

Impact of Islamic Financial Markets on Economic Growth: Evidence from the Middle East and Asia

Nur Hazimah Amran¹, Wahida Ahmad^{1*}, and Catherine S F Ho²

¹Arshad Ayub Graduate Business School, Universiti Teknologi MARA, Selangor, Malaysia

²Faculty of Business and Management, Universiti Teknologi MARA, Selangor, Malaysia

ABSTRACT

Globalization and integration of the global financial markets have yielded much volatility in economic activities and it is essential that emerging countries avoid contagious crises to ensure robust development. With the rapid progression in both conventional and Islamic financial markets, countries with dual financial systems have to uphold a stable and resilient financial market that could contribute to sustainable economic growth. This study aimed to investigate the contribution of Islamic financial markets towards economic development in selected Middle Eastern and Asian countries from 2008 to 2017. The study employed panel data analysis methodology on a balanced panel of seven countries and the finding reveals consistent results where both Islamic stock markets and the Islamic banking sector significantly and positively contributed to economic growth. Meanwhile, region significantly interacted in the relationship between Takaful and economic growth positively for Middle Eastern countries but not for Asia. Empirical evidence highlights the importance of the Islamic financial markets in stimulating a nation's economic growth, which is especially vital for the stock and banking sectors. Further, Asian nations should also further expand and empower the Takaful industry to achieve a positive economic impact.

Keywords: Financial Markets, Economic Growth, Islamic Bank, Takaful, Islamic Stock Markets

ARTICLE INFO

Article History:

Received: 16 February 2023

Accepted: 24 October 2023

Available online: 01 December 2023

* Corresponding Author: Wahida Ahmad; Arshad Ayub Graduate Business School, Universiti Teknologi MARA, 40450 Shah Alam, Selangor, Malaysia; Email: wahida@uitm.edu.my; Tel: +6019-3321069

INTRODUCTION

Globalization and the rapid expansion of worldwide financial markets in the last few decades have generated high volatility in economic activities in terms of large swings in the business cycle. The effect of global financial market integration can be seen with the financial crises that spread rapidly from one country to another. This rapid growth in financial markets in terms of size, types and variety of instruments coupled with the latest technology have never been experienced in previous decades. It is believed that financial development and globalization are major determinants of economic development and growth in many countries worldwide (Nasreen et al., 2020). However, there are few comprehensive studies on the effects of the overall Islamic financial market. Juhro et al. (2020) discovered that the development of Islamic stock market and banking sector boosted economic growth in Indonesia. The large swings in economic expansions and contractions have caused havoc especially in smaller emerging nations and therefore there is a need to effectively manage these challenges in order to achieve sustainable development.

It is imperative that developing and emerging countries stimulate economic growth to sustain development and thus maintain a strong and resilient domestic financial market. These countries are most sensitive to shocks and contagion from developed countries, for they depend on them for trade and investments. When a crisis occurs, the rise in income inequality and unemployment coupled with the decrease in real income are also among the noticeable evidence of economic contraction. This would miserably affect a country's development thus leading to economic recession. In response, effective and efficient channeling of deposits from savings into sustainable investment and feasible financial systems to sustain growth in the economy is needed. The more capital flows in the economy, the more production and demand are created, thereby intensifying economic activities. This consequently creates more job opportunities hence increasing the standard of living and as a result, a reduction in poverty and income equality. Higher level of economic growth therefore helps to reduce unemployment, increase real income, reduce income inequality and, reduce crime and social vices as well. In addition, economic growth also promotes sustainable development in trade and financial sectors further strengthening nations' progress.

Islamic finance has experienced a rapid growth in the last few decades and it has been generally accepted as an alternative and part of the financial system (Trabelsi et al., 2020). Similar to the conventional financial market, the Islamic financial market also shares the same roles in stimulating economic growth. A major difference between both markets is the restriction on *Syariah* compliance in the Islamic financial market. The Islamic financial market needs to comply with Islamic principles that prohibit transactions which are interest-based (*riba*), excessive risk-taking (*gharar*), as well as gambling and speculative activities (*maysir*). The Islamic financial markets are further prohibited to deal with firms that are involved in illicit activities including entertainment, bars and weapons (Bugan et al., 2021). Due to the strict compliance with Islamic principles, *Syariah* firms must meet not only the qualitative screening of types of businesses but also the quantitative screening criteria of their financial ratios. Among the quantitative screening criteria are debt, liquidity, interest income and non-permissible income ratios. Islamic banks finance their customers through equity financing also known as profit and loss sharing (PLS), unlike their conventional peers that practice debt arrangement (Risfandy et al., 2019).

The financial sectors in a dual system country consists of both the conventional and Islamic financial markets which then include the sub-markets of the capital or stock market, banking and insurance sectors and others. Pradhan et al. (2020) identified four channels of stock market development that induced higher economic growth. First of all, the long-term capital or stock market provides an alternate option for investors to invest their savings. Investing in the stock market may result in higher returns depending on their risks tolerance. In order to maximize profit and wealth, investors diversify their financial portfolio and risks, thereby lessening the possibility of losses from investment. Secondly, the stock market enables investors to acquire ownership of listed firms. Being a stockholder of these firms enables the sharing of economic risks between firms and investors. Thirdly, the stock market facilitates sources of capital for firms. This is advantageous for firms that are in need of capital as an important channel for fund raising. Capital formation thus helps firms to become more productive in their economic endeavors. Fourthly, stock market provides avenues for listed firms to pool money from domestic and foreign investors in supporting their operation and expansion. This encourages rapid increase and development of firms hence stimulating economic growth.

The banking sector plays an important role in global financial markets as the main intermediaries that channeling funds. According to Jayakumar et al. (2018), the banking sector influenced economic growth where competition among the banks in the industry results in greater credit access for growing firms, thereby promoting higher economic growth. In another study, Dash et al. (2020) pointed out that the banking sector improved their financial services via adaptation of new technology. This creates more businesses which in turn generates more income and profit to banks. Focusing on European countries, Nasreen et al. (2020) indicated that the banking sector and stock market development in the context of continuous financial liberalization and integration improved the growth of economies. Overall, the stock market and banking sector provides a vital channel for firms to raise funds and accelerate economic activities.

