Abstract - This paper aims to examine the long-run relationship between Islamic banking development and economic growth in Malaysia for 15 years from 2004Q1 – 2018Q4. This research employed the bound testing approach and long-run models which are developed within the autoregressive distributed lag (ARDL) framework. Islamic banking development is represented by the quarterly time-series data of the Islamic banks’ total deposits \([\text{ln(dep)}]\), whereas Gross Domestic Products \([\text{ln(GDP)}]\) represents the economic growth. In addition, four control variables were selected, namely gross fixed capital formation \([\text{ln(GFCF)}]\), trade openness \([\text{ln(OPN)}]\), consumer price index \([\text{ln(CPI)}]\), and general government expenditure \([\text{ln(GE)}]\). The findings revealed that there is an Islamic finance-economic growth relationship in Malaysia. Besides, they also highlighted the difference in the Islamic finance-economic growth nexus between pre- and post-IFSA 2013. The findings are expected to have important implications for the banking institutions, regulators, and policymakers in formulating future strategies to enhance both the banking and economic developments in Malaysia.

Keywords: Islamic banking, Islamic finance, Financial development, Economic growth, ARDL

1. Introduction

As of 2018, the gross national income (GNI) per capita in Malaysia was marked at USD10,460, which is below the yardstick of high-income country status by only USD1,915 (World Bank, 2019b). Therefore, Malaysia is well on track in its aspiration to achieve the high-income and developed nation status by 2024 as its economy continues to expand despite the moderated growth rate. The latest statistics in 2019Q4 shows that the growth has slowed down to 3.6 per cent (Bank Negara Malaysia, 2020), and this trend is expected to persist until 2020 due to the heightened uncertainty and external headwinds (World Bank,
The economic outlook for Malaysia in this coming year is expected to tilt to the downside due to the on-going macroeconomic turbulences that mainly stem from the geopolitical crisis. It is believed that these factors could affect the financial market and services volatility.

The gross domestic product (GDP) statistics in 2018 highlight the significant contribution of the services sector in Malaysia that accounts for 55.5%. In addition, finance and insurance (6.8%) is the third-largest contributor to the services sector that comes after wholesale and retail trade (15.6%) and government services (8.7%) (Bank Negara Malaysia, 2019a). As reported by the World Bank (2019a), the financial soundness indicators in Malaysia revealed that the nation’s banking system remains resilient. The financial institutions have sound profitability, and steady asset quality, whereas the gross impaired loans (GIL) ratio remains stable.

The former Governor of Bank Negara Malaysia, Tan Sri Dr. Zeti Akhtar Aziz, mentions that the Islamic finance industry in Malaysia has successfully promoted several economic sectors in the financial system and contributed to financial stability (Khaliq & Thaker, 2017). Malaysia is one of the pioneers and front-runners in the global Islamic banking industry, it has an exemplary role to other countries. Since the inception of its first Islamic bank (Bank Islam Malaysia Berhad) in 1983, the country’s development in the Islamic banking industry has come a long way in terms of breadth and depth. To date, there are 16 Islamic banks (11 local and 5 foreign) that are operating side-by-side with 26 other conventional banks in the Malaysian dual banking system.

Up until the end of 2017, Malaysia is home to the third-largest Islamic banking assets of USD201 billion. Malaysia is still working hard to meet the target of achieving 40% for the overall banking system’s loans by 2020. The latest statistics as of December 2018 revealed that it had reached 36.6%, which shows an increase of 1.7% from the previous year (Bank Negara Malaysia, 2019b). In its latest edition, RAM Ratings expected that the growth rate of Islamic financing would continue to increase around 10% to 11% in 2019. Besides, the Islamic banking system’s deposits had increased by 12.4% in 2018, with a slower growth rate compared to the previous year (RAM Ratings, 2019). Although the amount of Islamic deposits is still significantly lower than its conventional counterpart, there has been a steady growth in its market share for the overall banking deposits. The statistics revealed that the market share of Islamic banking’s deposits has consistently increased from 2014 to 2018, i.e. 28.2%, 20%, 31.5%, 33.8%, and 34.9%, each year respectively (Bank Negara Malaysia, 2019b).

