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Investigating the Institutional Quality Integration with Islamic Banking Development in Promoting Entrepreneurship

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Abstract

Empirically, conventional finance has proven insufficient while providing the required finance for startups and entrepreneurs. While handling the risks, entrepreneurs tend to avoid the high-cost nature of the debt, which limits their true potential leading to sub-optimal resource utilization. For this, Islamic finance provides a participative and equitable alternative for new ventures with proven merits, but a lack of regulation hinders its penetration among entrepreneurial aspirants. This study investigates how Islamic finance assists entrepreneurial decisions and the role of institutional quality in aligning Islamic law with commercial law requirements. This study selected the unbalanced panel data of 37 countries between 2011 and 2020 and used panel quantile regression to estimate the quadratic Islamic financial development effects and the moderation of institutional quality. The results showed that generally, Islamic financial development has a U-shaped relation with entrepreneurship, but with the improvement in institutions, the U shape is flipped to inverted-U shape. This study points toward the potential of Islamic financing when coupled with better regulations for the economies which are developing the nascent Islamic financing system.

Keywords: Islamic financial intermediation, New business density, Panel quantile regression.

Introduction

Importance of Entrepreneurship

Entrepreneurship is mostly discussed with purposeful activity for profits (Cole, 1968) but is associated with risk (Knight, 1921). Kirzner (1973) represented entrepreneurs as motivated enough to identify previously unnoticed profit opportunities and act on them. Gilder (1980) considered that the entrepreneur knows how any economy works and can contribute to its progress. Bolton and Thompson (2000) defined an entrepreneur as "someone who usually creates and innovates to build something of recognized value around perceived possibilities".

Hart (2003) believes that entrepreneurship is about opening a business and expanding the new business. Skala et al. (2019) define startups as new firms which create

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innovative ideas. Gill (2002), however, believes that startups are a mixture of desire and work. Entrepreneurship promotes creative business ideas and transforms economic structure (Peprah & Adekoya, 2020).

Entrepreneurship primarily means "taking critical decisions about managing limited resources" (Casson, 2003). According to Onuoha (2007), "the practice of launching new businesses or stimulating mature businesses, particularly new organizations, generally in response to identified opportunities". Entrepreneurship and entrepreneurs have become gradually important worldwide, seeing a positive impact on the unemployment rate, productivity, invention and economic growth by analysts, economic theoreticians and researchers (Global Entrepreneurship Monitor GEM, 2018; Ahmad & Hoffmann, 2008). Baumol (2014) plentifully motivating entrepreneurship projects can be a policy option to stimulate growth that may better appeal to today's policymakers and world leaders.

No doubt entrepreneurial activities are significant in many respects. New businesses create jobs (Folster, 2000); guarantee the economy's welfare, efficiency and productivity (Baumol, 1990), and serve as a major instrument for promoting innovation, achieving business ideas, and changing economic structures (Audretsch et al., 2002; Fritsch, 2008).

Constraints for Entrepreneurship

Conveniently obtaining finance is the most vital growth for the survival and growth of the small business (Bakhtiari et al., 2020). In the case of developing countries, most entrepreneurs face unsuitable business environments due to complex business regulations, specifically in the case of business registrations and taxation (Benzing et al., 2009)

Farsi and Toghraee (2015) state that the main challenge or constraint SMEs in Iran face is a lack of managerial skills, regulatory environment and national innovation policy. Agwu and Emeti (2014) found that most SMEs do not survive more than five years due to a lack of capital, infrastructural shortfalls, lack of market knowledge, inexperience, and market competition. However, its seen that the success or failure of firms depends upon the personality and responsibility of the entrepreneurs (Murphy, Liao, & Welsch, 2006), which they cannot fully explore in the restrictive usurious financing system. In the case of conventional banking models, the vital constraints for SME lending include lack of collateral, managerial experience, and information asymmetry (Steijvers, Voordeckers, & Vanhoof, 2010, Martin & Staines, 1994, Binks et al., 1992)

Zhuplev and Shtykhno (2009) conclude that in the case of Russian small businesses, the major barriers include inadequate capital, as well as issues relating to government regulations and laws. On the other hand, for developing countries, the major obstacles entrepreneurs face includes a weak economy, the suitability and reliability of staff, access to finance, and competition (Benzing et al. 2005; Chu et al. 2007).

Bari and Cheema (2005) enumerate that the shortage of finance is the main issue in enhancing SMEs in Pakistan and India. Gulani and Usman (2012) deduced that SMEs face difficulties obtaining capital to expand their businesses. Further common barriers include a dearth of innovation, access to external credit, regulatory issues, legislative problems, production, under-skill labour and insufficient infrastructure (Bhutta et al., 2008; Bilal et al., 2016; Hyder & Lussier, 2016).

