

## Beyond finance: Impact of Islamic finance on economic growth in Pakistan

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### Abstract

Islamic finance, which may have been considered only in the context of a multitude of trading structures among economists, merits a fresh evaluation in how it dovetails with and supports national economic growth. This study examines the dynamic interaction between Islamic financing and economic growth of Pakistan by employing the unit root test, cointegration test and Granger Causality tests to see whether the Islamic financial system influences the economic growth. For the analysis, time series data of total Islamic financing and real GDP per capita, Islamic financial assets, and population to represent real economic sector were considered. **Findings/Originality:** This paper finds that a well-functioning Islamic financial system promotes economic growth. It also finds an evidence of a bidirectional relationship between Islamic asset financing and population. It implies that population reinforces Islamic finance, and population attracts Islamic financing.

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## Introduction

Numerous market trends suggest a rising use of Islamic financing as a financial sector development. It is an increasingly visible substitute for conventional banks in Islamic states (Cihak & Hesse, 2008) and in a growing number of countries with large Muslim populations, such as the UK, USA, Italy, France, China, Singapore, Korea, and Japan. In some countries, such as Pakistan and Malaysia, Islamic banking activity runs in parallel with the conventional banking system. Globally, the assets of Islamic institutions have grown at two-digit rates for three decades and some conventional banks have opened Islamic finance divisions.

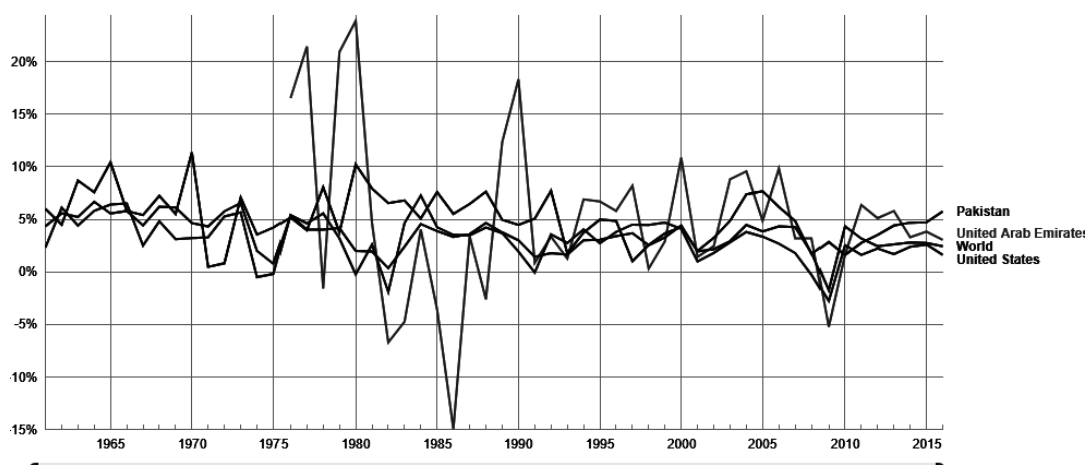
Islamic finance is founded along the principles of Shariah (Islamic religious law) and provide banking products based on different structures and relationships than certain conventional banking products. Most notably, Shariah generally prohibits charging interest on money loaned. Accordingly, interest-free sale contracts in Islamic finance employ mutual financial relationships among parties, such as profit and loss sharing (*Murabahah*), joint ventures (*Musharaka*), and leases. Islamic banks may be regulated by both central banking authorities and by independent Shariah supervisory boards.

Academic research has explored the characteristics and dynamics of Islamic finance and economic development. However, the ability of Islamic finance to produce sustainable and equitable economic growth has received less attention (Ahmad, 2000). The challenges to doing so

include determining how to successfully build Shariah compliant structure that delivers new services that can satisfy client demands.

