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Relevance of Islamic Banking System to India in Light of its Effectiveness in Bringing Long Run Causality between Domestic Credit Provided by Finance Sector and GDP Growth Rate in Case of Islamic Banking Countries

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ABSTRACT

GDP growth rate of India during 2015Q₁ was at 7.5% compared to China's 7%, making it the fastest growing economy. In next 10 years, Indian economy climbs to the third largest in the world just behind the U.S. and China. Yet an economic deceleration in the past few quarters has generated worries about India's growth potential. Maintaining the GDP growth rate at a pace which makes India to become economic super power is a concern of policy makers of India. In recent times, there is an increase in the number of economists who opine that Islamic Banking and Finance (IBF) is better than interest based banking system in addressing many of the world's economic issues. In this context, an attempt is made in this paper to test whether or not, IBF is effective than conventional banking in stabilizing the GDP growth rate. To test it, Granger causality tests are applied for four countries viz. India, Pakistan, Iran and Sudan, of which the first one is based on conventional banking system and the remaining three operate on IBF principles. Two variables i.e. Domestic Credit Provided by Finance Sector (DCPFS) in percentage and GDP Growth Rate (GDPGR) in percentage are selected from the World Bank's database on World Development Indicators (WDI). The results evidenced that there is no significant cause and effect relationship from DCPFS to GDPGR in case of India, though it has higher degree of correlation coefficient. However, in case of the countries which provide domestic credit on IBF principles i.e. Pakistan, Iran and Sudan, the significant cause and effect relationship is found. Hence, it is concluded that IBF is relevant to India in bringing the long run causality between DCPFS and GDPGR.

KEY WORDS: Islamic Banking, Domestic Credit Provided by Finance Sector, GDP Growth Rate, Granger Causality Test, Relevance to India

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1. INTRODUCTION

Islamic banking system can be simply described as a banking system that adheres to the principles of Shariah i.e. the Islamic law. In other words, it can be viewed as a financial system which identifies itself with the spirit of Shariah as laid down by the holy Qur'an and Sunnah with regard to its objectives, principles, practices and operations¹. Islamic banking though has origin from the era of Prophet Mohammad (peace be upon him), evolved as a formal banking system since 1970s. In its modern journey of over 40 years, it has spread to over 75 countries worldwide, about 40% of which are non-Muslim countries. Besides Arab countries, modern, secular and industrialized countries like Britain, Singapore, Japan and Hong Kong have already become hub for Islamic banking and finance². HSBC, Citi Bank etc. have started separate branches that offer Islamic financial products³.

2. BACKGROUND OF THE PAPER

Indian economy is one of the most happening economies of the world. With the consistent efforts of the successive governments, it is on its way to become an economic super power in the world. India's GDP was around US\$ 480 billion at the beginning of the century. As per IMF estimates, its economic reforms made its GDP to grow by five-fold and reach US \$2.2 trillion in 2015. GDP growth rate of India during 2015Q₁ was at 7.5% compared to China's 7%, making it the fastest growing economy⁴. The historical analysis of growth rate of India shows that the average growth rate is 4.4% during 1970s and 1980s. It is accelerated to 5.5 % during the 1990s and early 2000s, and further to 7.1 % in the past one decade. The acceleration of growth is found in case of per capita income also which grew at 5.5 percent per year in the last decade. In the next ten years, economic forecasters predict that India's economy will climb to the third largest in the world just behind the U.S. and China. India has achieved much in the last decades. Yet an economic deceleration in the past few quarters has generated worried commentaries about India's growth potential⁵. American economist *Paul Krugman* warned that there is a problem with the growth model of India. India could take the lead only when it focuses on its manufacturing sector⁶. Maintaining the GDP growth rate at a pace which makes India to retain its current economic position and march-forward to become economic super power, is one of the contemporary economic issues of India.