Entrepreneurs want to choose the best financing option for their business, which is why crowdfunding is quite popular among entrepreneurs. Banking is one of an economy's most valuable and resourceful financial bodies, and it is an instrument that thrusts the economy to develop because it creates effectiveness, opportunities, and employment. Typically, some guarantees or collateral are asked for by the lenders, like requesting prior experience in business, profit of previous years, business plan, future profit measures, and assets you have. Typically, some conditions are asked for by the lenders, like requesting prior experience in business, profit of a previous company, business plan, and future profit measures. These are also the requirements that commercial banks ask for because they do not want to take the risk. They usually avoid giving loans to new startups without any security guarantee, which often is missing if the prospective entrepreneur is from a poor community. Commercial banks prefer those with previous business experience and those who have earned a profit and have some guarantee that they will pay back. Banks, therefore, need entrepreneurs to come up with extensive collateral, in most cases, to a value exceeding the value of the loan to protect their investment and guarantee the security of the loan.

Due to these kinds of demanding requirements, many entrepreneurs do not survive. Because they do not have an affordable alternative for this lending as per the proposed business model, even if some entrepreneurs are considered potential by the commercial banks and prove that they can manage the loan criteria, they will now be held accountable to repay the predetermined interest and the borrowed principal. But now, an entrepreneur is burdened by the debt he must pay to the bank. He needs to take care of his idea and its expenses, consider the idea's investment, and earn huge profits if he wants to pay back the debt. How can an entrepreneur manage all these things, and most importantly, if he does not make a profit, he will lose it?

On the other hand, we have seen that Islam motivates entrepreneurship, but Islam says that an entrepreneur must be based on ethical values and that business should be socially acceptable (Siddiqi, 1979). The moral values connected with Islam help inspire entrepreneurship (Elfakhani & Ahmed, 2013). Islam has no issue with profit earning, meaning banks can profit, but if they keep it ethical and do not use any interest (riba), is there any transaction for making a profit (Kayed & Hassan, 2010). Islam says that interest is an obstacle to economic growth (Pipes, 1983), which is evident from the fact that developed economies have lower interest rates and higher growth.

Entrepreneurs in Islam should perform their duties under the parameters defined by the Shari'ah law, and the financial matter must be followed according to Islamic rules. Humankind must grow and prosper the world. All those commodities, products and services must not be practiced, which is against Islam. In other words, Muslim entrepreneurs must follow Maqasid al-Shari'ah, which includes protection of wealth, region, lineage, life, and intellect.

While starting a business, a Muslim entrepreneur must be understood what is permissible (halal) and what is against the practice of Maqasid Al-Shari'ah (Abdullah, 2020). The further such entrepreneur must avoid those transactions which entail high risks and uncertainty (Kabir & William, 2014).

Islamic Finance and Entrepreneurship

Islamic finance is beneficial for entrepreneurship because it offers equity and debt financing. It mainly offers risk-sharing contracts through partnership products, allowing entrepreneurs to share risk with banks. They do not need to be in debt entirely (Adelekan, 2021), the debt formed in Islamic banks is asset based, and its cost is levied only in the case of returns from that venture or the successful use of usufruct of the leased item. Hussain et al. (2015) considered equity, participation, and ownership as the ultimate principles that govern Islamic finance.

Islamic banks share the profit with their clients because two or more parties are involved in PLS; other parties share their expertise and resources in a specific project and try to generate a return based on the agreed ratio (Akhter et al., 2009, Abdul-Rahman & Nor., 2016). The other one is debt-based financing, which is not PLS based; in this debt financing, Islamic banks can earn a little profit by charging fees. (Shahinpoor, 2009). Although some previous studies suggested that Islamic banking instruments are mainly debt-based instead of equity-based (Aggarwal & Yousef 2000), it still ensures the funds are used ethically, and the proceeds are integrated with asset performance.

Islamic banking is based on risk sharing, unlike other conventional banks, which only give loans on interest bases and create more debt for the borrower (Ahmed & Khatun,2013). Islamic banking emphasizes that the PLS agreements between the bank and the entrepreneur are the best financing resources and reflect Islamic banking's true meaning (Dusuki & Abdullah, 2007; Siddiqi, 1978). SME owners avoid taking loans from commercial banks because of interest, which is prohibited in Islam, so SME owners with Muslim owners tend to avoid using it (Wahab, 1996).

