Role of Islamic banking in economic growth: Case analysis of Malaysia

Saaransh Gupta and Vatsal Sapra

Abstract
In the Islamic paradigm, the banking sector aims at mobilizing financial resources and investing them in an attempt to achieve predetermined social and financial objectives, by following a system of reasonable profit and return from investments. Interest being the cogwheel of the modern banking, is strictly prohibited in the Islam form of banking. This paper is framed with an intention to outline in brief the conceptual framework of Islamic Banking, while aiming at conducting a deep dive analysis of its effectiveness. It seeks to examine the relationship between economic growth and development of Islamic Finance in Malaysia, using econometric analysis. The paper adopts a mathematical approach to examining practically the efficacy of Islamic finance in the perspective of an economy's GDP. The exploratory study on the subject matter was carried out by empirically analysing the relationship between Islamic Banks 'growth, Gross Domestic Product Growth and Gross Fixed Capital Formation Growth.

Keywords: banking, economic, gross, Islamic.

Introduction
Islamic banking conjointly referred to as non-interest banking, is a banking industry that's fashioned around on the principles of Muslim, or Shari'ah, law and guided by Muslim philosophy.
Most banks make money by charging interest for loans, while trying to attract those who deposit by offering interest. An Islamic bank, however, works differently. Instead, an Islamic bank collects all of people's funds, invests in tangible and real assets like buildings, land or commodities, encourages risk-reward sharing and entrepreneurship, at an equivalent time emphasising the non-breakable nature of contracts. Gambling and speculation are not allowed and any activity which may be considered wrongful such as pornography, alcohol or pork products.

History
This is has originated with the very birth of Islam and with Prophet himself. Their way of business went on for a long with no role of interest. They struck in partnerships. They united the three most important factors of production, namely: capital, labour and entrepreneurship. The capital-owner gave in the money and the partner managed the business. Everything in a pre-determined share of the profits. If there was a loss, the capital-provider lost his money and the manager lost his time and labour.

Theoretical Basis for Islamic Banking
Everyone thinks that Islamic banking is simply an interest-free financial structure. But, in fact, Islamic economics is actually a complete system of social and economic justice. It deals with property rights, the incentive system and the allocation of resources, economic freedom
and decision-making and the proper role of government. But also only pre decided rates are forbidden and undecided ones like profit are fine.

Working of Islamic Banking

The basic concept of Islamic banking is avoiding interest; hence most of the literature and studies revolve around the working of the bank in a way that it can avoid interest and still function well.

Another principle is that no one should be earning profit or getting a reward, without bearing risk. The risk but be properly appropriated and hence the reward too.

Assume a partnership of two people where one has capital but no skills and the one has skills but no capital. Mudarabah (the Islamic way, or PLS). The two persons cooperate with one another on the idea of partnership, wherever the capital-owner provides the capital and therefore the alternative party puts his management skills into the business. The capital-owner isn't concerned within the actual day-after-day operation of the business, however is unengaged to stipulate sure conditions that he might hold necessary to confirm the simplest use of his funds. When the ending of the amount, which can be the termination of the contract or such time that returns square measure obtained from the business, the capital-owner gets back his principal quantity at the side of a pre-agreed share of the profit.

The quantitative relation within which the overall profits of the enterprise are distributed between the capital-owner and also the manager of the enterprise is decided and mutually united at the time of coming into the contract, before the start of the project. Within the event of loss, the capital-owner bears all the loss and also the principal is reduced by the number of the loss. It's the danger of loss that entitles the capital-owner to a share within the profits. The manager bears no loss, as a result of he has lost his time and his work has been wasted. This is, in essence, the principle of mudarabah.

Islam argues that there's no excusable reason why someone ought to get pleasure from a rise in wealth from the employment of his cash by another unless he's ready to show his wealth to the danger of loss additionally. Islam views true profit as a comeback for entrepreneurial effort and objects to money being placed on a pedestal above labor, the other contemplate production. As long because the owner cash is willing to become a shareowner within the enterprise and expose his money to the danger of loss, he's entitled to receive a simple proportion of the profits and not just a just nominal share supported the prevailing rate.

Hence, under Islamic banking cost of capital does not equate to zero interest as assumed by many people. The difference is that, as compared to traditional banking systems, here the rate of interest is not pre-determined for cost of capital, instead it is the appropriate sharing of profit. The records of the banks have shown pretty encouraging statistics, hence making the case for Islamic banking, stronger.