The insurance sector of the Islamic financial market is termed Takaful, and this sector implements an aggressive approach towards venturing into new technology and products of risk-adversity thus playing a key role in economic growth. The Takaful insurance sector helps to create capital through facilitating savings in the form of financial assets (Aziz & Kassim, 2020). This capital formation supports the theory of supply leading hypothesis which claims that insurance sector development induces economic growth. The paper further rationalizes the uniqueness of insurance and Takaful products that offer both protection and investment opportunities attracting a high volume of contribution and promoting a higher level of growth in particular regions.

The Islamic Financial Services Board (2020) recently published the statistics of global Islamic financial services industry with the assets breakdown of banking, Sukuk, Islamic funds and Takaful sectors as shown in Table 1. The Gulf Corporation Council (GCC) region had the largest Islamic banks in terms of assets worldwide. Islamic banking assets of the Middle East and the South Asian region was the second highest after the GCC. Southeast Asia had relatively smaller Islamic banks than these two regions but larger than Africa and others combined.

The global distribution of Islamic funds is focused on the GCC and Southeast Asia with Saudi Arabia and Malaysia as the top two countries in this category. There is also a large amount of Islamic funds in the other

regions especially in Europe and North America. Similar to the Islamic funds sector, most Sukuk is also concentrated in the GCC and Southeast Asian regions. In terms of asset value, the smallest Islamic financial market globally was in the Takāful sector and it was rather vastly distributed between the GCC, Middle East and South Asia, as well as the others category. The three countries which operate wholly in Islamic insurance, Iran, Saudi Arabia and Sudan, accounted for 81 percent of global contributions. The growth of global Islamic banking assets from 2018 to 2019 by the Islamic Financial Services Board (2020) is exhibited in Figure 1. The two regions that experienced relatively higher growth in this sector are the GCC and the Southeast Asian regions.

Table 1: Breakdown of the Global IFSI by Segment and Region (USD billion, 2019*)

Region	Banking Assets	Şukūk Outstanding	Islamic Funds' Assets	Takāful Contributions	Total	Share
GCC	854.0	204.5	36.4	11.70	1,106.6	45.4%
Southeast Asia	240.5	303.3	26.7	3.02	573.5	23.5%
Middle East and South Asia	584.3	19.1	16.5	11.36	631.3	25.9%
Africa	33.9	1.8	1.6	0.55	37.9	1.6%
Others	53.1	14.7	21.1	0.44	89.3	3.7%
Total	1,765.8	543.4	102.3	27.07	2,438.6	100%
Share	72.4%	22.3%	4.2%	1.1%	100.0%	

* Data for Sukūk outstanding and Islamic funds are for full-year 2019; for Islamic banking, they are as at 3Q19; and for Takāful, they are as at end-2018. Middle East and South Asia captures other jurisdiction in Asia, other than GCC and Southeast Asia countries. Jurisdictions not belonging to any of the four regions are classified as 'Others', specifically countries located in Europe, North America, South America, and Central Asia regions.

Source: IFSB Secretariat Workings (Islamic Financial Services Board, 2020)

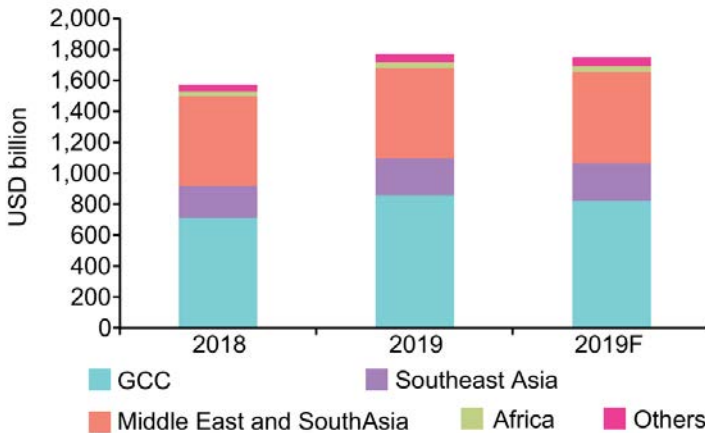


Figure 1: Islamic Banking Assets (2018-2019F)

There are many studies on the development of financial markets on the growth of nations especially on the conventional side, nevertheless Islamic financial market development in the recent decade has created an interest if similar effects exist empirically, especially for developing nations with dual financial systems. Additionally, in response to the inconsistent research evidence in this area, especially for emerging countries across the Middle Eastern and Asian regions, this study proposed a twofold objective in which firstly, to investigate the relationship between the Islamic financial market and economic growth. The study subsequently included a region dummy to account for differences between regions. The study further investigated if differences between the regions played any role in moderating the impact of Takaful on economic growth by incorporating a regional interactive Takaful factor in the last model. This study is more comprehensive in that the study included not only the banking sector which is commonly investigated but also the stock and Takaful sectors which are rarely investigated. Islamic financial markets in this study focussed on the development of the Islamic stock market, banking and Takaful sectors on economic development of emerging countries.

The rest of the paper is structured as follows: Section 2 provides the theoretical and empirical discussion on the survey of literature related to Islamic financial market and economic growth. Section 3 explains the data description and research methodology. The study continues to further

analyze and interpret the findings on the significant impact of the Islamic financial market on economic growth in Section 4, followed by concluding remarks in Section 5.

