well as the control variables that are commonly used in economic growth studies. We then incorporate variables

that approximately determine the quality of institutions. We successively estimate the following equations:

$$Y_{it} = \alpha Y_{i,t-1} + \beta FI_{i,t} + \gamma X_{i,t} + \varepsilon_{i,t} \textcircled{1}$$

$$Y_{it} = \alpha Y_{i,t-1} + \beta FI_{i,t} + \gamma X_{i,t} + \delta Gov_{i,t} + \varepsilon_{i,t} \textcircled{2}$$

We then make a slight modification to the first equation of the model, in order to introduce the interaction terms between institutional quality and the Islamic financial development indicators (FI* Gov).

$$Y_{it} = \alpha Y_{i,t-1} + \mu (FI_{i,t} * Gov) + \gamma X_{i,t} + \varepsilon_{i,t} \textcircled{3}$$

3-4 Results and interpretations

•Islamic Financial Development-Economic Growth

The results obtained show that Islamic finance positively influences economic growth in these countries. Indeed, the coefficients of the variables related to Islamic finance are positive and statistically significant in all estimations, which confirm the robustness of this result. Our result shows that the financing provided by the Islamic sector contributes to economic growth. In other words, Islamic banks have proven to be effective as a financial intermediary facilitating the transmission of funds from surplus households to deficit households. Indeed, Islamic banking stimulates investment by acting as a partner rather than a traditional intermediary through the implementation of participatory financing based on the principle of profit and loss sharing. The investor is thus assured as long as the bank is bearing the risk and the loss with him. In this way, he will be encouraged to invest more. The Islamic financial system positively influences economic growth through the investment channel. Our result is confirmed by the works of Mosab&Dhank(2014), Iman&Kapdar(2015) and Jobrarteh&Ergec(2017).

•Incorporation of institutional variables

For the institutional variables in each of the estimations made, we introduce a measure of financial development and an institutional variable. Control variables are included in all regressions. Our objective is to find out whether institutions have a positive influence on growth through Islamic financial development.

In the first regression, we have introduced the control variable of corruption. This indicator is negatively correlated with economic growth independently of the Islamic financial variable introduced in the model. This is due to the fact that corruption distorts the optimal allocation of resources. In other words, instead of allocating the most efficient **inputs**, they will be allocated to corruption (which pays more). This result is comparable to the one obtained by ZouheirHadhek (2011).

In the second regression, we have introduced an institutional index indicating the efficiency of government. This indicator gives a negative effect on economic growth which means that a country with inefficient governance (poor service quality, staff proficiency in the public sector, wasteful government expenditure) negatively affects economic growth.

In the third regression, we have introduced the political stability variable, which measures the various events that create insecurity in a country and hinder investment prospects. This variable has a negative effect on economic growth. As a result, an explanation can be provided that political institutions will have an indirect effect on economic growth, an effect that is mediated by investment and particularly human capital.

• **Integration of interaction variables**

The creation of a sound institutional environment is a precondition for increased savings, investment and foreign capital inflows. The latter are the main determinants of growth. However, this is also a key condition for Islamic finance to fully play its role as a stimulus to economic growth. Thus, in this estimation, we have chosen to analyse the interaction between Islamic finance and institutional variables. Our objective is to determine whether the positive effect of Islamic finance will be greater in the presence of a healthy environment. We will estimate the following equation:

$$Y_{it} = \alpha Y_{i,t-1} + \mu (FI_{i,t} * Gov) + \gamma X_{i,t} + \varepsilon_{i,t}$$

The results obtained are consistent with economic intuition. Indeed, the coefficients of the cross variables Islamic finance - institutional quality are mostly positive and statistically significant. The results are as follows:

- A negative interaction between the cross variable Islamic finance - corruption. The coefficient of this variable is negative and statistically significant. This result is expected since the negative effect of corruption on growth is mainly exerted through corruption.

- A positive interaction between the cross variable Islamic finance-government efficiency and economic growth. The coefficient of this variable is positive and statistically significant.

- A positive interaction between the cross variable Islamic finance - political stability and economic growth. This result is consistent with that of Barro (1996) and Azam et al (1996) who showed the existence of a negative impact of political instability on growth.

- A positive interaction between the cross variable Islamic finance-quality of regulation and economic growth. The coefficient of this variable is positive and statistically significant.

- A positive interaction between the cross variable Islamic finance-rule of law and economic growth. The coefficient of this variable is positive and statistically significant.

- Corruption is not the only source of institutional inefficiency since the voice and accountability variable also has a negative and statistically significant coefficient.

Thus, it can be concluded that the positive effect of Islamic development on growth can be greater in the presence of an adequate institutional environment. Islamic development can only go hand in hand with the development of the institutional structure, in particular, political stability, governmental efficiency, compliance with rights and prudential rules, and the absence of corruption. This, in turn, has a positive impact on economic growth.

Conclusion

In this paper, we have attempted to examine the relationship between Islamic finance and economic growth in a sample of seven countries. We have used a dynamic panel model with a generalized method of moments (GMM) estimation. We have made two estimations. In the first estimation, we introduced the Islamic finance variables, the control variables and the institutional variables and we found that Islamic finance positively influences economic growth. Indeed, Islamic finance promotes economic development through its direct link with the real economy, its prohibition of harmful products and activities and its promotion of solidarity and social justice. We then opted for a second estimation to evaluate the interaction between Islamic financial development and the institutional environment. The results show that in the presence of a sound institutional environment, Islamic finance is more conducive to economic growth. This interesting finding provides a number of implications:

- Governments in the studied countries should continue to promote Islamic banking, which has proven to be effective and contribute to economic growth.

-Countries that want to take advantage of Islamic banking as a stimulator of economic growth must first prepare an appropriate institutional environment.

Muslim and non-Muslim countries suffering from low growth rates should encourage and promote the establishment of Islamic banks and allow foreign Islamic banks to operate in their national territories.

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