The steady growth of Islamic banks is expected to continue, especially after the implementation of the new Value-Based Intermediation (VBI) strategies under the VBI Strategy Paper released by Bank Negara Malaysia (BNM). It is expected that the Islamic banking industry would leverage the facilities offered by the Asian Development Bank (ADB) Trade Finance Programme and Supply Chain Finance Programme. Both programmes have increased their capacity in the halal industry financing. The Islamic banking services are also offered by the development financial institutions (DFIs) that are governed by the Development Financial Institutions Act 2002. Two from the six DFIs have converted into full-fledged Islamic financial institutions, namely Bank Kerjasama Rakyat Malaysia Berhad and Agrobank. The rest of the banks are also expected to go through a similar transition to be in line with the government’s aspirations of becoming the global Islamic financial hub.
Research on the nexus between financial development and economic growth has been conducted in the endogenous growth literature. Financial development is defined as “the factors, policies, and institutions that lead to effective financial intermediation and markets, as well as deep and broad access to capital and financial services” (World Economic Forum, 2012: xiii). Economic growth is generally defined as “a long-term rise in capacity to supply increasingly diverse economic goods to its population, and this growing capacity is based on advancing technology and the institutional and ideological adjustments that it demands” (Kuznets, 1973:247). In examining the relationship between the two terms, Abduh and Omar (2012) highlight three types of relationships between financial development and economic growth, which were discussed in the literature:

1) Schumpeter’s supply leading (finance drives growth);
2) Robinson’s demand following (growth drives finance); and
3) bi-directional causal relationships.

This paper intended to examine the causal relationship between Islamic banking development and economic growth in Malaysia. The Islamic deposits variable is used as the proxy of Islamic banking development, whereas gross domestic products (GDP) represents economic growth. Besides that, this paper also included three control variables, namely gross fixed capital formation, trade openness, consumer price index and general government expenditure.

There has been a significant development in the Malaysian financial system landscape with the issuance of Islamic Financial Services Act 2013 (IFSA 2013) by BNM which came into force on June 30, 2013. The objective is mainly to ensure that the financial regulatory and supervisory system remain relevant and useful. This new reform is essential to maintain financial stability and support inclusive growth in the financial system and economy. Given that the research period is from 2004 to 2018, this paper contributes to the body of literature by extending the research scope by examining any difference in the results between pre-IFSA 2013 and post-IFSA 2013. This paper is structured into six sections as follows: Section 1 presents the discussion with some background of the Malaysian Islamic banking development. Section 2 looks into the literature review of the research area; Section 3 elaborates on the data and research methodology; Section 4 presents the findings and discussions; and Section 5 presents the conclusion.

2. Literature Review

Most of the existing body of literature debated the relationship between financial development and economic growth. Many research found a close relationship between the two, and some studies suggested otherwise (Nyasha & Odhiambo, 2015).

It is believed that the financial sector has a vital role in promoting economic growth by channelling the financial resources to the economic segments which needed it the most. The financial services show advancement when the financial sector is developing. This development allows higher risk diversification, and ultimately achieves improved productivity through better financial resources allocation to the right producers and consumers (Furqani & Mulyany, 2009; World Economic Forum, 2012). The link between financial development and economic growth was highlighted in the seminal work by
Schumpeter (1912). It suggested that through the “identification and funding of productive investment”, the banking system has an impact on the national income growth and economic development.

Among the works of literature which support the positive impact of financial system expansion on the economic growth are Furqani and Mulyany (2009), Abd. Majid and Kassim (2015), Sehrawat and Giri (2015), Kassim (2016), Kalim, Mushtaq, and Arshed (2016), and Ibrahim and Alagidede (2018). It is called “supply leading” due to the transfer of resources “from the traditional, low growth sectors to the modern high growth sectors and to promote and stimulate an entrepreneurial response in these modern sectors” (Patrick, 1966: 75). Tabash (2018) and Tabash and Dhankar (2014) suggested that if the financial sector successfully directs the financial resources to the right sectors, it would eventually lead to economic growth. They find that in the case of the United Arab Emirates (UAE), there is a causal relationship where Islamic banking development has a positive impact on the country’s economic growth.