In a PLS contract, wealth distribution and income distribution are perceived to be more effective and equal (Hassan & Mollah, 2018; Biancone & Radwan, 2018; Ellahi, Awais & Raza, 2020). Previous research shows that the profit-sharing concept can be a solution for the market because it requires the direct involvement of society, managerial skills and expertise in managing different investment projects of financial institutions (Austay, 2007).

Previous studies have shown that Islamic banks are better than conventional banks financially and in meeting the needs of society (Aldeen et al., 2020; Sohel, 2017 & Aslam & Ismail, 2016). Bensalem and Bouherb (2021) tried to find the issues Islamic banking faces while using PLS products for SMEs. Their study showed that these products are risky for banks to provide SMEs financing; hence, the conventional banking system is not expected to provide equity financing and share the risks.

Venture capital is one of the tools through which entrepreneurs can get finance for their firms. Venture capital is considered a good source for the financier at the start of any entrepreneurial business (Croce et al., 2013). Many professionals have argued that venture capital is crucial in promising innovation and growth (Kortum & Lerner, 2001; Nanda, Samila & Sorenson, 2017), productivity (Croce et al., 2013), and professionalization of enterprises` internal organization (Hellmann & Puri, 2002). Venture capitalists are vigorous investors who offer finance and additional facilities of value to entrepreneurs who "are often technically competent but commercially inexperienced" (Keuschnigg, 2004). Peneder (2010) found that venture capital has a positive impact on the growth of enterprises, and it also helps a firm to grow further.

Islamic finance has also observed astonishing growth in many parts of Europe, America, and Sub-Sahara Africa. For example, Islamic banks started to operate in Denmark, France, Luxembourg, Switzerland, the United Kingdom, South Africa, and Nigeria (Hussain et al., 2015). Islamic financing is increasing in countries due to important factors like government support. Islamic finance is introducing more awareness programs, training on Islamic finance, and offering more Sukuk in the countries. Academics working on research papers on this topic have shown significant improvement in Islamic banks and diversity in financing. Even some regulators have used Islamic finance to mitigate the economic impact of the Covid-19 period and offered Sukuk to help the corporate sector and the economy. As we can see, the growth of Islamic finance globally in figure 1 and in 2024, the expected growth in US$ Billion is shown as well (ICD-REFINITIV, 2020).

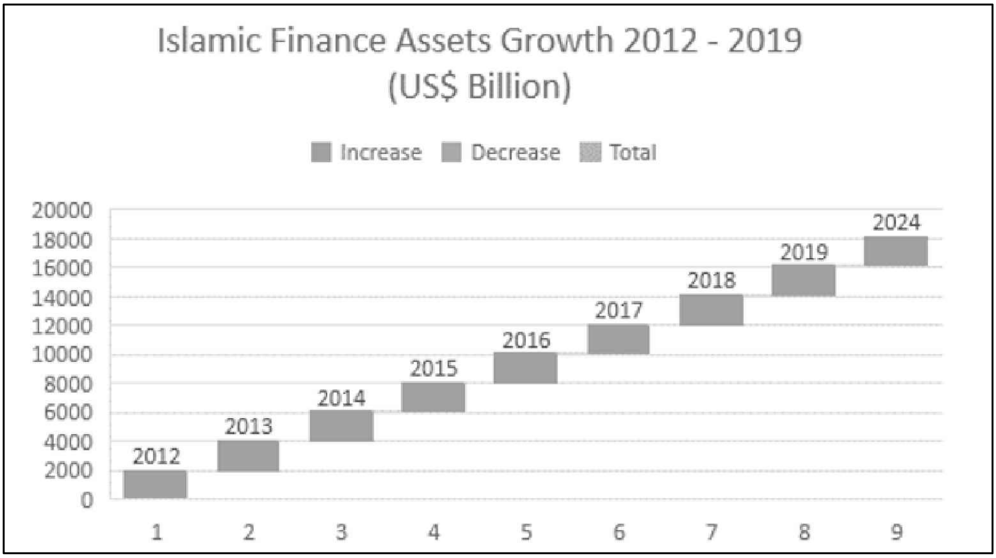

Figure 1: Growth in Islamic Financing.

