

# IMPACT OF ISLAMIC FINANCE ON ECONOMIC GROWTH – Empirical Evidence from Pakistan

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## Abstract

After the Global financial crisis, Islamic finance gets worldwide attention and it increased with fast pace especially in Pakistan where total assets of Islamic Banks crossed Rs. 1.7 Trillion. This paper explores empirically the relationship between the development of Islamic banking system and economic growth in the Islamic Republic of Pakistan. Using econometric analysis, quarterly time-series data of economic growth and Islamic banks' financing from 2006 to 2015 were used. In this paper Islamic Banks, private lending and total assets as a proxy for the development of Islamic Finance and GDP and GFCF as a proxy for Economic Growth. For the analysis, the unit root test, descriptive stats, regression analysis, co-integration test, and Granger causality tests were done. Empirical results generally signify that in the long run Islamic banks' financing is positive and significantly correlated with economic growth in Pakistan which reinforces the idea that a well-functioning Islamic banking system promotes economic growth. Meanwhile, there is no short-term relationship exist in between Islamic banking and economic growth.

Keywords: Islamic Finance, Economic Growth, Islamic Economics, Islamic Banking, Empirical Research

## Introduction

In Quran, it's clearly mentioned about *Riba* (interest) and its bad impact on society. As Muslim's believe that *Riba* is strictly prohibited and declared heinous sin in Islam. In *Sura Al-Baqarah* Verse 279, ALLAH (SWT) says "And if you do not, then be informed of a war [against you] from Allah and His Messenger. But if you repent, you may have your principal - [thus] you do no wrong, nor are you wronged". People of book consists of an almost 60% of global population

and *Riba* is also prohibited in Christianity and Jews. "Do not charge your brother interest, whether on money or food or anything else that may earn interest." (Deuteronomy 23:19)

In the book of Hadith, *Riba* has also declared a major sin and strictly disallowed. From Jabir: The Prophet Muhammad (SAW) may curse the receiver and the payer of interest, the one who records it and the two witnesses to the transaction and said: "They are all alike [in guilt]." (Muslim, Kitab al-Musaqat, *Bab la'ni akili al-riba wa mu'kilihi*; also in Tirmidhi and Musnad Ahmad)

Islamic Finance emerged as a new segment in the field of finance, having appreciation around the world and also trying to contribute their part to the betterment of the society. Islamic Financial Instruments majorly divide into Sharia Compliant Finance and Sharia-based Finance. Sharia-Compliant financing is based on those instruments which are developed under the guidance of Quran and Hadith. Beside, clerics Ijama and Qias assist it to be operational. Sharia-based financing is purely derived from Quran and Hadith. In Sharia Complaint Financing following instruments is common practice in Islamic Banks including *Murahaba*, *Bai Majjal*, *Bai Salam*, *Istisna*, and *Ijarah*. In Sharia-based Financing following instruments are operational in Islamic Banks including *Musharaka*, *Diminishing Musharaka*, and *Mudarabah*. Islamic Finance also enables the user to deal in capital market through equity finance under sharia compliance and *Sukuk* financing is one of the fastest growing Islamic instrument. *Takaful* is an alternative solution of conventional Insurance. The Islamic Republic of Pakistan contributes 12% of world Muslim population, while the contribution of Global Islamic Banking, Assets is just 0.75%. (World Islamic Economic Forum, 2014)

In this paper, following variables selected to check the impact of private lending and total assets of Islamic Banks on Gross Domestic Product (GDP) and Gross Fixed Capital Formation (GFCF).

These economic indicators mainly used to check the development of any country. In this paper, our key focus is to examine the relationship between Islamic finance and Economic Growth.