Islamic Banking in Malaysia

As the industry in Malaysia has been around for 30 years, Malaysia has been regarded as one of the leaders and top of global front in Islamic Banking. There are a total of 16 fully fledged licensed Islamic Banks in Malaysia, a no. of party Islamic and many foreign owned entities, while the nation's sukuk market represents over 60% of the international sukuk market share.

All these statistics are not very surprising because the Malaysian government has put in considerable efforts in boosting the Islamic banking sector of the nation and continues to do so still.

The reasons that the sector is flourishing is due to comprehensive market structure, a strong and well enforced regulatory framework and pretty dynamic market participants.

This template is formatted according to APA Style guidelines, with one inch top, bottom, left, and right margins; Times New Roman font in 12 point; double-spaced; aligned flush left; and paragraphs indented 5-7 spaces. The page number appears one inch from the right edge on the first line of each page, excluding the Figures page.

Literature Review

Islamic Banking and Economic Growth - A cointegration Approach

Mosab I. Tabash 1 Raj S. Dhankar2

The paper studies about Islamic banking and growth of nation. The results indicate that Qatar’s Islamic Banks will in the long run help with economic welfare and help in poverty reduction. The results show that Islamic Banking is good for boosting investment.

Are Islamic Banks More Resilient during Financial Panics?

Moazzam Farooq and Sajjad Zuheer

This studies about the relative resilience of Islamic Banks as compared to Commercial Banks during the times of Financial Crisis. The Islamic Banks also attract more deposits which also suggest the role of Religious Branding. They lend more loans during crisis. All in all, the paper suggests that Islamic bank can bring more stability to the banking system.

Islamic Banks and Financial Stability: An Empirical Analysis

Martin Cihák and Heiko Hesse

In this paper, the study is done on the stability of the various banks- We find that (i) small Islamic banks are usually financially stronger than small commercial banks; (ii) large commercial banks are usually financially stronger than large Islamic banks; and (iii) small Islamic banks are usually financially stronger than large Islamic banks, which may reflect challenges of credit risk management in large Islamic banks. They also concluded that themarket share of Islamic banks does not have a significant impact on the financial strength of other usual conventional banks.

Islamic Banking in Pakistan: A Critical Review

Dr. Hafiz Muhammad Zubair and Nadeem Ghafoor Chaudhry

This compares the Islamic and Conventional Banking system in detail. This also studies how the banks and not completely following ethics. A detailed study is done on the system and it is found that the what the companies are advertising and actually doing is really different.

Huang et al. in (2009) [6, 12]

He has re-examined the dynamic relationship between financial development and economic growth on the dataset
used in Levine et al. (2000). He has shown that they support a positive linkage between financial development and economic growth, and found that financial development has an important effect on growth in low-income countries.

**Hassan, Sanchez and Yu (2011)**
They have focused more on the low- and middle income countries from 1980 to 2007. The study has some significant findings. These include; a strong long-run connection between financial development and economic growth, and a two directional correlation exists between financial development and economic growth among the Sub-Saharan African countries, the East Asian countries, and the Pacific countries.

**Objective and Hypotheses**
This research paper aims to look at Islamic Banking as a driver for economic growth by tracking its impact on the growth of GDP in Malaysia. It also aims to ascertain the shift towards the relatively new concept of Islamic Banking by tracking the impact of correlation between increase in Gross Fixed Capital Formation and growth of Islamic Banking assets.

For the following purpose, the following hypotheses have been defined:

- **H0**: Growth in Total Assets with Islamic Banks does not cause Growth in GDP
- **H1**: Growth in Total Assets with Islamic Banks does cause Growth in GDP
- **H0**: Growth in Total Assets with Islamic Banks causes Growth in Gross Fixed Capital Formation Growth Rate
- **H1**: Growth in Total Assets with Islamic Banks does not cause Growth in Gross Fixed Capital Formation Growth Rate

**Methodology**

**I. Data**
The research paper uses the following data for a period of 11 years from 2005-2016:

1. Gross Domestic Product Growth Rate in Malaysia
2. Gross Fixed Capital Formation Growth Rate in Malaysia
3. Total assets with Islamic Banks in Malaysia Growth Rate

For the purpose of the study, the data of Islamic Banks' Assets Growth Rate was taken from the central bank of Malaysia’s website ie bnm.gov.my while the data on the growth rate of GDP and GFCF was taken from UN yearly reports on Malaysia’s economic development.