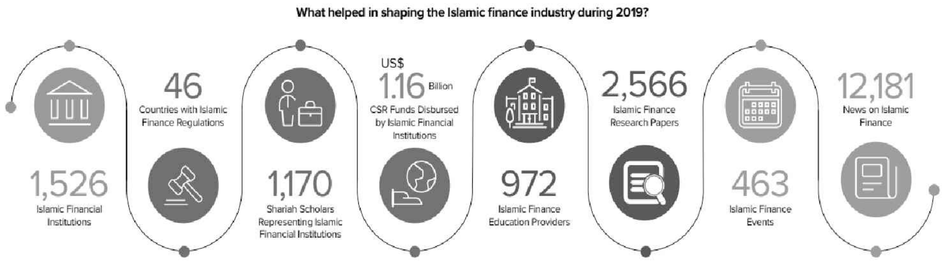

Figure 1: Shapes of Islamic financing.

Figure 2 shows that are the factors that are helping Islamic finance to grow globally. The main factor is always the regulatory bodies and policies of the country. Because of policies and the government is not supporting, the industry cannot grow. Islamic finance can grow with the help of Shari'ah advisors or scholars because they guide about the importance of Islamic finance and what new products can be used to facilitate the people or economy. They are the ones who approve of the products of Islamic finance. Islamic finance education or awareness helps the economy and other industries to know how beneficial Islamic finance is.

Also comes the government regulations that create awareness through seminars through training and offering Islamic financing products in the economy so that people also show instruction in these products and services. Education on everything is needed, but it can be given through Academic research papers because they talk about the whole world and how it is good and can be made into better products shown through all sorts of research (ICD-REFINITIV, 2020).

Objectives of the study

There are several studies which have explored the role of financing on entrepreneurship (Lawal et al.,2018; Kerr & Nanda, 2011; Amit et al.,2000). Most of them advocate that financing has an effect an impact on entrepreneurship. But there are also studies exploring the nonlinear effect of financing (Line et al., 2020; Benczúr et al., 2019). According to them, if the financing availability is more than the financing requirement, it will be beneficial; otherwise, it will have a negative effect. This study tries to explain that Islamic finance has a curvilinear impact on entrepreneurship. With the above-stated details, the study tries to answer the following questions:

- How does changes in the size of Islamic financial development influence entrepreneurial decisions?
- What is the role of institutional quality in increasing the productivity of Islamic financial development?

Literature Review

Economic growth is very important and is linked with factors like financial development, inflation, political stability, and many other factors. Bosma, Sanders, and Stam (2018) conclude that institutional quality, financial stability, small governments and a perceived set of skills are the most important elements of productive entrepreneurship. They further view that productive entrepreneurship contributes towards economic growth. Chambers and Munemo (2017) deduced that business creation is significantly lower in countries with excessive barriers and a lack of high-quality institutions. Moreover, entrepreneurial activity is reduced if the number of steps increases to start a new business activity. Finally, three institutional qualities are crucial to promoting entrepreneurial activity: political stability, regulatory quality and accountability.

Odhiambo (2009) for South Africa studied the relationship between financial development, economic growth and investment using ARDL. The outcome reveals that financial development has a significant relationship with economic growth to promote entrepreneurship. Martins (2007) quantified entrepreneurship by using various indicators and proposed different variables in which new business density is commonly available.

Lee et al. (2015) investigated the influence of access to finance and the economic-financial crisis of SMEs. They used around 10,000 SME employers' data for this work, and their study showed that due to lack of access to finance, the growth of SMEs gets affected, and they do not grow further. Narayan and Narayan (2013) study trying to find a relationship between the financial system and economic growth. After taking 65 countries, the result of their study suggested that the financial sector has a negative impact on economic growth.

Shinkafi and Ali (2018), under the context of Islamic economics, reveals that entrepreneurship development can promote economic development, employment, self-reliance, and national growth. The major hurdles in the way of entrepreneurship development are the lack of capital and financial support. Moreover, entrepreneurship success depends on coordination, networking, sharing of resources, and cooperation between government, public and private sector.

Masuduzzaman et al. (2018) believe that Islamic banks are more resourceful in financing SMEs as compared to its conventional counterpart. However, most SMEs are still unaware of the products and benefits of Islamic banks being offered (Elasrag, 2016). In the case of Turkey, it is believed that Islamic banks are more determined to finance SMEs than conventional banks (Aysan et al., 2016).

Faisol (2017) worked on a paper investigating how much Islamic finance influences SMEs. The sample they have taken for the study is 240 entrepreneurs, which showed that if Islamic financing is better, it will benefit the SMEs. The study results proved a significant impact of Islamic finance on SMEs. Hassan and Hippler (2014) believe that the limitation imposed by Shari'ah Laws on Muslim entrepreneurs helps to eradicate immoral and unjust practices, and the prohibition elevates the social value of the economy. Understanding the motivation of western and Islamic entrepreneurs is important to estimate the level of success between two.