To date, some empirical evidence revealed that a significant part of the economic growth rate differences among countries is due to the varying level of the country’s financial development (World Economic Forum, 2012). However, the relationship remains a question due to the lack of theoretical consensus. According to Cave, Chaudhuri, and Kumbhakar (2019), four competing theories are presented in the argument of the finance-economic growth nexus, namely bank-based view, market-based view, financial services view, and law and finance view. Therefore, it is best to look at the holistic approach in examining the financial development aspect. In their research, Cave et al. (2019) found a significant negative relationship between the banking sector and economic growth.

On the other hand, Robinson (1952) suggested that economic growth can lead to financial sector development. The increases in real national income will result in an increase in the demand for external funding by the enterprises, which is usually facilitated by the financial intermediaries. Thus, financial development is a result of real economic growth, i.e., demand following. This idea is further corroborated by the findings for Sub-Saharan Africa and East Asia and Pacific countries (Özcan & Ari, 2011; Hassan, Sanchez, & Yu, 2011), and Russian banks from 1999-2014 (Ono, 2017).

The third view is the bi-directional causality of the finance-growth nexus (Luintel & Khan, 1999; Lawal, Nwanji, Asaley, & Ahmed, 2016; Abduh & Omar, 2012). Ono (2017) found that when M2 is used as the proxy of financial development, there is a bi-directional causality for 1999-2008. It is believed that financial development enhances economic growth, whereas economic growth boosts financial development.

Lucas (1988) and Harris (1997) suggested that finance has nothing to do with economic growth. The latter used market-based view in his research and found no significant relationship between the stock market and per capita output growth. Similarly, a cross-country research by Galindo and Micco (2004) found that state-owned banks do not induce the growth rates of the manufacturing industries which rely on external funding. This view is further supported by Narayan and Narayan (2013) who found no evidence of any relationship between the financial sector and the economic growth in the Middle Eastern countries.
In light of the rising global Islamic banking industry, it is interesting to examine the relationship between its development and economic growth, especially Malaysia, that has a target to become the global industry leader. So far, the research on the relationship between Islamic banking development and economic growth is still in its infancy stage. Furqani and Mulyany (2009) found that there is evidence to support the demand-following hypothesis of GDP and Islamic bank, where an increase in GDP can develop Islamic banking. Meanwhile, Abd. Majid and Kasim (2015) documented a significant role by Islamic banks and financial institutions (IBFIs) in the Malaysian economy during the post-1997 Asian financial turmoil period (1997:Q3-2009:Q2). In particular, significant unidirectional causality was found in the IBFIs development for economic growth that supports the finance-growth led hypothesis or the supply-leading view.

In examining the effects of Islamic banking on the finance-growth nexus, Caporale and Helmi (2018) found that there is a supply leading relationship in countries with Islamic banking presence, and there is a demand-following relationship in countries without Islamic banks. A plausible reason to support this finding is the distinctive feature of Islamic financing, which puts a high emphasis on real economic activities, and hence the improvement in the economic resource allocaton. This reason can lead to long-run economic growth.

Given the fact that approximately one-third of the Islamic banks in Malaysia are foreign banks, the composition would likely to affect the country’s economic growth. As suggested by Ghosh (2017), foreign banks may, directly and indirectly, have either a positive or negative bearing on economic growth. On the positive side, foreign banks have better corporate control and risk management practices which allow them to allocate the resources that advocate economic growth efficiently.

On the contrary, the opponents of the foreign banks’ entrance into the industry suggested that these foreign banks are inclined to focus on profitable borrowers and ignore small and medium-sized companies. The main reason for this action is due to the information asymmetry problem between the foreign banks and the small and medium-sized companies which are ambiguous. The small and medium-sized companies commonly contribute the most to the economy, and it is expected that the participation of foreign banks in the industry might reduce economic growth.