**II. Method**

**A. Descriptive Analysis**
As a first step, we calculate the following descriptives with respect to all the three data sets that we have ie Gross Domestic Product Growth Rate, Gross Fixed Capital Formation Growth Rate in Malaysia, and total assets with Islamic Banks in Malaysia Growth Rate.

- **Mean**: It depicts the average of the growth rates of the 3 variables. A higher mean will naturally represent a higher average growth rate.
- **Median**: Median is the value that occurs in the middle of a series arranged in ascending order. While it is not a robust indicator of a growth rate's potential, it does provide an insight into the economy’s performance.
- **Maximum**: It depicts the highest value in a series
- **Minimum**: It depicts the lowest value in a series
- **Maximum and minimum values are basically an indicator of the range in which the growth rates vary.
- **Standard Deviation**: It is the square of the deviations of the values in a series from the central value (i.e. mean). It is an indicator of the variability in the growth rate and depicts how fluctuating is the rate.
- **Skewness**: It measures the degree to which the values in a series depart from the central value.
- **Kurtosis**: Kurtosis measures the height and peakedness of the frequency curve of a series.

**B. Augmented Dickey Fuller Test**
Augmented Dickey–Fuller test (ADF) tests the null hypothesis that a unit root is present in a time series sample. The alternative hypothesis is different depending on which version of the test is used, but is usually stationarity or trend-stationarity.

In this research paper, before determining the causality and the inter-relatedness of the 3 variables, it is important to ensure that the time series data (for 11 years) is a stationary data ie a time series whose statistical properties such as mean, variance, autocorrelation, etc. are all constant over time.

For the same, we test the data using Eviews software at 5% level of significance and 2 lag length.

**C. Granger Causality Test**
Granger causality is a statistical concept of causality that is based on prediction. According to Granger causality, if a signal X1 "Granger-causes" (or "G-causes") a signal X2, then past values of X1 should contain information that helps predict X2 above and beyond the information contained in past values of X2 alone.

For the purpose of this study, the null hypotheses underlying the Granger Causality Test are:

1. GFCF growth doesn’t Granger Cause Islamic Banks’ Assets Growth
2. Islamic Banks’ Assets Growth doesn’t Granger Cause GFCF growth
3. GFCF growth doesn’t Granger Cause GDP Growth
4. GDP Growth doesn’t Granger Cause GFCF growth
5. GDP growth doesn’t Granger Cause Islamic Banks’ Assets Growth
6. Islamic Banks’ Assets Growth doesn’t Granger Cause GDP growth

Based on the data of the 13 years between 2004 and 2016, we find out the causal relationship between the 3 variables. We test the null hypotheses at 10% level of significance and reject the same if our p-value is less than the level of significance ie 0.05.

**D. Regression Analysis**
The next step is to establish a regression equation which helps one understand how the typical value of the dependent variable (or 'criterion variable') changes when any one of the independent variables is varied, while the other independent variables are held fixed.

For the purpose of our study, the dependent variable is GDP growth Rate and the independent variables are Islamic Banking Assets’ Growth Rate and Gross Fixed Capital Formation Growth Rate.
Results
The next step is to establish a regression equation which helps one understand how the typical value of the dependent variable (or ‘criterion variable’) changes when any one of the independent variables is varied, while

Descriptive Statistics

The Descriptive statistics indicate the following:
The GDP of the nation has been growing at an average of 4.9% over the past 12 years while the Fixed Capital Formation has been growing by about 6.46% and the Assets with Islamic Banking are growing at a mammoth rate of 19.2%. The nation has also seen a period of fall in GDP and GFCF but never has it witnessed a fall in Islamic Banking Growth Rate.