These days, Islamic Banking and Finance (IBF) has evolved itself as an alternative to conventional interest based banking system. The proponents of it are opining that IBF is superior than interest based banking and finance system in addressing many of the economic issues that the world is currently facing⁷. **Prof. Vijay Shankar Vyas (Former PMEAC member)** while speaking at a conference on Ethical Issues in Planning and Development, Jaipur on Dec 6, 2010 said,

*“Islamic economic principles could provide answers to some of the serious challenges of modern economy advocating limitless production and consumption which invariably leads to poverty, deprivation and exploitation. Among all religions, Islam has the most egalitarian system of equitable distribution of wealth to benefit the poor and the needy through Zakat and Sadaqat. There is a need to explore the scope for its adoption in the mainstream economy”.*⁸

Further, the finance sector of the country is advancing billions of rupees in the form of domestic credit to boost up the GDP and its growth rate so that Indian growth is sustained on continuous basis. Now the research question is that whether or not, there is any cause and effect relationship between Domestic Credit Provided by Finance Sector (DCPFS) and GDP Growth Rate (GDPGR) in case of India. If the causality is found, then it is inferred that Indian banking (credit) system is effective in bringing causality between DCPFS and GDPGR. If not, it is ineffective. Further, if the causality is found between DCPFS and GDPGR in case of Islamic banking countries, then, Islamic banking (credit) system is effective. Therefore, it is relevant to India. Thus, the focus of this research paper is to assess the relevance of Islamic Banking System (IBS) to India in bringing the long run causality between DCPFS and GDPGR.

3. OBJECTIVES OF THE PAPER

The following are the objectives of this research paper.

- To assess the relevance of Islamic banking system in stabilizing Indian GDP growth rate.
- To recommend the appropriate ways to introduce Islamic banking in India, if it is proved to be relevant.

However, the first objective mentioned above is of abstract nature and hence difficult to test it. Hence, it is transformed into following secondary objectives.

- To ascertain whether there exists or not, any causality between Domestic Credit Provided by Finance Sector (DCPFS) and GDP Growth Rate (GDPGR) in case of India.
- To ascertain whether there exists or not, any causality between DCPFS and GDPGR in case of sample Islamic Banking and Finance (IBF) countries.
- To ascertain whether or not, Islamic banking is relevant to India in bringing causality between DCPFS and GDPGR.

4. RESEARCH HYPOTHESES

The above mentioned objectives are transformed into the following testable hypotheses.

- **H₀₁:** There is no (granger) causality between Domestic Credit Provided by Finance Sector (DCPFS) and GDP Growth Rate (GDPGR) in case of India.

- **H₀₂:** There is no (granger) causality between Domestic Credit Provided by Finance Sector (DCPFS) and GDP Growth Rate (GDPGR) in case of sample IBF countries.

5. RESEARCH METHODOLOGY

- **Data variables:** In order to test the above two hypotheses, data related to Domestic Credit Provided by Finance Sector (DCPFS) and GDP Growth Rate (GDPGR) are collected for both India and sample IBF countries.
- **Data sources:** World Bank has collected and compiled the data related to all nations from officially recognized international sources and termed the data set as ‘World Development Indicators’ (WDI). It presents the most current and accurate global development data at national, regional and global levels. This is the most authentic data set and forms the basis for all the economic databases. This source is used to collect the data related to Domestic Credit Provided by Finance Sector (DCPFS) in percentage and GDP Growth Rate (GDPGR) in percentage.
- **Sample size:** Out of the 75 countries in which Islamic banking is operational, only 3 countries claim that they are putting efforts to completely eliminate interest from their economy and comply with IBF principles. They are Pakistan, Iran and Sudan. Thus, the sample size is 3.
- **Sampling method:** Judgment sampling
- **Data analysis methods:** The Karl Pearson’s correlation coefficient is used to know the direction and degree of association between the variables. In order to test the causality, depending on the case, either Error Correction Model (ECM) or Unrestricted VAR model or Toda and Yamamoto model is used. Before applying them, Augmented Dickey Fuller (ADF) test, Phillips - Perron (PP) test, and Kwiatkowski – Phillips – Schmidt - Shin (KPSS) test are applied to know the stationarity of the series and then, Johansen co-integration test to know the long run equilibrium between the series.

6. DATA ANALYSIS AND INTERPRETATION

6.1. Case – 1: Testing the causality between DCPFS and GDPGR in case of India

The calculated value of Karl Pearson’s correlation coefficient (r) between DCPFS and GDPGR is found to be + 0.32. It means that both these series are positively (directly) correlated with each other, meaning that increase in DCPFS is associated with increase in GDPGR and vice versa. In

order to know, whether there is any cause and effect relationship between these variables (series), Granger causality test is performed which has three steps.

