

# Islamic Banking: An Ultimate Source of Financial Inclusion

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**Abstract**—Promotion of socioeconomic justice through redistribution of wealth is one of the most salient features of Islamic economic system. Islamic financial institutions known as Islamic banks are used to implement this in practice under the guidelines of Islamic *Shariah* law. Islamic banking systems strive to promote and achieve financial inclusion among the society by offering interest-free banking and risk-sharing financing solutions. *Shariah*-compliant micro finance is one of the most popular financial instruments used by Islamic banks to enhance access to finance. Benevolent loan (or *Qard-al-Hassanah*) is one of the popular financial tools used by the Islamic banks to promote financial inclusion. This aspect of Islamic banking is empirically examined in this paper with specific reference to firm's resources, largely defined here as intellectual capital. The paper finds that Islamic banks promote financial inclusion by exploiting available resources especially, the human intellectual capital.

**Keywords**—Financial inclusion, intellectual capital, *Qard-al-Hassanah*, Islamic banking.

## I. INTRODUCTION

ISLAMIC banking and finance entered into the mainstream financial services industry about half a century ago. Since then the industry has developed itself to become one of the fastest growing segments in the field of finance [14]. Since the beginning of the new millennium, Islamic finance industry has maintained a steady yet robust growth and outperformed its conventional rivals. The industry faced its first test since the inception during 2007-2008 financial crisis, which led to the collapse of many leading conventional banks. The efficiency and stability of Islamic finance during the recent global financial crisis proved the soundness of Islamic way of banking and urged the researchers to study the underpinning of Islamic banking business model [5], [7], [11].

Islamic banking is based on the ideology of *Shariah*, known as Islamic law, which guides social and economic aspects of the Islamic religion. Under Islamic jurisprudence, Islamic banks are not allowed to charge interest (or *riba*), invest in illicit activities (i.e. alcohol, tobacco, armaments or pornography) or encourage/promote *Gharaar* (uncertainty). Furthermore, Islamic banks do not transfer risk rather risk is shared between the borrower and the lender (*for further details see*, [4], [12], [15]). Furthermore, Islamic banks are co-governed by the religious scholars to monitor the *Shariah* compliance of all their products and services. Hence, Islamic banking business model is based on ethics to encourage financial inclusion. The key features of Islamic banking business model suggest that Islamic banking is based on intangible sources (i.e. *Shariah* law), which

are exploited to create value i.e. stability, profitability and financial inclusion.

The concept of intangibility is at the core of the phenomenon of intellectual capital (IC), which has been argued to be a source of competitive advantage for financial services sector in today's knowledge intensive area (*see inter alia*, [6], [9], [13]). Like any other knowledge-intensive sector, banking industry in general and Islamic banks, in particular are dependent on their IC resources to create value. However, there is a lack of empirical evidence in examining this relationship.

Against this background, the main purpose of this paper is to empirically examine the sources of competitive advantage for Islamic banks and how they relate to the ultimate objective of Islamic banking –the financial inclusion.

## II. BACKGROUND

### A. Intellectual Capital (IC)

IC, which refers to knowledge resources that can give the company a competitive advantage in the market [21] is defined as “the new source of wealth is not material; it is information, knowledge applied to work to create value” [22]. In this paper, IC refers to the “the possession of knowledge and experience, professional knowledge and skill, good relationships, and technological capacities, which when applied will give organisations competitive advantage” as defined by CIMA [23]. IC is further divided into human and structural IC, where the former refers to the human intellect, which generates new ideas and the latter refers to the supporting mechanism, which helps human capital to convert those ideas into tangible products.

Previous research suggests that IC is the main driver of value creation in the banking industry [6], [9], [13]. Since Islamic banks are mainly involved in relationship banking and their income sources (depositors and borrowers) are different from the conventional banks, such banks are expected to create value by exploiting various resources. In this paper, value creation refers to the promotion of financial inclusion. Therefore, it is expected that IC resources relate positively with financial inclusion.

- Hypothesis 1: There is a significant positive relationship between IC and financial inclusion

#### 1. Human IC

The combination of factors, possessed by a firm's individuals and the collective workforce is referred to as human IC. This encompasses knowledge, skills, and technical ability; personal

traits such as intelligence, energy, attitude, reliability, and commitment; ability to learn including aptitude, imagination and creativity; and desire to share information, participate in a team, and focus on the goals of the firm [1]. Human IC is the central component of IC and its extraction creates firm value.