Islamic finance in Pakistan has a remarkable record of consistently high growth (Zaher & Kabir Hassan, 2001). Pakistan's constitution emphasizes the implementation of interest-free banking policies consistent with the principles of Islam. The influx of various Islamic financial intermediaries—including Islamic banks—is driving ongoing growth of the Islamic finance sector in Pakistan

Past research on Islamic finance has concentrated mainly on two broad issues: the factors that determine the success of new products and services and the structures of Islamic finance models. The literature is almost silent with respect to the relationship between Islamic finance and economic growth and development in Pakistan.



Source: World Bank 2016

**Figure 1.** Annual change in Real GDP Growth –World, Pakistan, UAE, and the U.S.

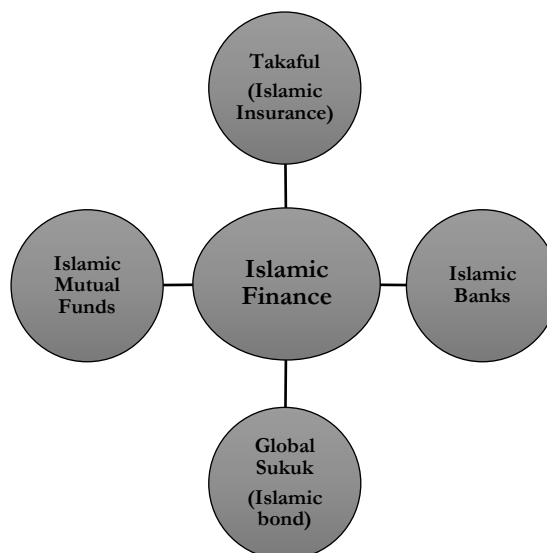
Pakistan's economy shifted toward services in the 1980s and there was an initial attempt to Islamize the banking system (Mehmood, 2002). Around the same time, in 1984, the country's real GDP growth accelerated to 7.26%. As shown in **Figure 1**, Pakistan's GDP growth has fluctuated markedly over the past two decades but had a 5.74% in 2016.

Against this background, the purpose of this research is to answer the following research questions of what is the present state of Islamic finance in Pakistan?; what is the relationship between Islamic financial development and economic development?; and does Islamic finance development have a significant effect on economic growth of Pakistan?

This study attempts to identify the key stages of economic growth and ties them to Islamic financing. In particular, this study responds and draws inspiration from the studies of Abduh & Chowdhury (2012) and Furqani & Mulyany (2009), who have studied the relationship between economic growth and Islamic finance. The findings of this research are expected to motivate practitioners in developing Islamic finance structures and increasing practitioners' awareness of the need for growth of the Islamic capital market.

This paper examines the Pakistani scenario based on available data and the ability to test theoretical findings. Consequently, the following hypotheses are tested. The first hypothesis is whether Islamic finance development leads to economic growth in Pakistan. The second hypothesis is whether economic growth leads to Islamic finance development in Pakistan. The next section reviews the literature on Islamic finance and economic growth. The following section covers the details of the data and methodology employed. The final section is the conclusion.

This paper examines different attributes and aspects of the present literature regarding social acceptance, financial development, and important segments of the Islamic financial system depicted in Figure 2.



**Figure 2.** Important Segments of Islamic finance

A number of authors have studied and analyzed a close relationship between the Islamic financial system and economic growth. According to those studies, Islamic finance facilitates the following economic activities and functions (at least to some extent): transferring of purchasing power over time and space; mobilizing savings; allocating capital funds; monitoring managers and transforming risk.

On the other hand, some researchers have stated that Islamic banks and economic development are not significantly correlated. For example, Johnson (2013) concluded that the Muslim prevalence in a population was the key determinant of the diffusion of Islamic finance activity in a country's financial system.

Other research has found that permeation of Islamic banks appears generally independent of the quality of the institutional environment. The way Islamic banks are permitted to behave is driven by relatively strict Shariah law, making the institutional environment less important than for conventional banks (Kpodar & Imam, 2010). But, current investment Sukuk bids appeals may be suitable, however, it is not its full consistency to bring into one point the all Islamic jurisprudence, to get consideration and engage enormous financial investors (Bukhari, Nawaz, Imam, & Qadri, 2014; Bukhari, Nawaz, & Sair, 2014).