Literature Review

Empirical evidence on the conventional financial markets and growth relations has been confirmed (Lai et al., 2019; Mhadhbi et al., 2020) and it is imperative that it exists from the perspective of the Islamic financial development. This study however focussed on the contribution of Islamic financial market development, which includes the Islamic stock market, Islamic banking, and Takaful sectors, on economic growth which has gained interest in recent decades due to the rapid expansion and integration of the global financial markets. This is especially so when there is strong growth in Islamic finance coupled with inconclusive evidence among scholars (Mollaahmetoğlu & Akçalı, 2019; Wu et al., 2020). Acknowledging that sustainable economic growth is important to ensure a country's development, this study intended to examine the impact of the Islamic financial markets on economic growth. The study debates on the relationship by providing theoretical and empirical evidences in this section.

The two main theories supporting this study on the relation between financial development and economic growth are the supply leading theory (Schumpeter & Backhaus, 2003) and demand following theory (Robinson, 1951). The supply leading theory indicates that development of the financial market induces higher economic growth. This theory depicts that a stable development of financial markets across nations in which a resilient and strong stock market or banking sector enhances confidence of investors to participate in the market attracting a pool of capital. Capital formation and deepening of the financial market further promotes profit and wealth maximization, boosting economic growth. Financial institutions are also more efficient in allocating resources through their intermediary function. On the other hand, the demand following theory explains that economic growth attracts higher demand for financial services stimulating the volume and depth of the financial markets. While an economy grows, additional services in the stock market, banking and insurance sectors are required implying that a sustainable growing economy necessitates financial support. The growth in financial services eventually results in further economic

development. Both theories thus postulate a positive relation and causality between financial markets and economic growth.

Empirically, Fufa and Kim (2018) discovered that stock market development encouraged economic growth in both high and middle income European countries. The authors highlighted that countries with a liquid and active stock market encouraged higher economic growth through active trading activities. Similarly, Pradhan et al. (2020) revealed further that stock market development led to higher economic growth in nations. The study explained that with the development of the stock market, a larger number of listed firms would be able to raise capital from both domestic and foreign investors thus promoting the real economic sector and economic growth. Juhro et al. (2020) provided evidence for a thriving Islamic stock market on listed firms where the flourishing stock market serves as an alternate option for funding research and development activities of firms. An increase in research and development activities indirectly promotes higher profitability of firms thus spurring economic growth of the country.

Another study by Mishra et al. (2011) on the stock market in India from 1991 to 2010 indicated a positive significant relationship between market capitalization and economic growth. The study found that higher market capitalization contributes to capital market efficiency and higher economic growth. The result was consistent with Bilal, Songsheng, et al. (2016) which also provided empirical evidence of a significant positive relation between stock market capitalization and economic growth. The results also supported the notion where a well-developed stock market structure helps to boost the financial sector which in turn stimulates economic growth. On the other hand, Elsayed and Yarovaya (2019) studied stock market volatility from global financial crisis and the Arab Spring shocks on economic activities, and found high spillover effects among the sectors due to their connectivity. The authors revealed that Middle Eastern and North African (MENA) countries were significantly affected by the global financial crisis, relative to the Arab Spring. The study provided evidence for the effects of financial market disturbances and deterioration in economic growth.

A stable and resilient banking sector is able to offer efficient intermediary and credit services to the public and private sector, hence accelerating economic growth of a country. This positive relation supports the supply

leading theory which indicates that financial asset accumulation promotes economic growth. Balcilar et al. (2018) highlighted in their research that economic development is extensively affected by financial development. In this case, financial development is able to facilitate more efficient banking activities such as savings and investment which in turn increase the level of economic activities. Furthermore, Lai et al. (2019) demonstrated that financial crises jeopardized the banking sector which in turn negatively impacted economic growth. The study indicated that disturbances in the banking sector threaten economic activities and degenerate economic growth of a country. Interestingly, a study by Jayakumar et al. (2018) supported both the supply leading theory and demand following theory when the study found that banking sector development induces economic growth and vice versa. Wu et al. (2020) disclosed that the banking sector development in Japan was promoted by significant growth of business activities. As the economy grows competently, entrepreneurs demand more financial products and services, stimulating the banking sector activities. This relationship between economic growth and development of the banking sector demonstrates the demand following theory. Higher banking sector demand would eventually stimulate employment and income, resulting in economic growth. In another perspective, Ghosh (2017) found no significant relation between banking sector development and economic growth and disclosed that the development of foreign banks in advanced economies negatively influenced growth. Foreign banks are more likely to encounter information bottlenecks and a lack of customer information which hinder their ability to provide quality financing and credit facilities.

There are only a few studies that provided empirical support in terms of the effect of the Takaful insurance sector on economic growth. Aziz and Kassim (2020) investigated Takaful development in Malaysia and it was found to positively influence growth. Takaful provides an opportunity for healthy savings and appropriate investments to clients. This helped in their long-term financial planning and as a result smoothened the financial cycle by reducing delinquencies. Similarly, Muye and Hassan (2016) discovered that Takaful encouraged economic growth in ASEAN and GCC when the development of Takaful supported the supply leading theory. Another study by Safitri (2019) disclosed that the Takaful sector significantly impacted economic growth in Indonesia while Ching et al. (2010) found a significant positive relationship between total asset of life insurance and real output

in Malaysia. An increase in total asset of life insurance resulted in a higher level of economic activities.

Thus, the study sought to further investigate the comprehensive relationship of the development of Islamic financial markets that include, Islamic stock market, Islamic banking and Takaful sectors towards economic growth. This study compared selected Middle Eastern and Asian countries from 2008 to 2017. The next section explains data description and the methodology applied in this study.