## Problem Statement

In 1949, the Objective resolution was passed which dictate policy makers that our constitution will be based as per the teaching of Islam (Hoodbhoy & Nayyar, 1985). In 1973, the constitution was developed which clearly advocates policy makers to an emphasis on eliminating *Riba* from

economic system of Pakistan (Shah, 2012). With previous researches, figure out that there are cause and effect relationship exists in between Islamic finance and economic growth. Therefore, in this paper, examine this relationship in Pakistan.

## Objectives of the Study

The majority of researchers are in favour of the role of financial sector in the development of any economy. This paper examined many empirical studies that concluded the relationship between Islamic Finance and Economic growth. But there is no research conducted specifically on Pakistan. As previous literature clearly supported that the instrument of Islamic Finance played a vital role in the development of an economy.

## Research Questions

- Does Islamic Finance lead to Economic Growth in Pakistan?
  - Does Islamic Finance have a significant relationship with Economic Growth in the long term in Pakistan?
  - Does Islamic Finance lending have a significant relationship with GDP of Pakistan?
  - Does Islamic Finance Total Assets have a significant relationship with GDP of Pakistan?
  - Does Islamic Finance lending have a significant relationship with GFCF of Pakistan?
  - Does Islamic Finance Total Assets have a significant relationship with GFCF of Pakistan?

## Significance of the study:

This research paper helps the economist about the role of Islamic Finance especially in Pakistan and in its prolific impact on economic growth. This paper guides policy maker of Pakistan about the importance of Islamic Financial Institutions Development and its significant impact on macroeconomic variables of the country.

## Literature review

Economic Growth is an increase in production and services of a country from one period of time to another. It can be calculated via nominal terms in which inflation is inclusive while in real terms, inflation is adjusted. There are so many macroeconomic variables can be used to check the growth of the economy. The stability, peace, and human well-being are easily understood by checking the economy of any country (Rostow, 1990). If Country economy is stable and growing at a fast rate and recently many development projects has been accomplished, depicts that country is stable, peaceful and citizens of that country are enjoying a decent life. The economy is a combination of macro and microeconomic variables. To check the performance of economy used many tools and techniques. GDP is most widely and authentic source to measure the economy of any country. It describes as annual production of goods and services of a country. If GDP is growing, it considers as the flourishing economy (Chow & Li, 2012).

Islamic Financial Institutions are operating in the same society where conventional banks do and performing all the functions which are generally expected from any financial institutions. Currently, Islamic financial institutions are offering almost all the alternative solutions of the banking sector. Islam is the predominant religion in the Middle East, North Africa, Central Asia and Muslims constitute a big population in South East Asia, Balkans, Central Africa, South Asia and West Africa. In 1963, Islamic Finance emerged in Egypt as a separate segment in the field of finance (Iqbal & Mirakhor, 2011).

The modern Commercial banking system is completely based on interest while in Islamic finance interest is strictly prohibited and declared heinous sin. Islamic Finance was developed to provide an alternative space free from *Gharar* (Absolute risk of outcome), *Myser* and *Qimar* (A form of Gambling), sale of pork and absence of profit and loss sharing (Salman Ahmad Sheikh, 2012).

The impact of financial development on the economic growth of Pakistan was not well researched (Khan, Qayyum & Sheikh, 2005). Researchers have done an attempt to fill this gap. The purpose of the study was to investigate the relationship between financial Institutions development and economic growth for the period 1971 to 2004 in Pakistan. Since Independence,

Government of Pakistan was keenly concerned with creating the necessary infrastructure to support its macroeconomic policies (Mckinnon, 1973).

Salman Ahmad Sheikh (2012) has done research on the impact of Foreign Direct Investment on Economic Growth in Pakistan over a period of 3 decades (1981 to 2010). He took, FDI is an independent variable and GDP as a proxy for Economic growth and used as a dependent variable. Results are positive and shown a significant relationship between GDP and FDI. This study advised to policy makers to focus on attracting FDI which eventually contribute to the development of human capital and widen the tax revenues.