Contrary to some naive critiques of interest-free finance, Caprio & Honohan (2001) showed that it is at least arguable that an Islamic finance solution can satisfy most conceivable finance-related needs, even in sophisticated market economies. Moreover, El Qorchi (2005) found that Islamic finance can contribute to economic and social development, by financing the economic infrastructure and creating job opportunities.

Several challenges need to be addressed in Islamic finance, like improving regulatory oversight, rebalancing tax treatment, strengthening insolvency frameworks, promoting standardization, ensuring adequate liquidity, and establishing sound risk-management practices for the financial environment (Mohieldin, 2012). Many of those factors help to promote financial stability, which is a necessary condition for economic growth, both in economies that embrace Islamic finance and in those that do not.

Aziz (2012) found that Islamic financial services make economic growth more equitable and sustainable. Asutay (2012) found that the development of Islamic finance will require economic efficiency to fulfill the need for socially acceptable financing options. Financial development and pooling of funds have a strong impact on economic growth for a wide range of economies. The expansion of Islamic finance activity has been driven by improvements in risk-sharing, better screening and monitoring of borrowers, increasing the amount of capital and productivity, meeting the preferences of local cultures, reducing poverty and undernourishment, improving public health, enhancing education and gender equality, and mitigate a variety of risks by mobilizing financing for small and medium enterprises (Hassan, 2014).

Social justice and poverty alleviation with financial inclusion are among the priority areas of Islamic financing strategies. Many authors like Khoutem (2012); Khoutem & Nedra, 2012 found that in an ideal Islamic world, contracts are free from *gharar*, opportunism, and asymmetric information. So, financial markets can promote desirable social objectives by steering market participants toward certain products. Society can potentially benefit from the Islamic approach to promoting growth, equal opportunity, and equitable wealth distribution for poverty alleviation.

The percentage of Islamic financing growth with fastest growing segments i.e. Islamic banks, Islamic Insurance, Islamic capital market of the Islamic financial institution in Pakistan is reached to 27.8% (Board, 2017). Since the inception of Islamic banking operations in the 1970s, *Shariah*-seeking products investments has grown in its mundaneness reflected in the current innovative Islamic financial products. Islamic banking is gaining acceptance, particularly in high-growth emerging markets, as an effective way to establish an inclusive financial system and replace the shadow economy. Global commercial bank holdings of Islamic banking assets are nearly US\$1.7 trillion. Bukhari et al. (2014) found a close correlation between financial sector development and operational success of Islamic banks. The *Sukuk* market, one of important segment of the Islamic financial systems, has grown at a rapid pace, with issuance reaching US\$63 billion in 2013.

Various researchers have concluded that the Islamic finance mutual guarantee structure (*Takaful*) has been slower to develop than other Islamic finance product. However, other research indicates that increasing internationalization and diversified geographical penetration of *Shariah*-compliant insurance will support growth in the *Takaful* sector, with EY forecasting that activity would reach nearly US\$17 billion in 2015 (Mcaughtry, 2014). Islamic mutual funds, a segment of global Islamic financial system, has been only a smart part of the global fund industry until recently. The growing potential in that area is shown by net inflows of US\$912 million in the first quarter of 2013 (Lipper, 2014).

According to Kuwait Finance House (2011), the prospects for real growth of Islamic finance activity require the following conditions: ethical and socially responsible investment in human capital; research and innovation; standardization; secondary market trading and liquidity compared to conventional bonds; external funding; long-term funding for infrastructure; and higher internationalization. The challenges include the lack of enabling regulations, discrepancies in *Shariah* standards, and limited availability of risk management and liquidity tools.

To investigate the relationship between the development of Islamic finance and economic advancement, a set of growth indicators is included in a study of Kpodar & Imam (2010). Many economic growth indicators such as gross domestic product, the investment share of GDP, and the population growth rate are the conventional growth indicators. While investment to GDP ratio observed as a significant explanatory variable of the diffusion of Islamic banking.