Human capital is highly significant to Islamic banking as the whole concept is based on intangible ideology i.e. *Shariah* law, which requires higher level of intellectuality to interpret and implement *Shariah* in practice. Therefore, employees of an Islamic bank are expected to have good knowledge of banking and finance as well as to have knowledge of *Shariah* law. Hence, value is created through a combination of conventional and *Shariah* knowledge. Accordingly, higher human capital efficiency is expected to relate positively with financial inclusion.

- Hypothesis 2: There is a significant positive relationship between human IC and financial inclusion.

## 2. Organizational IC

The second main component of IC is the organizational or structural IC. Human capital cannot work alone and needs some sort of supporting mechanism, which is provided by organizational or structural IC in the form of an office building, working desks, organizational structure (i.e. vision, mission, and strategy), software, and copyrights agreements, etc.

Islamic banks came into being to encourage and promote socio-economic justice for the society as a whole. Thus, redistribution of wealth, not profit maximization is the ultimate goal for such banks. Hence, the structural and organizational capital resources of such banks are significantly different from their conventional rivals.

Accordingly, it is expected that organizational capital, possessed by an Islamic bank will relate positively with financial inclusion.

- Hypothesis 2: There is a significant positive relationship between organizational IC and financial inclusion.

## 3. Physical and Financial Capital

Organizations cannot function without 'brains' –human capital and human capital cannot work efficiently without any supporting mechanism i.e. structural/organizational capital. However, to afford both the said capital resources a firm needs finances. Hence, physical and financial is equally important for value creation. Accordingly, financial capital is expected to be one the main sources of financial inclusion.

- Hypothesis 3: There is a significant positive relationship between financial capital and financial inclusion.

## III. RESEARCH DESIGN

### A. Sample

The sample consists of 23 Islamic banks operating in Bangladesh and Pakistan. These two countries are selected given their reputation and increased engagement in promoting financial inclusion through micro-financing [2], [3], [16], [18], [19]. Various sources are used to extract data. First, Bankscope database was consulted to identify banks operating in both countries. Second, banks were verified using central bank's

data from both countries and by visiting individual bank's website. Third, annual and financial reports from each bank were downloaded for data collection and analysis. Since data on the proxy measure for financial inclusion i.e. Qard-al-Hassanah is not readily available in the Bankscope database, therefore, all such data is hand collected from annual and financial statements of each bank included in the sample. After eliminating banks with missing data, the final sample comprises of 23 banks (12 from Bangladesh and 11 from Pakistan). The data were collected for three years 2012–2015 (69 firm-years observations).

### B. Dependent Variable

According to [8], Islamic banks mainly use *Shariah*-compliant microfinancing to promote SMEs. However, benevolent loans (Qard-al-Hassanah), accumulated through *Zakat* (religious levy), *Sadaqah* (charity) and *Waqf* (endowment) are the ultimate sources of financial inclusion. Financial inclusion is the dependent variable in this paper. Following previous literature [8], [18], total dollar amount (transformed using natural logarithm) channeled through benevolent loans is used as a proxy to measure financial inclusion.

### C. Independent Variables

As stated earlier, value in Islamic banking is created through various tangible and intangible sources, combined as IC. Reference [20] developed the value added intellectual coefficient (VAIC) methodology to capture IC when using secondary data. The same methodology is adopted to capture the value of IC in sampled Islamic banks. VAIC consists of three sub-components namely human capital efficiency (HCE), structural capital efficiency (SCE) and capital employed efficiency (CEE):

$$VAIC = HCE + SCE + CEE$$

The difference between expenses and revenue is value added. HCE is the ratio of VA to total human capital expenditure. SCE is the ratio of structural capital expenditure to VA while CEE is the ratio of VA to book value of total assets. The paper also controls for size of the bank for its potential impact.

## IV. EMPIRICAL RESULTS

### A. Descriptive Statistics

The minimum and maximum value of financial inclusion (proxed as the long of total dollar amount channeled through benevolent loans) are 0.29 and 1.24 respectively, with a mean of 0.80, which indicates that on average, the sampled banks remained involved in financial inclusion activities during the study period. The mean of 4.65 for VAIC suggests that, during the study period, the sample Islamic banks were generally efficient in promoting financial inclusion by exploiting their IC. Descriptive statistics related to the segregated independent variables indicated that HCE, SCE and CEE all have positive means of 3.29, 1.23 and 0.38 respectively.

Table II presents the results based on Pearson's correlation.

It can be seen that the variable of interest, VAIC and its subcomponents, are positively correlated with financial inclusion measure.