Islamic banking and Economic Growth evidence from Bahrain investigated by Mosab & Dhankar (2014) to explore the relationship between the development of Islamic financial system and economic growth by using econometric analysis, annually time series data of economic growth and Islamic banks financing from 1990 to 2008 were used. Following tests run for analysis, the unit root test, Co-integration test and Granger causality tests. The finding of this paper illustrates that in long run Islamic banking has a positive and significantly correlated with economic growth in the kingdom of Bahrain.

Researchers examined the relationship between the development of Islamic financial system and economic growth in Qatar. For this purpose, used econometric analysis, 1990 to 2008 annually time series dataset were used. For the analysis, the unit root test, cointegration test, and granger causality test were done. GDP, GFCF, and FDI used as a proxy of Economic Growth while private lending of Islamic banks used as a proxy of Development of Islamic Finance. The results attained from granger causality test reveals a positive and significant relationship exists in between economic growth and Islamic finance. This paper recommended the policy maker of Government of Qatar to give more attention on Islamic Finance industry (Mosab & Dhankar, 2014).

Researchers investigated the relationship in Islamic financial institutions development with economic growth of UAE (Mosab, Dhankar, 2014). For this purpose, annual time series data from 1990 to 2010 were used. Gross domestic product, Gross fixed capital formation and foreign direct invest used as a proxy for Economic growth and private lending of Islamic banks as a proxy of Islamic finance. For the analysis purpose, following tests are run to check the relationship between dependent and independent variable: Unit root test, Co-integration test, and

Granger causality test. The results of this study determine that there is bidirectional relationship exists in between FDI and Islamic banks financing in UAE. Mosab & Dhankar (2014) opted three most important countries from the Middle East to investigate the relationship between Economic Growth and Islamic Finance which is a fastest emerging segment in the financial world. GDP is taken as a proxy of Economic Growth and private lending of Islamic banks as a representation of Islamic Finance. Three test were used, Unit root, Co-integration and granger causality test. The results obtained from above mentioned tests indicate a causal relationship in between economic growth and Islamic finance.

Al- Oqool, Okab & Basahyreh (2014) investigated the relation between Islamic Banking and Economic Growth of Jordan. In this paper, the time period over 1980 to 2012 chosen for analysis and two models have developed under the VECM framework. The results of this paper depict that there is bi-direction granger causality exists between Real GDP and FINC.

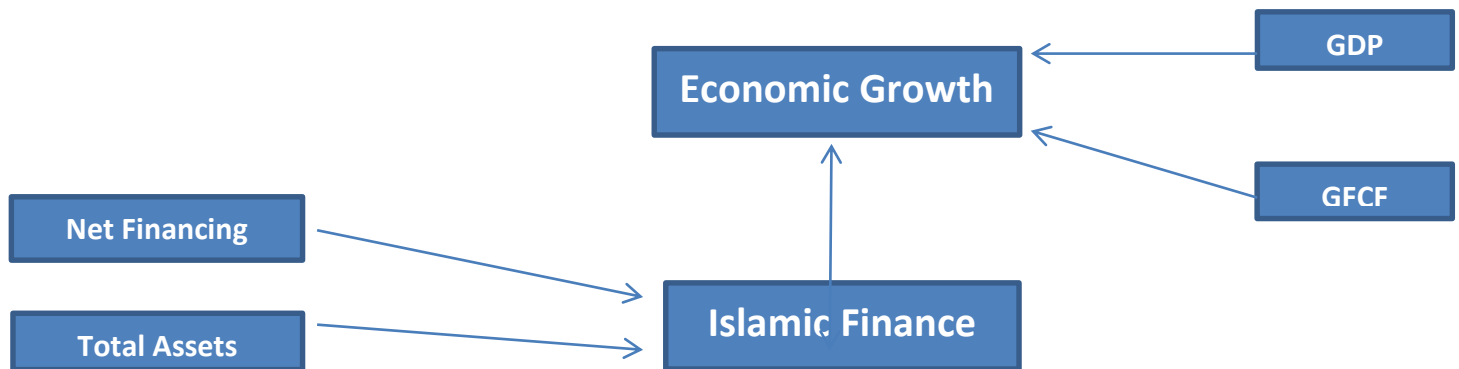
Abduh & Azmi (2012) examines relationships between Islamic banking development and economic growth in Indonesia, concluded that increase in GDP assist Islamic banks to develop but not vice versa while there is evidence of bidirectional causality between Islamic banking and fixed investment.