A number of studies were conducted with reference to the impact of the Islamic financial system on economic growth. Few studies try to sum up the literature based on empirical studies by empirically examining the influence of Islamic financial system on economies of Bangladesh (Abduh & Chowdhury, 2012; Abduh & Omar, 2012), Malaysia (Furqani & Mulyany, 2009) and

Indonesia (Abduh & Chowdhury, 2012). The findings demonstrate a significant relationship between Islamic financial development and economic growth.

## Research Method

We analyzed the relationship between the level of Islamic finance activity and economic growth in the Islamic Republic of Pakistan over the time period 2005–2013. We measured the level of Islamic finance activity by the number of assets in Islamic finance structures. The economic growth was measured with three variables: constant price GDP, gross domestic investment as a percentage of GDP, and population. The data was taken from the World Bank for population and the number of Islamic finance assets.

Many studies found that within a certain time range GDP is considered as a common statistic for representing the income level of any particular country. Further, study related to finance-growth approach always uses GDP as the principal variable reflecting economic development (Abduh & Chowdhury, 2012). Following an existing research study, we use gross domestic investment as a representation of investment in order to investigate net new investment during a fiscal period (Feldstein & Horioka, 1979). It is to be examined that the financing variable applied in this research finding is a portion of total financing in the economy provided by many Islamic financial institutions. The penetration levels of Islamic financial institution services vary substantially across the country. The hypothesis was tested at 1%, 5% and 10% level of significance (i.e.  $\alpha=.01$ ,  $\alpha=.05$  and  $\alpha=.10$ ).

## Results and Discussion

After collecting all data required, the first step of the study is to determine the relationship between financial deepening and economic growth and whether the series is stationary or not. In a model, for a correct evaluation, time series should be separated from all effects, and the series should be stationary. Thus, logarithms of time series variables were used up by following the existing studies (Furqani & Mulyany, 2009). Augmented Dickey-Fuller and Phillips Perron tests are used for testing stationarity. After that, the Johansen co-integration test was used to examine the relationship between financial deepening and economic growth to determine the cointegrating vectors (Johansen & Juselius, 1990). The last step is to run a Granger causality test to assess the causal relationship between Islamic financing and economic growth.

Table 1 illustrates descriptive statistics to determine the characteristics of variables utilized in the underlying study. In order to make the data pattern interpretable, log transformation was performed (Nguena, 2013). Summary statistics suggest that the variation in GDP (Mean=4.71, Standard deviation=.016) is more than the variations in population growth (M=2.22, SD=.028).

Appendix Table A 1 shows the summary statistics for a relationship between Gross Domestic Product (GDP), gross domestic investment, Population and total Islamic financing with respect to financial assets in Pakistan graphically.

**Table 1.** Descriptive Statistics (2005-2013)

Statistics	GDP	Net Investment	Population	Islamic Assets
Mean	4.71	1.22	2.22	2.50
Median	4.71	1.24	2.23	2.56
Maximum	4.73	1.29	2.26	2.92
Minimum	4.68	1.15	2.18	1.85
Standard Deviation	0.016	0.055	0.028	0.37
Variance	0.000	0.003	0.001	0.133

We observed in Appendix Table A 1, that the highest value of Islamic assets in 2013 reached to 2.92 from 1.85 in 2005 with a standard deviation of 0.37. This yields an indication of the high growth of the Islamic finance industry in recent years relative to traditional measurement parameters. The statistics also show that the medians for gross domestic investment (1.24) and Islamic assets (2.56) are less than the respective means (1.22 and 2.50, respectively), which indicates that the values are positively skewed.

We tested all the variables for unit root by using the Augmented Dickey-Fuller (ADF) and Phillips-Perron (PP) test. The Dickey-Fuller test statistic and the Phillips-Perron test statistic show p-values are less than or equal to a specified significance level of 0.1 (10%), 0.05 (5%), and even 0.01 (1%). So our data for test statistics don't follow t distribution, the test statistic is not extreme. The results of ADF and PP Tests applied to time series data (2005-2013). The Augmented Dickey-Fuller statistics of all variables is greater than the critical values. Therefore, we cannot reject the presence of unit root.