TABLE I  
DESCRIPTIVE STATISTICS

Stats	Mean	Std. Dev.	Minimum	Maximum	Skewness	Kurtosis
LnFI	0.798226	0.281847	0.29162	1.236937	-1.19009	3.369378
VAIC	4.6537	3.095076	-3.25049	11.02995	-0.16472	3.926944
HCE	3.293647	2.621808	-2.7043	9.409774	0.176709	3.816628
SCE	1.231884	0.698137	-0.03913	3.186768	0.574917	4.462302
CEE	0.380953	0.156085	-0.0936	0.487979	0.059271	2.487369
Bank-size	14.36143	1.557462	10.78707	16.83555	-0.67405	2.735814

TABLE II  
CORRELATION ANALYSIS

	LnFI	VAIC	HCE	SCE	CEE
VAIC	0.2893				
HCE	0.3089	0.9185			
SCE	0.1711	0.0344	0.0759		
CEE	0.3810	0.5179	0.5577	0.2009	
Bank-size	0.4762	0.3694	0.4008	0.1989	0.4516

### B. Regression Analysis

The following regression model is used to measure the relationship between IC and financial inclusion, promoted by Islamic banks.

$$\text{LnFI} = \alpha_0 + \beta_1\text{VAIC} + \beta_2\text{HCE} + \beta_3\text{SCE} + \beta_4\text{CEE} + \beta_5\text{Bank-size} + \varepsilon$$

where LnFI refers to financial inclusion (measured as the log of total dollar amount channeled through the benevolent loans), VAIC is the sum of HCE, SCE and CEE, bank size refers to total assets held by a bank. The model is repeated four times, referring to Model 1, Model 2, Model 3 and Model 4, where the independent variables changes in each model.

Table III presents the results from the regression models. The adjusted  $R^2$  for each of the four models ranges between 28% and 33% for the study period for the combined three-year period. Model 1 is the main regression model, which examines the association between financial inclusion measure and VAIC. VAIC is found to have a significant ( $p < 0.05$ ) positive relationship with financial inclusion for the pooled data. Thus, hypothesis 1 is supported. Similarly, Banks size is positively related to financial inclusion in the predicted direction at 1% significance level.

TABLE III  
REGRESSION RESULTS

Models	Model (1)	Model (2)	Model (3)	Model (4)
VAIC	0.0147**			
Banks-size	0.0893***	0.0876***	0.0987***	0.0788***
HCE		0.0191***		
SCE			0.0211	
CEE				0.597***
Constant	-0.378*	-0.350*	-0.485**	-0.232
Observations	69	69	69	69
Adjusted $R^2$	0.271	0.275	0.261	0.351

Robust t-statistics in parentheses

\*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$

In addition to the main model, three models are developed to measure the segregated impact of IC on financial inclusion efforts of Islamic banks. In Models 2, 3 and 4, the main independent variables have been changed but the control variable remains unchanged. The results from Model 2 are reported in the third column of Table III. It indicates significant positive relationship at the 1% level between HCE and financial inclusion measure. Thus, hypothesis 2 is supported. The findings suggest that human capital is the main driver of financial inclusion. These findings are consistent with that of [10] in Malaysia, [17] in Greece, and [13] in India, who regarded human capital as the main value driver in the banking industry.

The results in Model 3, reported in the fourth column of Table III, show no significant relationship between SCE and financial inclusion. Hence, there is not enough statistical evidence to support hypothesis 3. These findings are dissimilar to those of [9], who examined the IC performance of UK banks, and reported that structural capital has a significant impact on bank's performance. Finally, results in Model 4, reported in the fifth column of Table III, are similar to that of Model 2 but with a slightly higher coefficient. The results suggest a significant positive relationship at the 1% level between CEE and financial inclusion proxy. Thus, hypothesis 4 is supported. In all the models, control variable i.e. bank-size is found to be positively associated with the financial inclusion measure.

### V. SUMMARY AND CONCLUSION

This paper empirically examines the relationship between firm resources, defined as IC and financial inclusion of 23 Islamic banks operation in Bangladesh and Pakistan for three years 2012-2015, while controlling for bank size. Log of total dollar amount channeled through benevolent loans is used as a proxy to measure financial inclusion. Overall, the results suggest that Islamic banks are heavily engaged in promoting financial inclusion to encourage social and economic fairness in the society. The results further indicate that IC resources especially, human and financial IC are the main source of sustained financial inclusion for Islamic banks.

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