- **The first step** is to check for stationarity / unit root / level of integration of these variables.
- **In the second step**, if the variables are of same order, Johansen co-integration test is performed in order to trace out the long run equilibrium between these variables.
- **In the third step**, Granger causality test is performed to know the cause and effect relationship between the variables. If co-integration is found at second step, Error Correction Model (ECM) is used at third step. If no co-integration is found at second step, then, either Unrestricted Vector Auto Regression (U-VAR) Model or Granger Causality test is performed at third step. Further, Toda and Yamamoto Test is used to check the causality when the variables are of different orders i.e. I(0), I(1) and I(2).

6.1.1. Step – 1: Testing for stationarity of DCPFS and GDPGR Series: ADF, PP and KPSS tests are applied to know the level of stationarity of both the series. The results obtained are tabulated below which clearly indicate that DCPFS is of I(2) and GDPGR is of I(0).

Table – 1: Unit root test results of DCPFS and GDPGR series of India

Test	DCPFS Series	GDPGR Series
ADF Test	I(2)	I(0)
PP Test	I(1)	I(0)
KPSS Test	I(2)	I(2)
Conclusion @ 5% LOS	DCPFS is I(2)	GDPGR is I(0)

(Source: Own calculations based on World Bank's WDI database)

The results indicate that the variables are of different order; hence, Johansen co-integration test can't be used. Either Autoregressive models or Toda and Yamamoto model have to be used to test the causality. In this case, Toda and Yamamoto model is applied.

6.1.2. Step – 2: Toda and Yamamoto model of causality: Toda and Yamamoto model has two steps. The first step involves finding d_{max} i.e. maximum order of integration among the variables in the model and optimal lag length (m). The maximum order is 2 for this model as highest order is I(2) for DCPFS series. To apply Toda and Yamamoto model, the optimal lag must be greater than d_{max} . The second step is to apply VAR Granger Causality / Block Exogeneity Wald test to trace out the causality.

- **Determination of optimal lag:** Different lag length criteria are selected to find out the optimal lag. When the lag length criteria selected is 5, the optimal lag of the model is 3 as per LR, FPE and AIC criteria as tabulated below.

Table – 2: VAR lag order selection criteria for India (DCPFS and GDPGR)

Lag	LR	FPE	AIC	SIC	HQ
0	NA	614.6333	12.09674	12.18925	12.12689
1	101.5636	21.17856	8.727528	9.005074*	8.818001*
2	5.291446	22.46605	8.782076	9.244652	8.932864
3	10.34944*	19.08683*	8.608914*	9.256521	8.820017
4	3.092620	21.86821	8.726404	9.559042	8.997824
5	3.065034	25.02769	8.831217	9.848886	9.162952

(*indicates optimal lag order selected by the criterion)

- **VAR Granger causality / block exogeneity Wald Test:** This test is applied to know the causality. In this test, model equation is estimated with 3 optimal lags plus another 2 extra lags of d_{max} . The results are given below.

Table – 3: VAR Granger causality / BEW test for India (DCPFS and GDPGR)

Dependent Variable: GDPGR			
Excluded	χ^2	dof	Probability
DCPFS	2.51	3	0.47
All	2.51	3	0.47

(Source: Own calculations based on World Bank’s WDI database)

The result of the test shows that the probability of DCPFS is 0.47 which is greater than $\alpha=0.05$; hence, it can be inferred that DCPFS doesn’t granger cause GDPGR in case of India.

6.2. Testing the causality between DCPFS and GDPGR in case of Pakistan

The calculated value of Karl Pearson’s correlation coefficient (r) between DCPFS and GDPGR is found to be + 0.17. It means that both these series are positively (directly) correlated with each other, meaning that increase in DCPFS is associated with increase in GDPGR and vice versa. In order to know, whether there is any cause and effect relationship between these variables (series), Granger causality test is performed in the same manner as applied in the previous section. The results of various tests are given in the following section.