Growth Rate,
Augmented Dickey Fuller Test
Null Hypothesis: D (GDP_GROWTH) has a unit root
Exogenous: Constant Lag Length: 1 (Automatic - based on SIC, maxlag=2)

Augmented Dickey-Fuller Test Equation
Dependent Variable: D (GDP_GROWTH,2), Method: Least Squares.
Date: 04/19/18, Time: 18:08, Sample (adjusted): 2008 2016, Included observations: 9 after adjustments

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficient</th>
<th>Std. Error</th>
<th>t-Statistic</th>
<th>Prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td>D(GDP_GROWTH(-1))</td>
<td>-2.077167</td>
<td>0.511863</td>
<td>-4.058053</td>
<td>0.0067</td>
</tr>
<tr>
<td>D(GDP_GROWTH(-1),2)</td>
<td>0.554384</td>
<td>0.313617</td>
<td>1.767712</td>
<td>0.1275</td>
</tr>
<tr>
<td>C</td>
<td>-0.005694</td>
<td>0.013284</td>
<td>-0.428675</td>
<td>0.6831</td>
</tr>
<tr>
<td>R-squared</td>
<td>0.798083</td>
<td>Mean</td>
<td>-0.005168</td>
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<tr>
<td>Adjusted R-squared</td>
<td>0.730777</td>
<td>S.D.</td>
<td>0.076790</td>
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<tr>
<td>S.E. of regression</td>
<td>0.039844</td>
<td>Akaike info</td>
<td>-3.346487</td>
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</tr>
<tr>
<td>Sum squared resid</td>
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<td>Schwarz criterion</td>
<td>-3.280745</td>
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<tr>
<td>Log likelihood</td>
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<td>Hannan-Quinn criter.</td>
<td>-3.488357</td>
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<tr>
<td>F-statistic</td>
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<td>Durbin-Watson stat</td>
<td>1.952518</td>
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<td>Prob(F-statistic)</td>
<td>0.008232</td>
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</table>

Augmented Dickey-Fuller Test Equation
Dependent Variable: D (GFCF_GROWTH,2), Method: Least Squares,
Date: 04/19/18, Time: 18:09, Sample (adjusted): 2007 2016, Included observations: 9 after adjustments

<table>
<thead>
<tr>
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<th>Coefficient</th>
<th>Std. Error</th>
<th>t-Statistic</th>
<th>Prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Augm ented Dickey-Fuller test t statistic</td>
<td>-4.058053</td>
<td>0.0164</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Test critical values:
1% level: -4.420595
5% level: -3.259808
10% level: -2.771129


Warning: Probabilities and critical values calculated for 20 observations and may not be accurate for a sample size of 9 observations.
null hypothesis is rejected, and it can be concluded that the higher flow of Islamic finance has led to the growth of the economy. At the same time, the development of the real sector economy stimulates Islamic banking institutions to change and develop.

**Regression Analysis**

In an attempt to establish GDP as a linear function of Gross Fixed Capital Formation Growth and Islamic Banks’ Assets growth rate, we get the following result:

\[ \text{GDP Growth Rate} = 2.697 + 0.334 \times \text{GFCF Growth Rate} + 0.003 \times \text{Islamic Bank Assets’ Growth Rate} \]

**Conclusion**

This paper aims to examine the relationship between economic growth and development of Islamic Finance in Malaysia using econometric analysis. We empirically analyzed the relationship between Islamic Banks’ growth, Gross Domestic Product Growth and Gross Fixed Capital Formation Growth. Data for all the 3 variables proved to be stationary at first difference. The Granger causality test proved a two way relationship between GDP Growth Rate and Islamic Banks’ growth rate. In other words, there is a long term relationship between the 2 aforementioned variables. Finally the regression equation estimates GDP growth rate as a function of Islamic Banking Growth Rate and Gross Fixed Capital Formation Growth Rate.

We finally do not have sufficient proof to reject our 1st null hypothesis that Islamic Banking causes Growth in GDP while we reject our 2nd null hypothesis that Islamic Banking causes Growth in Gross Fixed Capital Formation.