Saleh, Rizwan & Waqar (2013) investigated that the dynamic interactions between Islamic banking and economic growth in Pakistan by taking interviewees of six experts regarding the role of Islamic banking in Pakistan. An interviewee asked eight different types of questions and most respondents share a positive impact of Islamic Banking and Economic Development. The results of this paper also depict that improving the infrastructure of Islamic banking in Pakistan could value economic development.

### **Theoretical Framework**

This paper investigates the relationship between economic growth and Islamic finance. For this purpose, two dependent macroeconomic variables have taken to test the relationship between two independent variables: Islamic Banking Total Assets and private lending. The majority of prior researchers are in favour of the financial development and economic growth. Recently occurred research papers strengthen the role of Islamic financial Institutions in Economic

Growth. The following tests: Unit Root, Cointegration, Regression and Granger Causality on available data.



### Research Hypothesis:

This research intends to the following hypothesis:

H1: There is a significant long-term relationship between Islamic Banking Total Assets and GDP.

H2: There is a significant long-term relationship between Islamic banking Total Assets and GFCF.

H3: There is a significant long-term relationship between Islamic banking Net Financing and GDP.

H4: There is a significant long-term relationship between Islamic banking Net Financing and GFCF.

## Methodology

### Research Design

In this paper, the Quantitative approach has been used to measure the relationship between Islamic Finance and Economic Growth. To test the relationship between Islamic Finance and Economy, two dependent variables: GDP and GFCF and two independent variables: Private lending of Islamic banks and total assets owned by Islamic banks have been selected for this analysis. The geographical region has been chosen is Pakistan.

## Data Collection

In this paper, data extracted from different authentic sources. State bank of Pakistan published quarterly Islamic banking bulletin from where total assets and net financing of Islamic banks extracted. GDP and GFCF data extracted from Pakistan Statistical Bureau.

Secondary data approach is used to measure the 36 observations based on quarterly time series data on Islamic finance and economic growth proxies, which have been chosen to check the relationship between exogenous and endogenous variables. This study focuses a nine year period from Oct 06 to Sep 15. All observations are based on quarterly time series data.

For the analysis and results following econometrics tests run:

## Econometric Tests

- Descriptive Stats
- Unit Root Test
  - Augmented Dickey-Fuller test
  - Phillips-Perron test
- Johansen Co-integration test
- Granger Causality test
- Regression

Proceeding from the literature review, this study has chosen, in line with Oqool, Okab, and Bashayreh (2014), the relationship between Economic Growth and Islamic Finance may be specified through the following models:

### a- Financing Model

$$\ln gdp = \beta_0 + \beta_1 \ln NF + \beta_2 \ln s + \mu_{1a}$$

$$\ln gfcf = \beta_3 + \beta_4 \ln NF + \beta_5 \ln c + \mu_{2a}$$

### b- Deposits Model

$$\ln gdp = \alpha_0 + \alpha_1 \ln TA + \mu_{1b}$$

$$\ln gfcf = \alpha_2 + \alpha_3 \ln TA + \mu_{2b}$$



## Results & Discussion

### Descriptive Statistics:

	TA	NF	GFCF	GDP
<b>Mean</b>	0.07285	0.04999	0.02335	0.03455
<b>Median</b>	0.06938	0.04426	0.02747	0.03314
<b>Maximum</b>	0.15624	0.42439	0.16196	0.06440
<b>Minimum</b>	0.001970	-0.35974	-0.28495	-0.00314
<b>Std. Dev.</b>	0.05057	0.12202	0.07854	0.015402
<b>Observations</b>	35	35	35	35