6.2.1. Step – 1: Testing for Stationarity of DCPFS and GDPGR Series: ADF, PP and KPSS tests are applied to know the level of stationary of both the series. The results obtained are tabulated below which clearly indicate that DCPFS is of I(1) and GDPGR is of I(0).

Table – 4: Unit root test results of DCPFS and GDPGR series of Pakistan

Test	DCPFS Series	GDPGR Series
ADF Test	I(1)	I(0)
PP Test	I(1)	I(0)
KPSS Test	I(1)	I(1)
Conclusion @ 5% LOS	DCPFS is I(1)	GDPGR is I(0)

(Source: Own calculations based on World Bank’s WDI database)

Since, the variables are of different order; Johansen co-integration test can’t be used. Either Autoregressive models or Toda and Yamamoto test can be used. The later is used in this case.

6.2.2. Step – 2: Toda and Yamamoto model of causality: As mentioned above, Toda and Yamamoto model has two steps. The first step involves finding maximum order (d_{max}) and optimal lag length (m). The maximum order is 1 for this model as highest order is I(1) for DCPFS series and it is found after testing that the optimal lag of the model is 8. In the second step, VAR Granger Causality / Block Exogeneity Wald test is applied with estimated model equation of 8 lags plus 1 extra lag of d_{max} . The results are given below.

Table – 5: VAR Granger causality / BEW test for Pakistan (DCPFS and GDPGR)

Dependent Variable: GDPGR			
Excluded	χ^2	dof	Probability
DCPFS	19.33	8	0.01
All	19.33	8	0.01

(Source: Own calculations based on World Bank’s WDI database)

The result of the test shows that the probability of DCPFS is 0.01 which is lesser than $\alpha=0.05$; hence, it can be inferred that DCPFS granger causes GDPGR in case of Pakistan.

6.3. Testing the causality between DCPFS and GDPGR in case of Iran

The calculated value of Karl Pearson’s correlation coefficient (r) between DCPFS and GDPGR is found to be + 0.13. It means that both these series are positively (directly) correlated with each other, meaning that increase in DCPFS is associated with increase in GDPGR and vice versa. In order to know, whether there is any cause and effect relationship between these variables (series), Granger causality test is performed in the same manner as applied in the previous section. The results of various tests are given in the following section.

6.3.1. Step – 1: Testing for stationarity of DCPFS and GDPGR Series: ADF, PP and KPSS tests are applied to know the level of stationarity of both the series. The results obtained are tabulated below which clearly indicate that DCPFS is of I(1) and GDPGR is of I(0).

Table – 6: Unit Root Test Results of DCPFS and GDPGR series of Iran

Test	DCPFS Series	GDPGR Series
ADF Test	I(1)	I(0)
PP Test	I(1)	I(0)
KPSS Test	I(4)	I(2)
Conclusion @ 5% LOS	DCPFS is I(1)	GDPGR is I(0)

(Source: Own calculations based on World Bank’s WDI database)

Since, the variables are of different order; Johansen co-integration test can’t be used. Either Autoregressive models or Toda and Yamamoto test can be used to test the causality. The later is used in this case.

6.3.2. Step – 2: Toda and Yamamoto model of causality: As mentioned above, Toda and Yamamoto model has two steps. The first step involves finding d_{max} i.e. maximum order of integration among the variables in the model and optimal lag length (m). The maximum order is 1 for this model as highest order is I(1) for DCPFS series. To apply Toda and Yamamoto model, the

optimal lag must be greater than d_{max} . The second step is to apply VAR Granger Causality / Block Exogeneity Wald test to trace out the causality.

- **Determination of optimal lag:** Different lag length criteria are selected to find out the optimal lag. When the lag length criteria selected is 7, the optimal lag of the model is 7 as per LR, FPE, AIC, SIC and HQ criteria as tabulated below.