METHOD

In order to investigate the impact of Islamic financial development on economic growth, this study included three measures of Islamic financial markets in the model, namely the Islamic stock market, Islamic banking and Islamic insurance (Takaful). The study focussed on four selected Middle Eastern countries and three selected Asian countries. The inclusion of these countries in the model took into consideration the availability of data for the three main Islamic financial sectors in each country. Most countries in these two regions had stock and banking data but lacked data on the Takaful sector. The final sample comprised of Qatar, Saudi Arabia, United Arab Emirates and Bahrain from the Middle East and Indonesia, Malaysia and Pakistan from Asia. A 10-year balanced panel data from 2008 to 2017 totaling of 70 observations were collected. Gross domestic product (GDP) as a proxy for economic growth was obtained from the World Bank Database. Whilst the three proxies for Islamic financial market: Islamic stock market, Islamic banking and Takaful sectors data were obtained from Thomson Reuters Eikon DataStream, Fitch Connect Database and Bloomberg respectively. The variables and proxies are listed in Table 2. This study included a region dummy to distinguish between the sample of Middle Eastern and Asian countries. Apart from regional differences to control for country variation, the study did not include other external factors as control variables in the model. The inclusion of additional external factors may have impeded the findings due to collinearity issue. Having more than one fixed factor was not feasible for the current data and observations due to data limitation and availability.

Table 2: List of Variables and Proxies

	Notation	Proxy and Measurement
Dependent Variable		
Economic growth	ECO	Natural log of gross domestic product
Independent Variables		
Islamic stock market	ISM	Natural log of Islamic stock market capitalization
Islamic banking sector	IB	Natural log of total Islamic financing
Takaful	TKF	Natural log of Takaful assets
Moderating Variable		
Region	RGN	1 for Middle East countries, 0 for Asian countries

This study began with the first basic model that portrayed only three measures of the Islamic financial markets and the economic growth. The second model included a region dummy to identify the significant difference in the region’s effect on economic growth between the Middle Eastern and the Asian countries. The Islamic Financial Services Board (2020) reported that global Takaful contributions grew at an 8.5% compound average growth rate (CAGR) from year 2011 to 2018. In addition, the study also incorporated interactions between region and Takaful to assess the role of region in shaping the relation between Takaful and economic growth in Model C. The interactive effects of the different regions on the relationship between Takaful and economic growth provided more informative findings if the region highly interacted on the relationship between Takaful and economic growth. Henceforth, the three models are referred to as Model A, Model B and Model C, respectively. The following equations (1) to (3) represented the three growth models:

Model A:

$$ECO_{it} = \beta_0 + \beta_1 ISM_{it} + \beta_2 IB_{it} + \beta_3 TKF_{it} + e_{it} \quad (1)$$

Model B:

$$ECO_{it} = \delta_0 + \delta_1 ISM_{it} + \delta_2 IB_{it} + \delta_3 TKF_{it} + \delta_4 RGN_{it} + \varepsilon_{it} \quad (2)$$

Model C:

$$ECO_{it} = \gamma_0 + \gamma_1 ISM_{it} + \gamma_2 IB_{it} + \gamma_3 TKF_{it} + \gamma_4 RGN_{it} + \gamma_5 RGN_{it} * TKF_{it} + \epsilon_{it} \quad (3)$$

The variables of the three equations were where *ECO* denoted economic growth, *ISM* represented the Islamic stock market, *IB* was Islamic banking sector, *TKF* denoted the Takaful sector, *RGN* was a dummy variable on region, *i* is individual country and *t* for year as detailed in Table 2.

This study conducted relevant diagnostic tests including the heteroscedasticity test, multicollinearity test and serial correlation test to identify potential data issues. The study further identified the most appropriate panel data model estimation by the necessary F-Chow test, Breusch Pagan Lagrangian Multiplier (BPLM) test and Hausman test. Tests results revealed that the random effect model was preferred over the pooled ordinary least squares and fixed effect models. This study employed generalized least squares method for the panel data estimation.

EPIRICAL FINDINGS AND DISCUSSION

The study conducted a preliminary analysis of correlation and panel unit root tests as shown in Tables 3 and 4, respectively. The Pearson correlation test ascertained that only the Islamic stock market significantly correlated with economic growth. The correlation was positive and significant at the 1 percent level and indicated that there was 0.796 of correlation between Islamic stock market and economic growth.

Similar to the Islamic stock market, Islamic banking also disclosed a positive correlation towards economic growth by 0.179, nevertheless it was not found to be significant. This indicated that both the Islamic stock market and the banking sector were moving parallel with economic growth. Interestingly, Takaful showed an opposite relation with economic growth and this indicated the lack of development in Takaful during a sluggish economy.

The study applied several unit root tests: Harris and Tzavalis (1999); Levin et al. (2002); Im et al. (2003); and Fisher-type (Choi, 2001) to test for stationarity of the panel as shown in Table 4. The null hypothesis for all tests indicated that the panels contained unit roots. Results shown that the time series disclosed stationary panel for almost all of the unit root tests and there was therefore little possibility of serious spurious regression.

Table 3: Pearson Correlation Test

Variables	Economic Growth	Islamic Stock Market	Islamic Banking	Takaful
Economic Growth	1.0000			
Islamic Stock Market	0.7963***	1.0000		
Islamic Banking	0.1791	0.5593***	1.0000	
Takaful	-0.0640	0.4377***	0.9089***	1.0000

Note: *** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$. Economic growth is proxy by natural log of gross domestic product (%), Islamic stock market is measured by natural log of Islamic stock market capitalization (%), Islamic banking is measured by natural log of total Islamic financing (%) and Takaful is proxy by natural log of Takaful assets (%).

Table 4: Panel Unit Root Test

Variables	Harris-Tzavalis	Levin-Lin-Chu	Im-Pesaran-Shin	Fisher-type
Economic Growth	0.5675*	-11.07***	-2.9245***	116.4512***
Islamic Stock Market	0.4849**	-4.8638***	-4.2077***	47.7347***
Islamic Banking	0.6313	-2.6598***	0.7370	16.6771
Takaful	0.2287***	-4.0072***	-6.3543***	21.3684*

Note: *** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$.