Table 2 and Table 3 represents the results of the Augmented Dickey-Fuller test and the Phillips-Perron test at critical values of 1%, 5%, and 10%. The results of both tests show the variables (GDP, investment, population, and Islamic assets) significant at the threshold levels in both tests.

**Table 2.** Unit Root Test (Augmented Dickey-Fuller Test)

Variable	Test Statistics	1% Critical Value	5% Critical Value	10% Critical Value	MacKinnon Approximate p-value For Z (t)
GDP	- 1.756	- 3.750	- 3.000	- 2.630	0.4025
Total investment	- 0.580	- 3.750	- 3.000	- 2.630	0.8753
Population	- 0.078	- 3.750	- 3.000	- 2.630	0.9516
Islamic Assets	0.739	- 3.750	- 3.000	- 2.630	0.9906

Unit Root Test (ADF): Phillips-Perron test and Augmented Dickey-Fuller test at Critical values of 1%, 5%, and 10%.

**Table 3.** Unit Root Test (Phillip-Perron Test)

Variable	Test Statistics	1% Critical Value	5% Critical Value	10% Critical Value	MacKinnon Approximate p-value For Z (t)
GDP	-1.702	-3.750	-3.000	-2.630	0.4301
Total investment	-0.788	-3.750	-3.000	-2.630	0.8225
Population	0.017	-3.750	-3.000	-2.630	0.9599
Islamic Assets	1.431	-3.750	-3.000	-2.630	0.9972

Significant at 1%, 5%, 10% level respectively.

## Cointegration

Cointegration means that even though the variables are not stationary individually, the linear combination between two or more variables may be stationary (Abduh & Chowdhury, 2012). Table 4 presents the outcomes of the Johansen co-integration test for the long relationship between Islamic financing and economic development. If the trace statistics exceed the critical value than the trace test rejects the null hypothesis.

**Table 4.** Johansen Tests for Co-integration

	Trace statistics	Critical Value		Max-Eigen value	Critical Value	
		5%	1%		5%	1%
<b>Gross Domestic Product (GDP)</b>						
H <sub>0</sub> : r = 0	23.7243	15.41	20.04	22.7838	14.07	18.63
H <sub>1</sub> :r ≥ 1	0.9404	3.76	6.65	0.9404	3.76	6.65
<b>Total Investment</b>						
H <sub>0</sub> : r = 0	9.9683	15.41	20.04	8.0711	14.07	18.63
H <sub>1</sub> :r ≥ 1	1.8972	3.76	6.65	1.8972	3.76	6.65
<b>Population</b>						
H <sub>0</sub> : r = 0	4.2495	14.07	20.04	4.2191	14.07	18.63
H <sub>1</sub> :r ≥ 1	0.0303	3.76	6.65	0.0303	3.76	6.65

The beginning row of Table 4 depicts that the trace statistics (23.7243) of gross domestic product (GDP) exceeds the critical value of (15.41) at the 5% level of significance. It designates that the null hypothesis of no-co-integrating relationships is rejected. The results confirm that there is a co-integrating relationship between the variables and exist the same stochastic trend. Thus, the cointegration of the series indicates that Islamic finance activity and economic growth have been correlated.

### Granger Causality

The Eigenvalue test tests the null hypothesis (H<sub>0</sub>) of r versus r+1 co-integrating relationships. If the eigenvalue test statistics exceed the respective critical value than this test rejects the null hypothesis. The outcome of the first row of Table 4 depicts that the eigenvalue test statistics (22.7838) of Gross domestic product (GDP) exceeds the critical value (14.07) at the 5 percent level of significance. This shows that the null hypothesis (H<sub>0</sub>) is rejected. Thus, there is one co-integrating relationship among the variables as indicated by the failure to reject the alternative hypothesis. The complete results findings from **Table 5** indicate that the null hypotheses (H<sub>0</sub>) of non-co-integration are rejected at the 95 percent confidence level. This suggests that in the long run Islamic financing will lead to the growth of GDP in Pakistan.