3. Methodology of Study

1.1 Data

In order to represent the real sector of the economy, the gross domestic product is used. For the proxy of Islamic banking development, the total deposits by Islamic banks are used as an indicator to signify the ability of the Islamic banks to finance real economic activities. This indicator is adopted because it captures the ability of the Islamic banks to mobilise funds from the surplus units of the economy. Gross fixed capital formation is included as a proxy for capital accumulation or investment, and it is considered one of the major channels that financial intermediaries may influence growth. In order to avoid bias due to the omitted variables, other variables are included in the model to control possible effects of other growth determining factors as follows: trade openness (representing the external sector), general government expenditure (representing the public sector), and consumer price index (as an indicator for macroeconomic stability). It is hypothesised that trade openness can contribute
positively to economic growth by providing domestic entrepreneurs access to foreign markets. Government expenditure may lead to budget deficit, which is financed by borrowing from the financial system that has the potential of crowding out private investment; hence, it can negatively affect growth. If government spending is effectively conducted, it may contribute positively to growth. Consumer price index indicates the price stability in the economy, which has an impact on the levels of deposits and financing by the Islamic banks and economic growth.

The selection of the variables is consistent with the existing studies in this area (Yusof & Bahlous, 2013; Abdul Manap et al., 2012; Abduh et al. (2012); Abduh & Omar (2012); Kassim, 2016). This research used quarterly data for the period 2004Q1–2018Q4, that were measured in local currency at constant prices. The data for Islamic bank development came from the Monthly Statistical Bulletin of Central Bank of Malaysia – Bank Negara Malaysia. The data for the remaining variables were obtained from the International Monetary Fund's International Financial Statistics database.

1.2 Econometric Model

This paper specifies the following long-run equation of GDP model and IBD mode:

\[
\ln(GDP)_t = \alpha_0 + \alpha_1 \ln(IBD) + \alpha_2 \ln(IBD*dummy) + \alpha_3 \ln(GFCF) + \alpha_4 \ln(OPN) + \alpha_5 \ln(CPI) + \alpha_6 \ln(GE) + e_t \\
\]

(1)

\[
\ln(IBD)_t = \alpha_0 + \alpha_1 \ln(GDP) + \alpha_2 \ln(GDP*dummy) + \alpha_3 \ln(GFCF) + \alpha_4 \ln(OPN) + \alpha_5 \ln(CPI) + \alpha_6 \ln(GE) + e_t \\
\]

(2)

where GDP is gross domestic product, IBD is Islamic bank deposit, GFCF is gross fixed capital formation, OPN is openness, CPI is consumer price index, GE is government expenditure, dummy is the period after 2013Q3 and \( \mu \) is the disturbance term. All the variables are in the natural logarithm form except for dummy. Besides, time-varying parameter analyses use the quarter 2013Q3 as a slope dummy (GDP*dummy and IBD*dummy) to investigate the Islamic finance-economic growth nexus between pre- and post-IFSA 2013.

This research adopted the bounds testing approach for the cointegration based on the Autoregressive Distributed Lag (ARDL) model framework by Pesaran, Shin, and Smith (2001). Unlike the previous approaches, the ARDL model does not have a restricting assumption that all the variables must be integrated at the same order. Therefore, the ARDL can be applied regardless of whether the variables are all I (0), I (1), or mutually cointegrated (Pesaran et al., 2001). It also addresses the problems associated with omitted variables and autocorrelations, besides providing unbiased and efficient estimates and valid t-statistics even in the presence of endogenous regressors (Narayan, 2004; Odhiambo, 2010).

The ARDL approach for the cointegration involves the estimation of the restricted error correction (EC) version of the ARDL model. For this research, the models involve both growths lead Islamic banking and Islamic banking lead growth, as follows:

\[
\Delta \ln(GDP)_t = \alpha_0 + \lambda_1 \ln(IBD)_{t-1} + \lambda_2 \ln(IBD*dummy)_{t-1} + \lambda_3 \ln(GFCF)_{t-1} + \lambda_4 \ln(OPN)_{t-1}
\]
\[
\begin{align*}
&+ \lambda_4 \ln(CPI)_{t-1} + \lambda_5 \ln(GE)_{t-1} + \lambda_6 \ln(GDP)_{t-1} + \gamma \text{dummy} \\
&+ \sum_{i=0}^{p} \beta_i \Delta \ln(IBD)_{t-i} + \sum_{i=0}^{p} \beta_2 \Delta \ln(IBD* \text{dummy})_{t-i} + \sum_{i=0}^{p} \beta_3 \Delta \ln(GFCF)_{t-i} + \sum_{i=0}^{p} \beta_4 \Delta \ln(OPN)_{t-i} \\
&+ \sum_{i=0}^{p} \beta_5 \Delta \ln(CPI)_{t-i} + \sum_{i=0}^{p} \beta_6 \Delta \ln(GE)_{t-i} + \sum_{i=0}^{p} \beta_7 \Delta \ln(GDP)_{t-i} + \mu_i \quad (3)
\end{align*}
\]