Further to the data description, auxiliary tests on model selection between pooled ordinary least squares, fixed effect and random effect models were carried out as shown in Table 5. This study found a significant F-Chow and BPLM tests which indicated that pooled ordinary least squares was not an appropriate model for the data. The significant Hausman test proposed the fixed effect model as the best model to represent this panel data of seven countries. However, this study found the random effect model to be more plausible due to collinearity issue in the competing model cause to omitted region dummy. The diagnostic tests identified heteroscedasticity and serial correlation issues, it was therefore appropriate to utilize the random effect estimator with robust standard error. The models were confirmed to be free from any serious multicollinearity issue.

Table 5: Panel Data Model Selection Testing

F-Chow Test	BPLM Test	Hausman Test
F = 100.73***	chibar2 = 22.72***	chibar2 = 55.256***

Note: *** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$.

The results for the three proposed models which investigated the significant relations between Islamic financial market and economic growth for selected countries in the Middle Eastern and Asian regions with random

effect estimator are detailed in Table 6. The aggregate data from the seven countries consisted of a 10-year balanced panel data from 2008 to 2017. The Wald Chi² for the three models were significant at the 1 percent level indicating the best fit models. The results confirmed that 30 percent of the variation in economic growth can be explained by the coefficients of determination for the proposed Model A from the between R-squared. The variation in economic growth explained by the coefficients of determination in Models B and C which included additional factors improved to 48 percent and 66 percent, respectively.

The findings for the random effect model on the impact of Islamic financial markets on economic growth in all three models established significant positive effects of the stock market and the banking sector on growth. This finding disclosed that development of the Islamic stock market significantly contributed directly to a country’s income and growth (Fufa & Kim, 2018; Pradhan et al., 2020). The evidence strongly supported that countries should strengthen their Islamic stock market in order to generate a higher level of economic activities. Meanwhile, the study also revealed the importance of the Islamic banking sector as one of the major contributors to a country’s growth. The positive relationship between Islamic banking growth and the economy implied the need for resilience in the banking sector to further contribute to a healthy and strong economy. This is confirmed to be an important finding where those countries with Islamic financial markets would benefit from the development of both the Islamic stock and banking sectors. It would help in increasing production and demand to eventually raise income and the standard of living of these countries as supported by Gheeraert and Weill (2015) and Lai et al. (2019).

Table 6: Results of Islamic Financial Market’s Effect on Economic Growth in Accordance to Random Effect Panel Analysis (Robust Standard Error)

	Model A	Model B	Model C
Islamic Stock Market	0.261*** (0.098)	0.284*** (0.078)	0.329*** (0.111)
Islamic Banking	0.142*** (0.055)	0.134* (0.074)	0.155*** (0.06)
Takaful	0.038 (0.101)	0.035 (0.099)	-0.078 (0.125)
Region		-0.806 (0.628)	-5.278* (2.849)

Region*Takaful			0.187*
			(0.112)
Asian			[-0.078]
Middle East			[0.108]*
Constant	17.37***	17.667***	19.031***
	(1.274)	(1.337)	(1.261)
Observations	70	70	70
Number of Groups	7	7	7
Minimum Observations per Group	10	10	10
Average Observations per Group	10	10	10
Maximum Observations per Group	10	10	10
Wald Chi-squared	82.57***	70.61***	67.663***
R-squared Within	0.615	0.606	0.582
R-squared Overall	0.307	0.488	0.658
R-squared Between	0.296	0.484	0.663

Notes: *** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$. Standard errors are in parentheses. Numbers in bracket represent the marginal effect of region-takaful interaction. Economic growth is proxy by natural log of gross domestic product (%), Islamic stock market is measured by Natural log of Islamic stock market capitalization (%), Islamic banking is measured by Natural log of total Islamic financing (%), Takaful is proxy by natural log of Takaful assets (%) and region is a dummy variable which note 1 for Middle East countries while, 0 for Asian countries.

The finding in Model B with an additional region dummy variable was to investigate if the significance of regional effects is somewhat similar to the original model where Takaful development is still discovered to be statistically insignificant on growth. The result depicted no crucial relation between Takaful development and progress in an economy, neither in the Middle East nor Asia. Nevertheless, both the stock and banking sectors still remained significant drivers of growth. The findings concur with Bilal, Chen, et al. (2016), Jayakumar et al. (2018) and Wu et al. (2020). The negative region coefficient implied on average that the Middle Eastern economic growth was statistically lower than Asia. It must be noted that the constant term was significant for all three models so other factors not included in this Islamic financial market model may be driving the economies. It is undoubtedly a fact that other macroeconomic and political factors not investigated in this study do exert an impact on the level of economic activities of all countries.

This study further investigated the interactive effects of region on the relationship between Takaful and economic growth in Model C. This model distinguished Takaful development between the Middle Eastern and Asian countries and interestingly, disclosed that Takaful had a marginally

significant positive interactive effect on growth in the Middle Eastern countries but not for Asian countries. The findings therefore provide vital insights on the interplay between regional effect and the development of the Takaful sector in shaping economic development, especially contribution to the Middle East. The significance of the region-Takaful interaction suggested the essential role played by Takaful to stimulate economic growth in the Middle East. According to Sherif and Hussnain (2017), demand for Takaful in Middle Eastern countries were expanding because of the improvement in the awareness of having Takaful thus, escalating the demand for Takaful in Middle Eastern countries. On the contrary, Asian countries had negative marginal effect of Takaful interaction, which implied an unfavorable contribution of Takaful to Asian economic growth. The study was however unable to prove any significant relationship between Takaful and economic growth in this region. This is probably due to the large variances between countries in the region that neutralized the effect. It was noted that there were huge discrepancies of Takaful asset value between countries in Asia where Malaysia had a substantial Takaful asset compared to only trivial asset values in Indonesia and Pakistan. This finding also confirmed the effectiveness of Takaful on economic development was contingent on regional impact. The relationship does not support the findings by Muye and Hassan (2016).