Table shows the summary of descriptive stats about the variables used in the econometric analysis. It includes Mean, Median, Standard Deviation, Maximum and Minimum. Descriptive stats test has been run on values (PKR Billion) taken after ln. The maximum value of total Assets of Islamic Banks in 2015 (0.156249) shows tremendous growth from (0.001970) in 2006 with a standard deviation of (0.050578). The results indicate that median of Total Assets of Islamic Banks, Private lending of Islamic Banks and GDP are less than mean, which means that the values are positively skewed. In the case of GFCF, the value of median is greater than the value of mean which shows that it's negatively skewed.

### Unit Root Test

This test is used to examine whether the data contains stationarity or not. For this purpose, researcher run two famous unit root test: Augmented Dickey-Fuller Test and Philips-Perron Test. In the first step, researcher took ln of all values and then run following test:

#### Augmented Dickey-Fuller

Augmented Dickey-Fuller test	T-Stats	Critical Values		Probability
		1%	5%	
TA has a unit root	-3.813468	-3.653730	-2.957110	0.0067
NF has a unit root	-9.173187	-3.639407	-2.951125	0.0000
GDP has a unit root	-19.01709	-3.639407	-2.951125	0.0001
GFCF has a unit root	-13.43031	-3.639407	-2.951125	0.0000

The probability of T-stats is less than 5% and the absolute value of t-statistic are greater than critical values at 1% and 5% level. So results reject the entire null hypothesis and accept the

alternative hypothesis. P-value shows that coefficients are significant at 1% and 5% confidence interval.

### Philips Perron Test

Phillips-Perron test	T-Stats	Critical Values		Probability
		1%	5%	
TA has a unit root	-8.985851	-3.639407	-2.951125	0.0000
NF has a unit root	-8.986456	-3.639407	-2.951125	0.0000
GDP has a unit root	-17.64806	-3.639407	-2.951125	0.0001
GFCF has a unit root	-12.89180	-3.639407	-2.951125	0.0000

The probability of T-stats of all the variables are less than 5% and the absolute value of t-statistic are greater than critical values at 1% and 5% level. Therefore, alternative hypothesis have been selected. P-value shows that coefficients are significant at 1% and 5% confidence interval.

### Johansen Co-integration Test Results:

Before proceeding with Johansen's co-integration test, researcher selected appropriate lag. For this purpose, Schwarz Information Criterion (SIC) (Schwarz, 1978) used to check the optimal lag length.

### Lag Length Selection Criteria

Number of Lags		
	Net Financing	Total Assets
0	-1.660759	-2.878125
1	-3.387629*	-3.645530*
2	-3.326206	-3.537178
3	-3.165358	-3.291361
4	-3.017811	-3.267631

\* indicates lag order selected by the criterion

### Johansen's Test (Trace Statistic)

	Hypothesis		Trace Statistic	Critical Values	
	Ho	H1		5%`	1%
Net Financing					

GDP	r=0	$r \geq 1$	29.83992	15.49471	19.93711
	$r \leq 1$	r=2	8.708943	3.841466	6.634897
GFCF	r=0	$r \geq 1$	28.22756	15.49471	19.93711
	$r \leq 1$	r=2	10.63775	3.841466	6.634897
Total Assets					
GDP	r=0	$r \geq 1$	29.75067	15.49471	19.93711
	$r \leq 1$	r=2	12.53299	3.841466	6.634897
GFCF	r=0	$r \geq 1$	27.34782	15.49471	19.93711
	$r \leq 1$	r=2	11.38828	3.841466	6.634897

\* - Results are Insignificant

Results clearly stated that there is long term relationship exists in between private lending of Islamic banks and Economic growth and also long run relationship exists in between Total Assets of Islamic banks and Economic Growth.