\[
\begin{align*}
\Delta \ln(IBD)_t &= \alpha_0 + \lambda_1 \ln(GDP)_{t-1} + \lambda_2 \ln(GDP* \text{dummy})_{t-1} + \lambda_3 \ln(GFCF)_{t-1} + \lambda_4 \ln(OPN)_{t-1} \\
&+ \lambda_5 \ln(CPI)_{t-1} + \lambda_6 \ln(GE)_{t-1} + \lambda_7 \ln(IBD)_{t-1} + \gamma \text{dummy} \\
&+ \sum_{i=0}^{p} \beta_i \Delta \ln(GDP)_{t-i} + \sum_{i=0}^{p} \beta_2 \Delta \ln(GDP* \text{dummy})_{t-i} + \sum_{i=0}^{p} \beta_3 \Delta \ln(GFCF)_{t-i} + \sum_{i=0}^{p} \beta_4 \Delta \ln(OPN)_{t-i} \\
&+ \sum_{i=0}^{p} \beta_5 \Delta \ln(CPI)_{t-i} + \sum_{i=0}^{p} \beta_6 \Delta \ln(GE)_{t-i} + \sum_{i=0}^{p} \beta_7 \Delta \ln(IBD)_{t-i} + \mu_i \quad (4)
\end{align*}
\]

Where \( p \) is the optimal lag length. F-test is conducted to detect if the variables are cointegrated, whether they have a long-run relationship. The null hypothesis for both models is \( H_0: \lambda_1 = \lambda_2 = \lambda_3 = \lambda_4 = \lambda_5 = \lambda_6 = 0 \), which is tested against the alternative hypothesis \( H_1: \lambda_i \neq \lambda_2 \neq \lambda_3 \neq \lambda_4 \neq \lambda_5 \neq \lambda_6 \neq 0 \). The long-run coefficient test by the null hypothesis \( \alpha_i = \frac{\lambda_i}{\lambda_7}, i = 1,2,3,4,5 \text{ and } 6 \).

The computed F-statistic is evaluated using the critical values presented by Pesaran et al. (2001). The decision rule is determined when the computed F-statistic is higher than the upper-bound value, hence \( H_0 \) is rejected, which concludes that there is a long-run relationship between the variables considered. If the computed value falls in between the two bounds or lower than the lower bound, the results are inconclusive and insignificant, respectively.

Hence, the selection of optimal lag length is critical at all the stages of analysis outlined above. This research used the quarterly data with only 60 numbers of observations, and the appropriate optimal lag length was only 4. The lag length criteria are the Schwarz Bayesian Criterion (SBC) and the Akaike Information Criterion (AIC). The SBC always select a parsimonious model by the smallest possible lag length. In addition, the SBC-based models have a lower prediction error than the AIC in all cases (Jalil & Ma, 2008). Thus, the lag length selection in this research was based on the SBC criterion to satisfy the principle of parsimony and avoid significant prediction error.

Moreover, the diagnostic tests were conducted to test the goodness of fit and structural stability of the models so that the results are relevant for policy recommendations. In this regard, the serial correlation test, normality test, stability test, and heteroscedasticity test were conducted.
4. Result

For the first step of the analysis, this research investigated the time series properties of the fiscal variables. Based on unit root result in Table 1, all variables are mixed I (0) and I (1). None of the series is integrated into order two, I (2) that fulfills the pre-requisite proceed for the bounds testing procedure.