Growth in the established and bigger Takaful sector in the Middle Eastern countries was able to further strengthen the economy, hence indicating the need for sustainability of the industry. Although currently there is little noticeable effect of the Takaful sector on Asian countries, these countries should aim to further grow the industry, especially for Indonesia and Pakistan in order to achieve a more substantial market which could then affect growth in the future. A stronger Takaful sector would enable the other markets to replicate the effects of the Middle Eastern countries and contribute to growth positively.

In summary, the evolution from Models A to C revealed the significant positive impact of the Islamic financial markets which comprised of the stock market, banking and Takaful sectors on the Middle Eastern and Asian economies on economic development. Future initiatives to promote and strengthen the Islamic financial markets should be seriously strategized to develop a more prosperous and sustainable economy. In order to portray robust results and findings, the paper included the Granger Causality Test between variables, particularly for the significant ones.

Granger Causality Test

The Granger Causality Test helps to detect the nature of the causal relationship between variables. It is useful especially when data was found to be stationary. A country’s macroeconomics are largely influenced by many factors including past financial market performance as well as past economic growth. In this study, there was a possibility that the development in Islamic financial markets, may have a future influence on the economic growth. The Granger Causality Test results as shown in Table 7 provide evidence that the Islamic stock market was significant, and caused economic growth in the two regions, the Middle East and Asia. The rapid expansion and development of the Islamic stock market of these dual financial system economies resulted in a higher level of economic activities due to their competitiveness in the domestic and global market. On the other hand, economic growth was not found to granger cause the Islamic stock market and so the relation was found to be unidirectional. Results in this study are similar to Juhro et al. (2020) where the panel causality based model was applied and unidirectional causality from Islamic stock market to economic growth was found. In addition, further analysis on each individual region confirmed similar findings where larger stock market capitalization induced more robust economies. It was surprising to note that the Islamic banking sector was not found to significantly granger cause the level of economic activities in this set of countries. The expansion of Islamic bank financing and development was not found to cause a lift in economic confidence that drive economic progress or business confidence.

Table 7: Panel Granger Causality Test Results

Null Hypotheses	All Sample	Middle East	Asia
Islamic Stock Market does not Granger cause GDP	5.1479***	1.9969**	5.5576***
GDP does not Granger cause Islamic Stock Market	0.7927	-0.1081	1.3358
Islamic Banking Sector does not Granger cause GDP	-0.2305	-0.3785	0.0850
GDP does not Granger cause Islamic Banking Sector	-0.3421	-0.3968	-0.0645

Note: *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$. Economic growth is proxy by natural log of gross domestic product (%), Islamic stock market is measured by Natural log of Islamic stock market capitalization (%), and Islamic banking is measured by Natural log of total Islamic financing (%).

In summary, this study established the significance of the Islamic stock market and banking sector in affecting the level of growth for Middle Eastern and Asian nations. It further substantiates the interactive effect of regional Takaful on Middle Eastern countries as well as verifies the causality from Islamic stock market to economic growth. It is vital that these countries enhance the stability of their respective stock markets in line with world financial performance to further strengthen the competitiveness of their economic position.

CONCLUSION

The Islamic financial market is an alternative engine for economic growth, where similar to the conventional financial market and institutions, they also provide financial services to the economy and contribute towards stimulating the level of economic activities of a nation. The aim of this study was to investigate the impact of Islamic financial market on economic growth with a sample of countries with dual financial system from the Middle East and Asia. The Islamic financial market in this study included the Islamic stock market, Islamic banking sector and Takaful sector. This study contributes to the literature by comprehensively investigating a few sectors in the Islamic financial market in addition to the sample of less investigated developing countries in two regions. The robustness and the Granger Causality Test also empirically supported the results that only the Islamic stock market and banking sector significantly affected economic growth.

The empirical evidence from this study established the significant direct relation between the Islamic stock market, banking sector and economic growth. To be specific, the level of economic activities was substantiated to depend on the capitalization of the Islamic stock market and the size of financing in the Islamic banking sector. Results from the stock market indicated the roles played by Islamic stock market in providing stock trading and the various capital investment activities that lead to higher level of economic growth. It is necessary for nations to possess a conducive and sustainable environment with constant supervision and monitoring of stock activities by regulatory bodies that allow the Islamic stock market to function at its potential and eventually effectively bring positive impact on economic growth. The regulatory agencies must be responsible for the

supervision of exchange holding companies, clearing house and central depository. Proper supervision with clear guidelines and regulation is required for the continuous growth of the stock market. The Islamic stock market activities is known to be demand-driven, hence there should be a sustainable effort in promoting and encouraging proper conduct among participating organizations in order to build customers confidence. As the level of confidence and trade in the Islamic stock market advance, capital and trade values stimulate a positive impact on the level of economic activities.

Significant findings from the Islamic banking sector implies that the larger size of financing in the banking sector stimulates investments and helps to enhance the level of economic activities. The expansion of bank financing confirms the stability and level of business confidence where capital and assets can be utilized to create and invest in effective and profitable real activities that generate growth. Mostly, Islamic banks invest in the real sector projects of mega infrastructure of buildings or highways, providing access to capital and labor, indirectly attracting investments from home and abroad.

The results from the random effect analysis find no significant relation between the Takaful sector and economic growth. Further interactive effects of region and Takaful confirmed that Takaful was significant in affecting growth contingent upon different region, especially for the Middle Eastern countries. It postulated that sufficient fund accumulation in Takaful asset had similar effect on growth as the stock market where these funds are channeled to various types of investments for productive activities. Besides, the Takaful assets are long term with the objective to mitigate risks and avoid large losses. There is however no empirical evidence to support the growth for Takaful contributions in Asian countries and this may be due to vast differences in the development of the Takaful sector in these countries relative to those in the Middle East.