Table – 7: VAR lag order selection criteria for Iran (DCPFS and GDPGR)

Lag	LR	FPE	AIC	SIC	HQ
0	NA	2464.630	13.48536	13.58477	13.50218
1	25.78350	753.3385	12.29494	12.59318	12.34542
2	1.644351	1041.218	12.59854	13.09561	12.68266
3	4.443972	1148.489	12.64926	13.34516	12.76704
4	9.107024	771.5173	12.15961	13.05434	12.31104
5	7.593532	535.6283	11.63147	12.72503	11.81655
6	0.481624	999.8556	11.97225	13.26464	12.19098
7	11.77524*	133.7509*	9.449496*	10.94072*	9.701869*

(*indicates optimal lag order selected by the criterion)

- **VAR Granger causality / block exogeneity Wald Test:** This test is applied to know the causality. In this test, model equation is estimated with 7 optimal lags plus another 1 extra lag of d_{max} . The results are given below.

Table – 8: VAR Granger causality / BEW test for Iran (DCPFS and GDPGR)

Dependent Variable: GDPGR			
Excluded	χ^2	dof	Probability
DCPFS	14.78	7	0.03
All	14.78	7	0.03

(Source: Own calculations based on World Bank's WDI database)

The result of the test shows that the probability of DCPFS is 0.03 which is lesser than $\alpha=0.05$; hence, it can be inferred that DCPFS granger causes GDPGR in case of Iran.

6.4. Testing the causality between DCPFS and GDPGR in case of Sudan

The calculated value of Karl Pearson's correlation coefficient (r) between DCPFS and GDPGR is found to be + 0.12. It means that both these series are positively (directly) correlated with each other, meaning that increase in DCPFS is associated with increase in GDPGR and vice versa. In order to know, whether there is any cause and effect relationship between these variables (series), Granger causality test is performed in the same manner as applied in the previous section. The results of various tests are given in the following section.

6.4.1. Step – 1: Testing for stationarity of DCPFS and GDPGR Series: ADF, PP and KPSS tests are applied to know the level of stationarity of both the series. The results obtained are tabulated below which clearly indicate that DCPFS is of I(1) and GDPGR is of I(0).

Table – 9: Unit root test results of DCPFS and GDPGR series of Sudan

Test	DCPFS Series	GDPGR Series
ADF Test	I(1)	I(0)
PP Test	I(1)	I(0)
KPSS Test	I(1)	I(1)
Conclusion @ 5% LOS	DCPFS is I(1)	GDPGR is I(0)

(Source: Own calculations based on World Bank’s WDI database)

The results indicate that the variables are of different order; hence, Johansen co-integration test can’t be used. Hence, Toda and Yamamoto test can be used to test the causality.

6.4.2. Step – 2: Toda and Yamamoto model of causality: As mentioned above, Toda and Yamamoto model has two steps. The first step involves finding d_{max} and optimal lag length (m). The maximum order is 1 for this model as highest order is I(1) for DCPFS series. To apply Toda and Yamamoto model, the optimal lag must be greater than d_{max} . The second step is to apply VAR Granger Causality / Block Exogeneity Wald test to trace out the causality.

- **Determination of optimal lag:** Different lag length criteria are selected to find out the optimal lag. When the lag length criteria selected is 8, the optimal lag of the model is 8 as per LR, FPE, AIC, SIC and HQ criteria as tabulated below.

Table – 10: VAR lag order selection criteria for Sudan (DCPFS and GDPGR)

Lag	LR	FPE	AIC	SIC	HQ
0	NA	529.3734	11.94734	12.04608	11.97217
1	40.83838	97.56126	10.25325	10.54946	10.32774
2	2.168110	123.8371	10.48062	10.97431	10.60478
3	10.62930	92.59057	10.16412	10.85529	10.33794
4	3.483533	107.2866	10.26312	11.15177	10.48661
5	5.544304	103.8584	10.14892	11.23504	10.42208
6	5.214243	99.54047	9.975320	11.25892	10.29814
7	11.52893	41.01218	8.882030	10.36311	9.254517
8	10.26571*	14.59776*	7.518904*	9.197461*	7.941056*

(*indicates optimal lag order selected by the criterion)

- **The VAR Granger causality / block exogeneity Wald Test:** This test is applied to know the causality. In this test, model equation is estimated with 8 optimal lags plus another 1 extra lag of d_{max} . The results are given below.

Table – 11: VAR Granger causality / BEW test for Sudan (DCPFS and GDPGR)

Dependent Variable: GDPGR			
Excluded	χ^2	dof	Probability
DCPFS	47.6	8	0.00
All	47.6	8	0.00

(Source: Own calculations based on World Bank’s WDI database)

The result of the test shows that the probability of DCPFS is 0.00 which is lesser than $\alpha=0.05$; hence, it can be inferred that DCPFS granger causes GDPGR in case of Sudan.