Table 1: Unit Root Test

<table>
<thead>
<tr>
<th>Variable</th>
<th>Level ADF</th>
<th>PP</th>
<th>First different ADF</th>
<th>PP</th>
</tr>
</thead>
<tbody>
<tr>
<td>LGDP</td>
<td>-3.3946 *</td>
<td>-3.4868 *</td>
<td>-9.2719 ***</td>
<td>-7.8521 ***</td>
</tr>
<tr>
<td>LIBD</td>
<td>-0.3393</td>
<td>-0.3393</td>
<td>-5.6600 ***</td>
<td>-5.6357 ***</td>
</tr>
<tr>
<td>LGFGC</td>
<td>-1.8052</td>
<td>-2.1984 **</td>
<td>-1.6407 **</td>
<td>-8.9875 ***</td>
</tr>
<tr>
<td>LOPN</td>
<td>-1.0263</td>
<td>-1.8254</td>
<td>-8.3410 ***</td>
<td>-17.2645 ***</td>
</tr>
<tr>
<td>LCPI</td>
<td>-3.5596 **</td>
<td>-2.7795 **</td>
<td>-6.9706 ***</td>
<td>-7.6663 ***</td>
</tr>
<tr>
<td>LGE</td>
<td>-0.2442</td>
<td>-6.0575 ***</td>
<td>-4.4808 ***</td>
<td>-18.1953 ***</td>
</tr>
</tbody>
</table>

Note: *, **, *** indicate significant level at 10%, 5% and 1 %, respectively.

As stated earlier, the bounds tests approach for the cointegration was adopted, and the results are presented in Table 2. For both models, the calculated F-statistics for GDP and IBD models are higher than the upper critical bounds at 1% level of significance (7.78 and 5.20 > 3.28). Consequently, there is strong statistical evidence of the long-run relationship between the variables model GDP and model IBF. However, these models include multivariables that cannot interpret the casual relationship by bounds test (Abduh & Omar, 2012).

Table 2: Results of Bound F-Test for Long-Run Relationship

<table>
<thead>
<tr>
<th>Computed F-Statistic</th>
<th>Initial sample: n=60</th>
<th>Critical bounds (k=6)</th>
</tr>
</thead>
<tbody>
<tr>
<td>GDP Model</td>
<td>7.7780</td>
<td>3.2930 4.6150</td>
</tr>
<tr>
<td>IBD Model</td>
<td>5.2023</td>
<td>2.1140 3.1530</td>
</tr>
</tbody>
</table>

Level of significance | I(0) | I(1) |
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>10%</td>
<td>2.1140</td>
<td>3.1530</td>
</tr>
<tr>
<td>5%</td>
<td>2.4560</td>
<td>3.5980</td>
</tr>
<tr>
<td>1%</td>
<td>3.2930</td>
<td>4.6150</td>
</tr>
</tbody>
</table>

Note: The critical values of I(0) and I(1) refer to Narayan (2005)

ARDL analysis was used to investigate the long-run causal relationship between Islamic banking and economic growth. Table 3 shows that there is strong evidence to support Islamic finance-drives-growth relationship, but it is insignificant for the growth-drives-Islamic finance relationship. All variables in the IBD model are insignificant, and only the non-control variables in GDP model are statistically significant. These findings support the idea by Abduh and Omar (2012) and Kassim (2016) that Islamic finance drives growth. Financial sector development, including the Islamic financial sector, can generally reduce information asymmetry and diversify risks. In addition, it is believed that the Islamic finance-economic
growth causal relationship is partly due to the ability of the Islamic financial sector to allocate the resources efficiently.

Besides that, the slope dummy was used to investigate the impact of IFSA 2013 on Islamic finance-drives-growth relationship. The result revealed that the positive effect of Islamic finance-drives-growth was enhanced by IFSA 2013 (0.30 > 0.24). This finding confirmed that the IFSA 2013 could support inclusive growth in the financial system and economy.

The results of the diagnostic tests are shown in the lower segment of Table 3. It shows that there is no serial correlation among the residuals of both models, and the residuals are normally distributed and homoscedastic. The model is correctly specified; thus the coefficients estimated in these models are stable, efficient, and unbiased, which can be used for policy recommendations.