This study provides essential policy implications for countries with dual financial systems where the banking sector must be strengthened to support sophisticated innovation in the provision and delivery of products and services. Further to banking sector efficiency, competitiveness and sophistication, a sustainable and resilient stock market is crucial for sustainable growth and development. The banking sector as intermediaries

in pooling funds, it also provides credit facilities for business in creating jobs, facilitating production and eventually increasing income and building the nation. Additionally, the capital market generates huge funding for large investments at home and abroad as well enabling investors to manage their risk profile through diversification. A vibrant Takaful sector is needed to manage risks in the longer term, promote long term savings and investment alternatives for long-term financial sustainability and wealth creation. It is thereby crucial that policy makers develop a sound regulatory architecture to instill superior corporate governance and ethical practices as well as ensure adherence to global best practices and standards in the Islamic financial market.

In summary, this study provides evidence that the Islamic stock market, Islamic banking and Takaful sectors are significant in driving economic growth. The Islamic stock market and banking sectors accumulate capital to garner higher level of financial activities that can escalate growth. Stimulating financial and economic activities are crucial to ensure that financial institutions remain strong and stable for sustainable economic growth. Financial activities of the Islamic financial markets are also able to turn the accumulated capital into profitable return for businesses building confidence. The Takaful sector is eventually an institution that not only mobilizes funds, but also effectively mitigates risks and distributes capital in the economy.

The results obtained in this study are more comprehensive to include the development of three major financial segments: Islamic stock, banking and Takaful sectors. It adds to the financial market-economic growth nexus literature, with significant robust findings in countries with dual financial system. Furthermore, this study also provides critical insights into the types of strategies countries should implement to enhance economic development. The failure to incorporate the dynamics of Islamic financial market into the investigation of overall growth of economies would reflect only a narrow perspective and may lead to mismanagement of a nation's growth.

LIMITATION OF STUDY AND RESEARCH AVENUE

This study is subject to some limitations where data availability depended solely on the data provided by the respective database providers. Even though there is a growing interest and literature on Islamic financial market development, data was not matured enough to have concentrated observations for the time being. For instance, some countries focussed on one or two major Islamic financial assets (banking and/or stock market) while the other assets (Takaful and Islamic funds) were not fully emerged to contribute significantly to the economy. For the same reason, the model only incorporated a region dummy as a control variable to capture variations among countries. The exclusion of other control variables may cause a potential biased estimation. The findings obtained from this study however, still contribute to crucial practical implications reflecting the current situation of the industry. As for future studies, researchers may consider to include the effect of crises in the model as the findings would contribute to valuable insights in strengthening the economic growth of countries.

ACKNOWLEDGEMENT

This study was funded by Ministry of Higher Education through the Fundamental Research Grant Scheme-Malaysia Research Star Award (FRGS-MRSA) with code (FRGS-MRSA/1/2017/SS01/UITM/01/1). We acknowledge the assistance of Che Hasibah Che Hassan and Fatin Harlina Radzuan in data collection. Appreciation also goes to all anonymous persons for their constructive comments and suggestions for improvement.

REFERENCES

- Aziz, N. I. M., & Kassim, S. (2020). The Contributions of Takaful Industry towards Economic Growth, Savings and Investment in Malaysia. *International Journal of Advanced Research in Economics and Finance*, 2(3). <http://myjms.moe.gov.my/index.php/ijaref/article/view/10798>
- Balcilar, M., Gupta, R., Lee, C.-C., & Olasehinde-Williams, G. (2018). The synergistic effect of insurance and banking sector activities on

- economic growth in Africa. *Economic Systems*, 42(4), 637-648. <https://doi.org/10.1016/j.ecosys.2018.08.002>
- Bilal, Chen, S., & Komal, B. (2016). Impact of Stock Market Development on Economic Growth: Evidence from Lower Middle Income Countries. *Management and Administrative Sciences Review*, 5, 86-97.
- Bilal, Songsheng, C., & Bushra, K. (2016). Impact of Stock Market Development on Economic Growth: Evidence from Lower Middle Income Countries. *Management and Economics* 5(2), 86-97.
- Bugan, M. F., Cevik, E. I., & Dibooglu, S. (2021). Emerging market portfolios and Islamic financial markets: Diversification benefits and safe havens. *Borsa Istanbul Review*. <https://doi.org/10.1016/j.bir.2021.01.007>
- Ching, K. S., Kogid, M., & Furuoka, F. (2010). Causal Relation between Life Insurance Funds and Economic Growth: Evidence from Malaysia. *Journal of Southeast Asian Economies*, 27(2), 185.
- Choi, I. (2001). Unit root tests for panel data. *Journal of International Money and Finance*, 20(2), 249-272. [https://doi.org/https://doi.org/10.1016/S0261-5606\(00\)00048-6](https://doi.org/https://doi.org/10.1016/S0261-5606(00)00048-6)
- Dash, S., Pradhan, R. P., Maradana, R. P., Gaurav, K., & Jayakumar, M. (2020). Impact of banking sector development on insurance market-growth nexus: the study of Eurozone countries. *Empirica*, 47(2), 205-243. <https://doi.org/10.1007/s10663-018-9412-z>
- Elsayed, A. H., & Yarovaya, L. (2019). Financial stress dynamics in the MENA region: Evidence from the Arab Spring. *Journal of International Financial Markets, Institutions and Money*, 62, 20-34. <https://doi.org/https://doi.org/10.1016/j.intfin.2019.05.004>
- Fufa, T., & Kim, J. (2018). Stock markets, banks, and economic growth: Evidence from more homogeneous panels. *Research in International Business and Finance*, 44, 504-517. <https://doi.org/https://doi.org/10.1016/j.ribaf.2017.07.120>