7. SUMMARY OF RESEARCH FINDINGS

The following table presents the major findings of the study after analyzing the data related to DCPFS and GDPGR series of four countries of which one is India which operates on interest based banking system and the other three are Pakistan, Iran and Sudan which operate on interest free Islamic banking system.

Table – 12: Summary of research findings for sample countries (DCPFS and GDPGR)

Country	Correlation Coefficient	Co – Integration	Causality from DCPFS to GDPGR
India	+ 0.32	Not Applicable*	Doesn't exist
Pakistan	+ 0.17	Not Applicable*	Exists
Iran	+ 0.13	Not Applicable*	Exists
Sudan	+ 0.12	Not Applicable*	Exists

(*co-integration can't be applied because the variables are of different order of integration)

- The values of Karl Pearson's correlation coefficients between DCPFS and GDPGR for India, Pakistan, Iran and Sudan are + 0.32, + 0.17, + 0.13 and + 0.12 respectively. It is found that all the countries under the study have positive correlation coefficient. It means that increase in DCPFS is correlated with increase in GDPGR. Among the sample countries under the study, India has relatively higher value of correlation coefficient when compared to Pakistan, Iran and Sudan.
- The co-integration test which is applied to trace out the long run equilibrium between DCPFS and GDPGR series is not applied to the data of any country as the variables under the study are of different orders. Hence, the study directly applied Granger causality (Toda and Yamamoto model) test to know the causality.
- The study after applying Toda and Yamamoto Model, failed to identify any significant cause and effect relationship from DCPFS to GDPGR in case of India, though it has higher degree of correlation coefficient. However, the same model provided the evidence that there exists significant cause and effect relationship from DCPFS to GDPGR in case of the countries which provide domestic credit on Islamic banking and finance principles i.e. Pakistan, Iran and Sudan.

8. RESULTS OF HYPOTHESES TESTED

The acceptance and rejection position of hypotheses after testing them by using appropriate econometric models are given below.

- The hypothesis (H_{01}) which is framed as “*there is no (granger) causality between Domestic Credit Provided by Finance Sector (DCPFS) and GDP Growth Rate (GDPGR) in Case of India*” is accepted. It means that DCPFS is not a cause to increase GDPGR in case of India.

- The hypothesis (H_{02}) which is framed as “*there is no (granger) causality between Domestic Credit Provided by Finance Sector (DCPFS) and GDP Growth Rate (GDPGR) in case of sample IBF countries*” is rejected. It means that DCPFS is a cause to increase GDPGR in case of sample IBF countries.
- From the above two findings, it is proved that interest based banking (DCPFS) in India is ineffective in increasing the GDPGR whereas interest free Islamic banking (DCPFS) in sample IBF countries is effective in increasing the GDPGR. Hence, it can be concluded that Islamic banking is relevant to India in bringing the long run causality between DCPFS and GDPGR.

9. POLICY IMPLICATIONS

In light of the above findings, this paper makes the following recommendations.

- Development of an economy depends on development of infrastructure. Hence, *it is recommended* that India may adopt Istisnah product of Islamic banking system for infrastructure development in India.
- Growth rate of the economy depends on growth rate of industrial output. Hence, *it is recommended* that India may adopt Musharakah (profit and loss sharing / partnership) product of Islamic banking system for development of industrial output of India by attracting FDI from gulf countries.
- Further, MSMEs have a vital role in increasing the GDP growth rate. Hence, *it is recommended* that India may adopt Mudarabah (profit sharing contract) of Islamic banking system in this regard.
- Agriculture plays a vital role in GDP growth rate of India. *It is recommended* that Indian banks may opt for participatory modes of Islamic banking like Musharaka and Mudarabah etc in agriculture sector to improve GDP growth rate. *It is also recommended* to use Salam contract to improve the most awful position of the farmers in India.
- There are four major acts by which banks in India are governed. They are (i) The Negotiable Instruments Act, 1881 (ii) Reserve Bank of India Act, 1934 (iii) The Banking Regulation Act, 1949, and (iv) The Co-operative Societies Act, 1961. Islamic banks, though meet most of the sections, fail to meet certain sections. Hence, they can't get license to operate as banks in India. It is worth to mention here the statement of D. Subba Rao, former RBI governor, “*We got to see that Islamic banking which does not allow charging interest or taking of interest is inconsistent with our existing laws. All that I am saying is Islamic banking is not consistent with current banking laws*”. The sections which are against Islamic banking are; (i) Islamic banks operate on