Table 3: ARDL Estimate of Long-Run Relationship

<table>
<thead>
<tr>
<th>Regressors</th>
<th>GDP as regressand (2,0,0,0,1,1)</th>
<th>IBD as regressand (2,0,1,0,2,4,2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coefficients</td>
<td>t-statistics</td>
<td>Coefficients</td>
</tr>
<tr>
<td>LGDP</td>
<td>2.3719</td>
<td>1.5230</td>
</tr>
<tr>
<td>LGDP*dummy</td>
<td>-4.9636</td>
<td>-1.6340</td>
</tr>
<tr>
<td>LIBD</td>
<td>0.2424 ***</td>
<td>2.9124</td>
</tr>
<tr>
<td>LIBD*dummy</td>
<td>0.3020 ***</td>
<td>2.2406</td>
</tr>
<tr>
<td>LGFCF</td>
<td>0.3191 ***</td>
<td>3.2932</td>
</tr>
<tr>
<td>LOPN</td>
<td>0.2277</td>
<td>1.1748</td>
</tr>
<tr>
<td>LOPN</td>
<td>0.6977</td>
<td>1.2604</td>
</tr>
<tr>
<td>LOPN</td>
<td>-0.0976</td>
<td>-1.2005</td>
</tr>
<tr>
<td>LOPN</td>
<td>0.9618</td>
<td>1.0771</td>
</tr>
<tr>
<td>Intercept</td>
<td>-32.4091</td>
<td>-1.4908</td>
</tr>
</tbody>
</table>

Coeficients Coefficients Coefficients Coefficients

Diagnostic test

<table>
<thead>
<tr>
<th>F-Statistic</th>
<th>P-Value</th>
<th>F-Statistic</th>
<th>P-Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>LM (1)</td>
<td>0.1627</td>
<td>0.6886</td>
<td>0.0100</td>
</tr>
<tr>
<td>LM (2)</td>
<td>0.0872</td>
<td>0.9166</td>
<td>0.2177</td>
</tr>
<tr>
<td>ARCH (1)</td>
<td>0.0767</td>
<td>0.7829</td>
<td>1.4062</td>
</tr>
<tr>
<td>ARCH (2)</td>
<td>1.0489</td>
<td>0.3575</td>
<td>0.8147</td>
</tr>
<tr>
<td>Jarque-Bera</td>
<td>1.3994</td>
<td>0.4967</td>
<td>7.4668</td>
</tr>
</tbody>
</table>

Similarly, Pesaran and Pesaran (1997) suggested that the cumulative sum of recursive residuals (CUSUM) and the cumulative sum squares of recursive residuals (CUSUMSQ) tests are conducted to test structural stability. In addition to the various specific serial correlations, the CUSUM and CUSUMSQ were conducted by model stability, normality, and heteroscedasticity tests for the overall stability of the estimated coefficients in all the regressions. The results in Figure 1 show that all the plots of the CUSUM and CUSUMSQ statistics are within the critical bounds of the 5% significance level. Therefore, the null hypothesis states that all the coefficients in the regressions are stable and cannot be rejected; thus, the results are suitable for policy recommendations.
5. Conclusion

The present research is designed to determine the effects of IFSA 2013 to the causal relationship between Islamic baking and economic growth in Malaysia. This research employed the ARDL framework and bounds testing approach with slope dummy to distinguish the influence of Islamic banking development on the economy in the period of before and after IFSA 2013. The results revealed that there is no support to the growth-drives-Islamic finance relationship, although the total Islamic deposit has a significant effect on the real economy in the long run. The findings of this supply-leading relationship between Islamic banking development and economic growth show that Malaysia is on the right trajectory for being committed to developing the nation’s Islamic financial system.

Furthermore, this research also revealed that the effects of Islamic finance-drives-growth have improved from the pre-IFSA 2013 to post-IFSA 2013 period. The Islamic finance development is supported by a well-developed regulatory framework that enhances economic growth. This result signifies the importance of a conducive and refined legal and regulatory framework in supporting the transformation of the Malaysian Islamic finance industry to become a global industry that strengthens the country's position as a leader in the field. For the essential contribution of IFSA 2013 to the Islamic financial system in Malaysia, it is recommended that policymakers focus on implementing policies that can develop the Islamic finance capabilities to boost the economy.
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