Otman (2021) worked on a paper where he tried to find the barriers or obstacles faced by SMEs in South Africa. The study showed that there are many obstacles to the growth of SMEs, but the major challenge is the lack of access to finance. Wujung and Fonchamnyo (2016) conclude that domestic credit and savings mobilization impact private entrepreneurship, showing that improving access to finance will contribute to entrepreneurial growth in the economy. Lack of access to finance seems to be a more significant constraint for entrepreneurs or startups.

It seems that finance, investment, or both are crucial ingredients in starting or expanding the existence of any business (Owenvbiugie & Igbinedion, 2015; Abu & Ezike, 2012; Onyeneke & Iruo, 2012). Boldbaatar and Lee (2015) narrate that generally, high financial accessibility leads to high income level, whereas increases in the indicators of financial accessibility make a greater impact on economic growth, especially in low-income countries, whereas in high income countries, the impact is not on the higher side.

Hidiroglu (2017) uses four indicators of financial development: affordability, soundness of bank, venture capital and access to loans. The outcome confirms that banks' affordability and soundness show insignificant results whereas access to loan and venture capital shows significant results with entrepreneurship.

Nair, Njolomole, and Policy (2020) conclude that major failure of microfinance in respect of institutional quality in the form of private property rights and constant rules of laws leads to unproductive or destructive failure of entrepreneurship and this is the major cause of lack of productive entrepreneurship. Tabash and Dhankar (2014) found a correlation between economic growth and Islamic financial development in case of UAE. Their findings reveal that Islamic banks' financing has positively contributed to increasing investment in the long run. On the other hand, the immaturity of the financial sector negatively affects economic growth as discussed by (Ductor & Grechyna, 2015; Chong et al., 2017).

Kassim (2016), in the context of Islamic finance and real economic activity, concluded that Islamic finance is now making an important contribution by channeling funds to investment activities. Thus, in case of Malaysia, the refinement in legal and regulatory framework will enable this industry to grow healthier for supporting real economic activity. Muhmad and Rahim (2020) suggested a framework for SMEs that how Islamic financing products are helpful for the provision of financing applications. Arshed et al. (2020) deduce in case of Islamic banking and economic growth that there is a positive relationship between economic growth and Islamic banking. Dutta et al. (2021) discussed entrepreneurship and financial development. They believe that if stability exists in the financial sector, it leads to low-cost credit that could be available for entrepreneurs to grow their businesses more successfully.

Kamel (2019) states that Islamic banks provide many solutions, like many participatory and custom-designed products. But they are not fully utilized by SMEs due to a lack of awareness. Ledhem (2022) worked on the effectiveness of Islamic finance for entrepreneurial businesses (SMEs) on economic growth in Malaysia. They have taken quarterly data from 2014 to 2021 by taking GDP as a proxy for economic growth. The study's outcome confirms that Islamic finance, specifically for entrepreneurs contributes to Malaysia's economic growth. This also concludes that Islamic finance is a successful tool for achieving economic growth by financing the entrepreneurial business in case of SME's.

Nawaz, Abrar, Salman, and Bukhari (2019) find that well-functioning Islamic financial system support economic growth. Moreover, they also find bi-directional relationship between Islamic asset financing and population. It shows that the population reinforces and attracts Islamic financing. Kayed (2012) concludes that to fulfil the main requirement of entrepreneurship and the creation of SMEs such as risk sharing, Mudarabah and Musharakah are two vital instruments which follow defined rules of PLS. Usmani (2002), on the other hand, narrated that the major hurdle to implementing the Musharakah based on practical issues, which include working alone and, most of the time, with the governmental support.

The main issue with adopting Musharakah financing is that it does not include tax incentives, which is the main reason for low performance of equity financing (Ashraf, 2013). Hence better institutions can help in this matter. Besides other moral hazards such as agency issues, equity financing is the ideal financing instrument for Islamic banks (Aggarwal & Yousef, 2000). Asutay (2007) is of the view that equity financing and PLS contracts are meant for justice and fairness, and the same fulfil not only Maqasid Al-Shari'ah but also the objective of Islam.

Financing products with PLS principles include Mudarabah and Musharakah. Mudarabah is a contract of participation between two parties, where one party is provided with capital and the second party becomes the manager (El et al., 2022). Musharakah is a contract of participation between two parties to conduct a business (El et al., 2022). Both can be used in the PLS system. PLS is a fair system because it provides equal opportunity to all customers (Alzoubi, 2018). The previous study proves that PLS can boost the economic growth of a country (Chowdhury et al., 2018), and it also plays a great role in the industrial development and productivity of businesses (Bougatef et al., 2020). Nawaz et al. (2019) find that a well-functioning Islamic financial system supports economic growth.