- Gheeraert, L., & Weill, L. (2015). Does Islamic banking development favor macroeconomic efficiency? Evidence on the Islamic finance-growth nexus. *Economic Modelling*, 47, 32-39. <https://doi.org/https://doi.org/10.1016/j.econmod.2015.02.012>
- Ghosh, A. (2017). How does banking sector globalization affect economic growth? *International Review of Economics & Finance*, 48, 83-97. <https://doi.org/https://doi.org/10.1016/j.iref.2016.11.011>
- Harris, R. D. F., & Tzavalis, E. (1999). Inference for unit roots in dynamic panels where the time dimension is fixed. *Journal of Econometrics*, 91(2), 201-226. [https://doi.org/https://doi.org/10.1016/S0304-4076\(98\)00076-1](https://doi.org/https://doi.org/10.1016/S0304-4076(98)00076-1)
- Im, K. S., Pesaran, M. H., & Shin, Y. (2003). Testing for unit roots in heterogeneous panels. *Journal of Econometrics*, 115(1), 53-74. [https://doi.org/https://doi.org/10.1016/S0304-4076\(03\)00092-7](https://doi.org/https://doi.org/10.1016/S0304-4076(03)00092-7)
- Islamic Financial Services Board. (2020). *Islamic Financial Services Industry Stability Report 2020 (Islamic Financial Services Industry Stability Report, Issue. I. F. S. Board. www.ifsb.org.*
- Jayakumar, M., Pradhan, R. P., Dash, S., Maradana, R. P., & Gaurav, K. (2018). Banking competition, banking stability, and economic growth: Are feedback effects at work? *Journal of Economics and Business*, 96, 15-41. <https://doi.org/https://doi.org/10.1016/j.jeconbus.2017.12.004>
- Juhro, S. M., Narayan, P. K., Iyke, B. N., & Trisnanto, B. (2020). Is there a role for Islamic finance and R&D in endogenous growth models in the case of Indonesia? *Pacific-Basin Finance Journal*, 62, 101297. <https://doi.org/https://doi.org/10.1016/j.pacfin.2020.101297>
- Lai, V. S., Ye, X., & Zhao, L. (2019). Are market views on banking industry useful for forecasting economic growth? *Pacific-Basin Finance Journal*, 57, 101082. <https://doi.org/https://doi.org/10.1016/j.pacfin.2018.10.011>
- Levin, A., Lin, C.-F., & James Chu, C.-S. (2002). Unit root tests in panel data: asymptotic and finite-sample properties. *Journal of*

- Econometrics*, 108(1), 1-24. [https://doi.org/https://doi.org/10.1016/S0304-4076\(01\)00098-7](https://doi.org/https://doi.org/10.1016/S0304-4076(01)00098-7)
- Mhadhbi, K., Terzi, C., & Bouchrika, A. (2020). Banking sector development and economic growth in developing countries: a bootstrap panel Granger causality analysis. *Empirical Economics*, 58(6), 2817-2836. <https://doi.org/10.1007/s00181-019-01670-z>
- Mishra, R. K., Sehgal, S., & Bhanumurthy, N. (2011). A Search for Long-Range Dependence and Chaotic Structure in Indian Stock Market. *Review of Financial Economics*, 20(2), 96-104.
- Mollaahmetoğlu, E., & Akçalı, B. Y. (2019). The Missing-Link between Financial Development and Economic Growth: Financial Innovation. *Procedia Computer Science*, 158, 696-704. <https://doi.org/https://doi.org/10.1016/j.procs.2019.09.105>
- Muye, I. M., & Hassan, A. F. S. (2016). Does Islamic Insurance Development Promote Economic Growth? A Panel Data Analysis. *Procedia Economics and Finance*, 35, 368-373. [https://doi.org/10.1016/S2212-5671\(16\)00045-9](https://doi.org/10.1016/S2212-5671(16)00045-9)
- Nasreen, S., Mahalik, M. K., Shahbaz, M., & Abbas, Q. (2020). How do financial globalization, institutions and economic growth impact financial sector development in European countries? *Research in International Business and Finance*, 54. <https://doi.org/10.1016/j.ribaf.2020.101247>
- Pradhan, R. P., Arvin, M. B., Nair, M., & Bennett, S. E. (2020). Unveiling the causal relationships among banking competition, stock and insurance market development, and economic growth in Europe. *Structural Change and Economic Dynamics*, 55, 74-87. <https://doi.org/10.1016/j.strueco.2020.08.006>
- Risfandy, T., Harahap, B., Hakim, A. R., Sutaryo, S., Nugroho, L. I., & Trinugroho, I. (2019). Equity Financing at Islamic Banks: Do Competition and Bank Fundamentals Matter? [Article]. *Emerging Markets Finance and Trade*, 56(2), 314-328. <https://doi.org/10.1080/1540496x.2018.1553160>

- Robinson, J. (1951). The Rate of Interest. *Econometrica*, 19(2), 92-111. <https://doi.org/10.2307/1905728>
- Safitri, K. A. (2019). An empirical study of relationships between islamic insurances and economic growth [Article]. *International Journal of Recent Technology and Engineering*, 7(6), 1036-1043. <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85066749694&partnerID=40&md5=f09a487babfc0084e642c2b094465ad2>
- Schumpeter, J., & Backhaus, U. (2003). The Theory of Economic Development. In J. Backhaus (Ed.), *Joseph Alois Schumpeter: Entrepreneurship, Style and Vision* (pp. 61-116). Springer US. https://doi.org/10.1007/0-306-48082-4_3
- Sherif, M., & Hussnain, S. (2017). Family Takaful in developing countries: the case of Middle East and North Africa (MENA). *International Journal of Islamic and Middle Eastern Finance and Management*, 10(3), 371-399. <https://doi.org/10.1108/IMEFM-01-2016-0016>
- Trabelsi, L., Bahloul, S., & Mathlouthi, F. (2020). Performance analysis of Islamic and conventional portfolios: The emerging markets case. *Borsa Istanbul Review*, 20(1), 48-54. <https://doi.org/10.1016/j.bir.2019.09.002>
- Wu, C.-F., Huang, S.-C., Chang, T., Chiou, C.-C., & Hsueh, H.-P. (2020). The nexus of financial development and economic growth across major Asian economies: Evidence from bootstrap ARDL testing and machine learning approach. *Journal of Computational and Applied Mathematics*, 372. <https://doi.org/10.1016/j.cam.2019.112660>