**References**


### Table 4

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficient</th>
<th>Std. Error</th>
<th>t-Statistic</th>
<th>Prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td>D(GFCF GROWTH H-1)</td>
<td>-1.452999</td>
<td>0.314574</td>
<td>-4.61895</td>
<td>0.0017</td>
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<tr>
<td>C</td>
<td>-0.004221</td>
<td>0.024584</td>
<td>-0.171684</td>
<td>0.8679</td>
</tr>
<tr>
<td>C</td>
<td>-0.004221</td>
<td>0.024584</td>
<td>-0.171684</td>
<td>0.8679</td>
</tr>
<tr>
<td>R-squared</td>
<td>0.727285</td>
<td>Mean dependent var</td>
<td>-0.002205</td>
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<tr>
<td>Adjusted R-squared</td>
<td>0.693196</td>
<td>S.D. dependent var</td>
<td>0.140332</td>
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<td>S.E. of regression</td>
<td>0.07773</td>
<td>Akaike info criterion</td>
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<td>Schwarz criterion</td>
<td>-2.033783</td>
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<td>-2.160687</td>
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<tr>
<td>F-statistic</td>
<td>21.3347</td>
<td>Durbin-Watson stat</td>
<td>2.071452</td>
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<tr>
<td>Prob(F-statistic)</td>
<td>0.001713</td>
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<td></td>
</tr>
</tbody>
</table>

Augmented Dickey-Fuller Test Equation

Dependent Variable: D(IB_GROWTH,2)

Method: Least Squares

Date: 04/19/18 Time: 18:09

Sample (adjusted): 2007 2016

Included Observations: 10 after adjustments

### Table 5

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficient</th>
<th>Std. Error</th>
<th>t-Statistic</th>
<th>Prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td>D(IB GROWTH H-1)</td>
<td>-1.562446</td>
<td>0.131552</td>
<td>-11.87706</td>
<td>0</td>
</tr>
<tr>
<td>C</td>
<td>-0.048455</td>
<td>0.021055</td>
<td>-2.301325</td>
<td>0.0504</td>
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<tr>
<td>R-squared</td>
<td>0.946332</td>
<td>Mean dependent var</td>
<td>-0.037831</td>
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<tr>
<td>Adjusted R-squared</td>
<td>0.939623</td>
<td>S.D. dependent var</td>
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<tr>
<td>S.E. of regression</td>
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<td>Hannai info criterion</td>
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<tr>
<td>Sum squared resid</td>
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<td>Schwarz criterion</td>
<td>-2.34518</td>
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<td>Log likelihood</td>
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<td>Hannan-Quinn criter.</td>
<td>2.472084</td>
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<td>F-statistic</td>
<td>21.3347</td>
<td>Durbin-Watson stat</td>
<td>1.528145</td>
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<tr>
<td>Prob(F-statistic)</td>
<td>0.000002</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Results of Augmented Dickey Fuller test applied individually to the 3 time series data reveal that the economic indicators ie GDP growth rate and GFCF growth Rate as well as Islamic Banks’ assets growth rate are not stationary at level.

To make the series stationary, first differences of the series are taken. Having the data to support the reject the null hypothesis of unit root in the series, we conclude that the series are stationary at first difference.

### Table 6: Granger Causality Test: Sample: 1 13, Lags: 2

<table>
<thead>
<tr>
<th>Null Hypothesis:</th>
<th>Obs</th>
<th>F-Statistic</th>
<th>Prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td>IB GROWTH II does not Granger Cause GFCF GROWTH II</td>
<td>9</td>
<td>3.40065</td>
<td>0.1371</td>
</tr>
<tr>
<td>GFCF GROWTH II does not Granger Cause IB GROWTH II</td>
<td>2.08484</td>
<td>0.2397</td>
<td></td>
</tr>
<tr>
<td>GDP GROWTH II does not Granger Cause GFCF GROWTH II</td>
<td>0.05020</td>
<td>0.9516</td>
<td></td>
</tr>
<tr>
<td>GFCF GROWTH II does not Granger Cause GDP GROWTH II</td>
<td>0.09162</td>
<td>0.9143</td>
<td></td>
</tr>
<tr>
<td>GDP GROWTH II does not Granger Cause IB GROWTH II</td>
<td>32.1171</td>
<td>0.0034</td>
<td></td>
</tr>
<tr>
<td>IB GROWTH II does not Granger Cause GDP GROWTH II</td>
<td>9.68954</td>
<td>0.0293</td>
<td></td>
</tr>
</tbody>
</table>

From the results obtained from the Granger Causality Test, it can be observed that there exists a causal relationship between GDP Growth Rate and Islamic Banking Growth rate since the probability or the p-value is less than 0.05 (our alpha value) and hence the null hypothesis that there is no causal relationship between these two is rejected. So, the null hypothesis is rejected, and it can be concluded that the higher flow of Islamic finance has led to the growth of the economy. At the same time, the development of the real sector economy stimulates Islamic banking institutions to change and develop.