Data and Methods

Variable and Data Sources

Table 1 details the variables selected for the study and their data sources. Here the NBD is the dependent variable. IFCI, QES, and INNO are the independent variable, with IFCI having quadratic specifications. Lastly, INST is used as a moderator for IFCI and NBD relationship. Unbalanced panel data is collected for 37 countries between 2011 and 2020.

Table 1: Variable Composition.

Variables (symbols)	**Definition**	**Source**
Entrepreneurship (NBD)	New business registered per person	WDI
Islamic Financial Development Index (IFCI)	Index	Global Islamic Finance Report

Human Capital (QES)	Quality of Education System Index	WEF
Innovation (INNO)	Innovation Index	WEF
Institutional Quality (INST)	Institutional Quality Index	WEF

Equations

Following is the parameterized version of the moderating role of institutional quality on the quadratic Islamic financial development and entrepreneurship relationship. The coefficient $\beta_1$and $\beta_2$assess the quadratic effect whose nature is determined by the values of the coefficient. Saheen et al. (2022) provided details in terms of possible relationships based on slope values. Further $\beta_3$and β_4 explains the change in the quadratic relationship in terms of shifting, flattening/steepening or eventually flipping (Sohail & Arshed, 2022).

$$NBD_{it} = \beta_0 + \beta_1 IFCI_{it} + \beta_2 IFCI_{it}^2 + \beta_3 INST * IFCI_{it} + \beta_4 INST * IFCI_{it}^2 + \beta_5 INST_{it} + \beta_6 QES_{it} + \beta_7 INNO_{it} + e_{it}$$

Estimation Method

The incidence of Islamic financial system does not have geographical proximity, it has shown promising growth in different regions, which is evident from selected countries. Hence in expectation, this study has availed Panel Quantile Regression (PQR) which allows for estimating panel data models under data with outliers (Sohail & Arshed, 2022). Further, the estimates of IFCI and NBD are then visualized using quintiles of INST and compared with the actual data. This method will help regarding how come some countries have low incidence of IFCI but still have high NBD and it is hypothesized that it is because of high INST.

Results and Discussions

Table 2 provides the univariate descriptive statistics and pairwise correlation of the variables which are included in the model. Firstly, by comparing the skewness and kurtosis values form the standard of 0 and 3, it is noted that the variables are not normally distributed. This is also confirmed from the non-equal mean and median values. Secondly, for the data sets with mean value higher than standard deviations, then data is said to be under dispersed which denotes that it has a homogenous pattern across the countries and time. While vice versa is the case for over dispersed variables which are heterogeneous across countries and time. Table

2 shows that variables like QES, INNO and INST are under dispersed while others are over dispersed.

Table2: Data Descriptive Analysis.

Statistic	**NBD**	**IFCI**	**QES**	**INNO**	**INST**
Sample	249	249	249	249	249
Mean	11.45	11.14	3.81	3.47	4.10
Median	1.46	2.29	3.68	3.23	3.89
SD	171.69	18.78	0.92	0.85	0.87
Skewness	21.90	2.36	0.42	1.06	0.59
Kurtosis	492.86	8.07	2.51	3.39	2.40
Correlations					
NBD	1.00				
IFCI	-0.13	1.00			
QES	0.31	0.19	1.00		
INNO	0.46	0.10	0.82	1.00	
INST	0.49	0.20	0.79	0.81	1.00

Table 2 also provides the correlations. Here we can see that QES, INNO and INST have a linear association with NBD while IFCI has a negative linear association. Further all other pairs of independent variables have correlations less than 0.9, which confirms that the VIF value to be less than 10. This rules out the chances of multicollinearity.

Table 3: Panel Regression Analysis.

Panel Quantile Regression (Dep. Var. NBD)		
Variable	Coefficient	Prob.
IFCI	-0.294	0.000
$IFCI^2$	0.004	0.000
QES	-0.318	0.000
INNO	0.906	0.000
IFCI*INST	0.069	0.000
$IFCI^2$*INST	-0.001	0.000
INST	-0.370	0.153
Obs = 249		

Table 3 provides the estimates of PQR, using 249 observations from 37 countries. Here results show that the coefficient of IFCI is negative and IFCI2 is positive. This means it follows a U-shaped relationship where Islamic financing is generally deterring entrepreneurship, but if Islamic financing is increased beyond a certain threshold (the turning point of the U-shaped curve), it will benefit businesses. While it is below a threshold, the cost of entering into asset-based or participative financing is higher than its gains.