profit and loss sharing principle but the section 5 (b) and 5 (c) of the Banking Regulation Act, 1949 prohibit the banks to invest on profit and loss sharing basis. (ii) Section 8 of the Banking Regulation Act, 1949 mentions “No banking company shall directly or indirectly deal in buying or selling or bartering of goods”, but Islamic banks have to deal with goods in Salam, Murabaha etc type of contracts. (iii) Islamic banks use Ijarah contract for home finance in which they own an immovable property. But, the section 9 of the Banking Regulations Act, 1949 prohibits banks to use any sort of immovable property apart from private use, and (iii) Islamic banks do not receive or pay interest. But, the section 21 of the Banking Regulations Act, 1949 requires payment of interest. In this regard, the following recommendations are made.

- It is **recommended** that the government of India may amend these sections just like what the modern developed countries UK, Japan, Singapore, Australia and Hong Kong etc. have done to accommodate IBF in Indian Banking sector which benefits India to attract surplus from Gulf Cooperation Council countries. Though, India is more attractive to make investment than these countries, GCC business houses are left with no option but to invest in the countries which have amended their laws. India is definitely losing a very big bet due to its indecisiveness. It is interesting to note here that Indian banks like ICICI and Kotak have Sharia compliant windows in their Gulf operations. The major five Indian companies viz. Reliance Industries, Infosys Technologies, Wipro, Tata Motors and Satyam Computer Services are indexed in Standard & Poor’s BRIC Shariah Index.
- The word ‘Islam’ or Islamic might be abhorred by certain sections in the society. Hence, it is **recommended** that not to call it as Islamic banking. Name it as interest free banking or ethical banking or alternative banking or participatory banking or something else. Gulf houses don’t look for the title, they are concerned about whether the system complies with Shariah rules or not.
- In addition to banking, financial system of India also comprises of Non-Banking Financial Companies (NBFCs), Mutual Funds, Insurance Companies and Developmental Institutions. Under these sections, Islamic banks can operate without much to change in the sections of the laws. However, NBFCs seem to be the best available option for those Indian banks or individuals who want to start Islamic banks because of easier entry norms, lower capital requirements, lower regulation and flexibility in registration and functioning. Hence, *it is recommended* that Islamic banks can enter India through NBFCs mode just like what the Kerala State Finance Corporation has done.
- It is **recommended** that the government may allow banks to come out with a scheme under which instead of paying interest on deposits, they may convince the depositors to share

profits earned out of actual investments in financing infrastructural projects and other core business activities. It is similar to investment on shares in stock exchange.

10. CONCLUSION

In this research paper an attempt is made to know whether Islamic banking is relevant to India or not, in bringing the long run causality between DCPFS and GDPGR. To test it, the data related to India, which operates on interest based banking, and three countries viz. Pakistan, Iran and Sudan which operate on Islamic Banking and Finance (IBF) principles are collected in terms of DCPFS and GDPGR. Granger causality tests are applied to test the cause and effect relationship between these variables for all the countries under the study. It is proved that interest based banking (credit) system (DCPFS) in India is ineffective in bringing the long run causality between DCPFS and GDPGR whereas interest free Islamic banking (credit) system (DCPFS) in sample IBF countries is effective in achieving so. Hence, it can be concluded that Islamic banking is relevant to India to bring the cause and effect relationship between DCPFS and GDPGR. In light of these findings, it is recommended that government of India may consider the option of introducing Islamic banking in India with a different title like interest free banking, participatory banking etc. It may make necessary adjustments in banking laws to accommodate Islamic banking in India. Initially, the products which are similar to conventional banking products may be introduced. Later on based on its performance, the government may go for further expansion.

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