#### Johansen's Test (Max Eigen Value Statistic)

	Hypothesis		Max Eigen Value	Critical Values	
	Ho	H1		5%`	1%
Net Financing					
GDP	r=0	r≥1	21.13097	14.26460	18.52001
	r≤1	r=2	8.708943	3.841466	6.634897
GFCF	r=0	r≥1	17.58981	14.26460	18.52001*
	r≤1	r=2	10.63775	3.841466	6.634897
Total Assets					
GDP	r=0	r≥1	17.21767	14.26460	18.52001*
	r≤1	r=2	12.53299	3.841466	6.634897
GFCF	r=0	r≥1	15.95955	14.26460	18.52001*
	r≤1	r=2	11.38828	3.841466	6.634897

\* - Results are Insignificant

Almost all the Eigenvalues of Total Assets and Net Financing of Islamic banks are greater than critical values at 1% and 5% expect Net Financing and GFCF at 1% level of significance and total assets of Islamic banks with GDP and GFCF at 1% level of significance, predict that there is long run relationship exist in between NI and EG & NFI and EG.

## Granger Causality Tests Result

Null Hypothesis	Obs	F-Stat	Prob
LNGFCF does not Granger Cause LNNF	33	0.14466	0.8660
LNNF does not Granger Cause LNGFCF	33	0.69728	0.5064
LNNF does not Granger Cause LNGDP	33	5.79312	0.0078
LNGDP does not Granger Cause LNNF	33	0.32840	0.7228
LNGFCF does not Granger Cause LNTA	33	0.49321	0.6159
LNTA does not Granger Cause LNGFCF	33	0.80310	0.4580
LNTA does not Granger Cause LNGDP	33	2.48511	0.1015
LNGDP does not Granger Cause LNTA	33	0.17563	0.8398

There is no cause and effect relationship exists in between net financing and GFCF but there is granger causality exists in between Net Financing of Islamic Banks and GDP, which shows that with the change in the net financing of Islamic banks, it somehow affects GDP.

## Regression Results:

Regression	Coefficient	Probability
LNNF & GDP	0.101521	0.8405
LNNF & GFCF	0.000911	0.7020
LNTA & GDP	-0.000507	0.1933
LNTA & GFCF	-0.023145	0.7502

GDP Service Sector used as a control variable for GDP and Construction as a control variable for GFCF. Null Hypothesis is there is no relationship exists between endogenous variables and exogenous variables, which is accepted. Therefore there is no short run relationship exist in between Islamic Finance and Economic Growth.

## Conclusion & Recommendations

In this paper, an attempt has been conducted to check out the relationship exist in between Economic Growth and Islamic Finance. Since the variables in this paper are stationary at the same order of integration; therefore, the Johansen's co-integration technique has been applied. The results of cointegration provide an evidence of a unique cointegrating vector. GDP and GFCF have more than one co-integration with independent variables, private lending and Total Assets of Islamic Finance. In other words, that there is long term relationship exists in between Islamic Finance and economic growth in Pakistan. Through regression analysis, we have tested

the short term relationship exist in between endogenous and exogenous variables, which shows that there is no short-term relationships exist in between Islamic finance and economic growth of Pakistan.

The results indicate that there is unidirectional long-run granger causality between private lending of Islamic Finance and GDP which show the positive contribution of Islamic banks in Pakistan.

The results confirm that the importance of a well-functioning of Islamic banking system in Pakistan and its positive contribution toward the economic development of the country. This suggests that higher the growth of Islamic Financial system would lead to higher the contribution of Economic Growth in Pakistan.

This paper provides guidelines to academic researchers about the role of Islamic Finance on Economy. It will also help policy makers of the country to implement Islamic finance instead of an ongoing conventional financial system which contains many flaws and against the teaching of Islam.

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