Here the coefficient of IFCI*INST is positive, showing that improvement in institutions helps reduce the initial negative effect of low IFCI on entrepreneurship (Chambers & Munemo, 2017; Aggarwal & Yousef, 2000). This confirms that institutions can develop an Islamic financing-promoting framework that subsidizes small investors or borrowers. Further, the coefficient of IFCI2*INST is negative, showing that an increase in institutions at a high level of Islamic financing reduces entrepreneurship. This shows the regulation compliance cost effect and overburden of debt occurred. If too many regulations exist, it will incur higher costs to comply with for prospective entrepreneurs.

Here the quality of education has a negative effect, such that for the selected countries, an increase in education quality increases their employability or becoming intrapreneurs in existing businesses rather than entrepreneurs. Innovation has a positive effect. An increase in R&D helps new businesses to find a niche and sustain profits (Chiesa, 2001; Miller, 2001; Ruekert & Walker Jr, 1987).

Figure 3 visualizes the effects of independent variables for different quantiles of the dependent variable. The logic is to capture the effect of independent levels for different countries with different entrepreneurship incidences. So, sample heterogeneity is catered by this model. Here we can see that for the countries with higher entrepreneurship incidence, there is an increase in the negative effect of quality of education, increase in the positive effect of institutional quality, and N shaped effect of innovation.

While if we explore the coefficient of IFCI and IFCI squared, for economies with higher entrepreneurship, there is a higher IFCI and lower IFCI squared effect. This leads to a transformation from U shaped to inverted-U shaped effect. Similarly, IFCI*INST is increasing and INFI2*INST is decreasing with respect to countries with higher entrepreneurship. This also denotes that an increase in institutions helps in transforming the U-shaped Islamic financing – entrepreneurship relation to an inverted U shape.

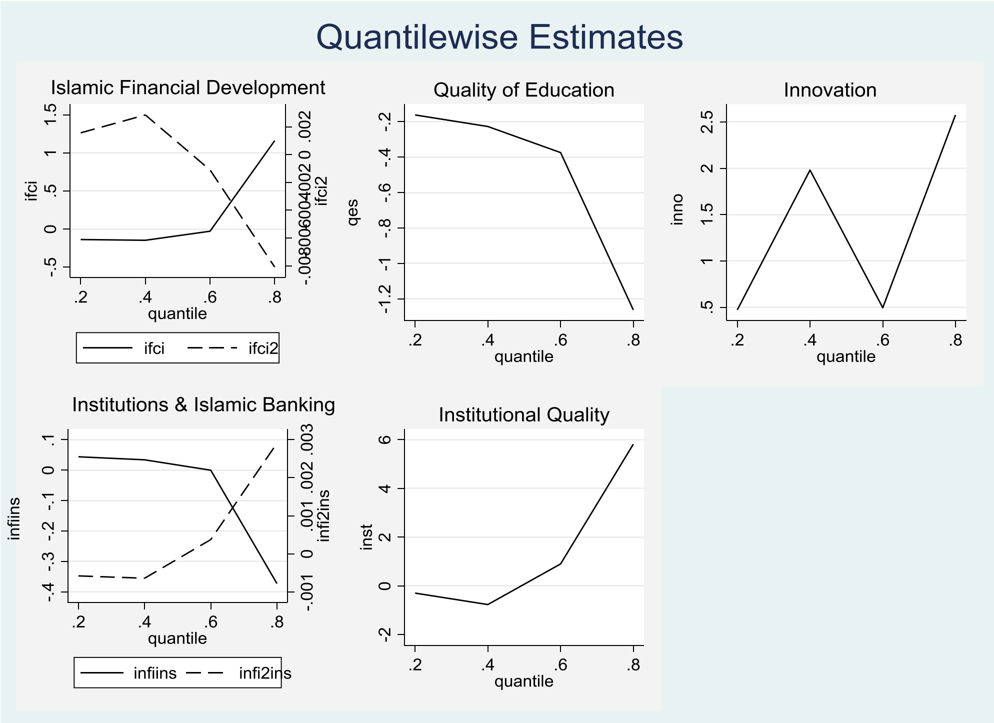

Figure 3: Quantile wise estimates of independent variables.