**Table 5.** Pairwise Granger Causality Tests (2005-2013)

Dependent Variable	F-statistics	Probability
Islamic asset does not Granger-cause GDP	144.18	0.000**
GDP does not Granger-cause Islamic Assets	.65349	0.721
Islamic asset does not Granger-cause Total Investment	12.756	0.002**
Total Investment does not Granger-cause Islamic assets	14.927	0.001**
Islamic asset does not Granger-cause Population	.39378	0.821
Population does not Granger-cause Islamic assets	3.2026	0.202

Entries in \*\* are significant at 5 % level

The Granger causality test used to assess whether a given data series provides a strong indicator of future values. **Table 5** presents the statistics and probability values constructed under the null hypothesis (H<sub>0</sub>) of non-causality. It can be noted that there is a causal relationship between Islamic financing and Gross domestic product (GDP). Nevertheless, our result findings indicate that one-way causality revealed only from Islamic financing to GDP since the probability value p (0.000) less than (0.05) level of significance. So, the null hypothesis (H<sub>0</sub>) is rejected, and it can result in the growth of the economy as concluded from the result of the higher flow of

Islamic finance. Furthermore, the result findings indicate that unidirectional causality exists between financing and gross domestic investment since it is significant at 95% confidence level, as (0.002) less than (0.05) level of significance. Hence, we can conclude that Islamic financing Granger causes the development of real economic growth in Pakistan.

In general, our results indicate that the relationship between Islamic finance and economic growth plays an important role in Islamic finance development in Pakistan. Nevertheless, the percentage of variance in the relationship between GDP and higher flow Islamic finance is significant at 5% level. Apart from products and service offered for a religious purpose, relationship efforts additionally contribute to economic growth. Moreover, our study empirically validated the significant relationship between Islamic finance and economic development in our selected sample indicating that Islamic financing is important for GDP growth.

## Conclusion

Consistent with research indicating a positive relationship between Islamic finance and economic growth, the study findings indicate that hedonic aspect of the GDP growth is strongly linked to Islamic financing. The findings are also congruent with Solow (2001) argument that 'economic growth is a long run phenomenon, which necessitates analyzing the evolution of the variables of interest over time in order to relate the findings to policy designs'.

Today, practitioners, as well as academicians, recognize the importance of economic development with the Islamic financial system. To meet the demand of the current market in Pakistan, practitioners need to capture more market by operating through Islamic financing. We observed that improvement of the Islamic financial institutions in Pakistan will benefit from economic growth.

Finally, our finding empirically validated that causality relation exists between Islamic financing to Population and gross domestic investment. Our results reveal that Islamic finance is a suitable environment to increase in gross domestic investment and percentage of Muslim population reinforces Islamic finance.

Consequently, researchers should be aware of the fact that the much wider range of variables influences economic development relative to Islamic financing. An example of such variables is foreign direct investments, Gross Fixed Capital Formation and market capitalization.

Some limitations might be related to collecting and interpreting data as we did not measure country differences with other countries. Another important factor of Islamic finance growth is a perception of Islamic financial Institutions (Nawaz, 2017). Moreover, religious beliefs are considered as basic components of Islamic finance growth in Muslim countries. Hence, our sample size restricted to few growth indicators. The confidence in our results could also be more strengthened by access to country data on important variables, for example; demographic factors, foreign direct investments, Gross Fixed Capital Formation, and market capitalization.

**Author Contributions:** Huma Nawaz performed research and edited the paper. Syed Muhammad Hassan Bukhari, Asma Salman, and Maira Abrar conceived the paper.

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### Appendix A

Appendix Table A 1 Summary statistics of Key Econometric Variables (2005-2013)