Figure 4 plots the Islamic financial development and entrepreneurship quadratic curves for different quantile values of the institutions as a moderator. Here it is evident that for the case of countries which weak institutions, Islamic financial development follows a U-shaped pattern in effecting entrepreneurship. Thus, it requires mature Islamic financial system to promote entrepreneurship. While the contrasts show that an increase in institutional quality flips the U shape curve towards inverted-U shape curve. This means that better institutes can extract benefits out of Islamic financial system for entrepreneurship at low levels of Islamic finance. The results are evident for the actual incidence, here France and Singapore have institutions at 60 and 100 percentiles, respectively, because of which the effect of Islamic finance on entrepreneurship is higher than the solid U shaped curve. While Kenya has an institutional quality of 30 percentile because of which the effect is not maximized.

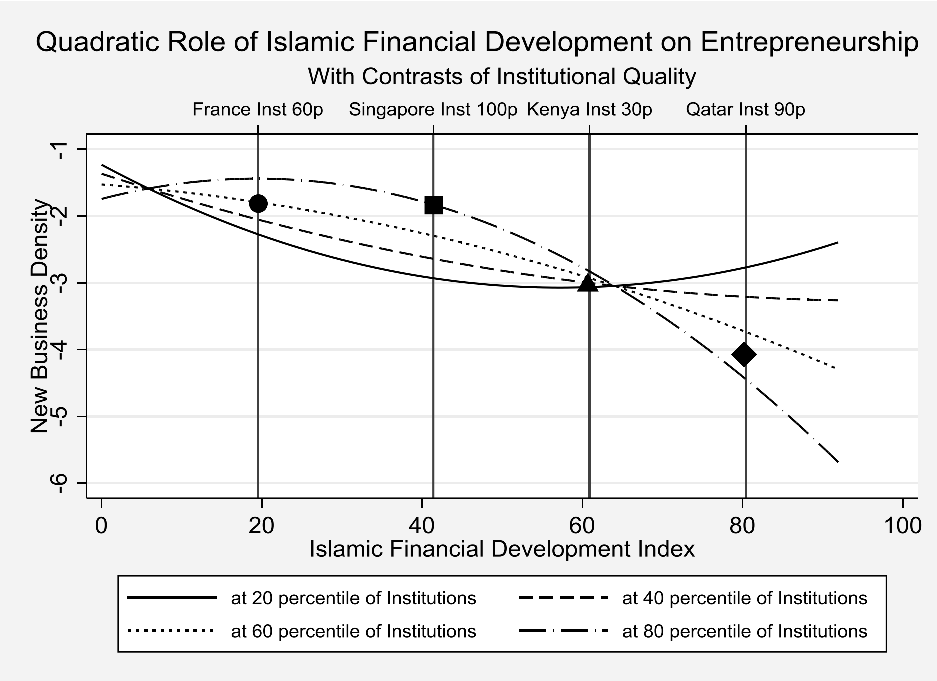

Figure 4: Mediation of Institutions.

Conclusion and Policy Implications

Empirically, the capitalistic conventional system has presented itself as a perspective for funds, growth, and entrepreneurship, but over time, it could not equitably participate in economic activity and share the risks associated with new businesses, rather it has engaged in pseudo transactions of usury, speculation and gambling. The debt overhang burden associated with interest-based financing tends to discourage entrepreneurship, especially in the case of a low internal rate of returns, risk-averse decision-makers and a turbulent economic outlook. The literature points towards the merits of Islamic venture capital and debt capital in promoting entrepreneurship and the qualities of venture capital are inherited in the equity financing modes and asset-utilization promoting role of Islamic debt financing structures provided by Islamic banks.

This study further builds on the ability of Islamic financing to promote economic growth. Empirical studies talk about the constraints entrepreneurs face while starting any new business. The most important factor which creates problems for entrepreneurs is access and cost of finance. Because of this issue, Islamic finance is discussed as a better alternative to conventional finance. But the lack of awareness and complexity of agreements makes it tedious for prospective entrepreneurs to deploy Islamic finance. The results suggested that Islamic finance can assist entrepreneurs if Islamic finance growth is on a certain level in any economy because it is costly to assist small-scale entrepreneurs with using equity financing methods. The solution to this predicament is the regulatory / institutional quality in the economy, which can facilitate the Islamic finance for entrepreneurs. The analysis using PQR model showed that improvement in the institutional quality can help entrepreneurs even at small size of Islamic financial system.

Countries pursuing for higher entrepreneurship incidence must explore the support systems. Proper regulations which can streamline and optimize the support system can help entrepreneurs to acquire the gains from Islamic financial system. This study helps in the economy to get rid of usurious and speculative transactions from the decision making of new businesses, which will ensure the maximization of halal income for managers, their employees and barakah for the economy.

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