

Islamic Finance and SDG 10: A Mirage?¹

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Abstract

Early writings in Islamic economics depicted a grand and, some would say, utopian image of the type of societal development that would result from implementing Islamic social and economic theory. However, despite the emergence of Islamic economics in a modern sense in the 1960s, we now find that the only manifestation that represents an Islamic alternative to mainstream neo-classical development is the Islamic banking and finance industry. However, the developments in the Islamic financial services industry indicate that it has converged towards conventional finance, which, arguably, contributes to the financialization of economy, as a result. Consequently, it has failed to fulfil the institutional and policy aspirations of Islamic economic system. This statement is investigated with an empirical study. We find evidence that initially Islamic banks played a positive role in reduction of income inequality, however, as Islamic finance has become a real force in the market place, financialization of the industry might have contributed to income inequality, thereby Islamic finance fails to meaningfully contribute to the realization of SDG 10, namely reducing inequalities.

Keywords: Islamic Finance, Income Inequality, Financialization of Economy

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1. Introduction

The way financial system is set up can be very central for an efficient resource allocation. History has shown that the financial system is determined by the nature of financial intermediation. The rapid development in financial system has made financial intermediary more important in the economy. The acquisition and processing of information about economic agents, the packaging and repackaging of financial claims, and financial contracting are among the activities that differentiate financial intermediation from other economic activities. The nature of intermediation has changed drastically over the last five decades due to the changes in macroeconomic policies, liberalization of capital accounts, deregulation, and advances in financial theory as well as breakthroughs in technology. Lending based operations which characterise traditional banking activity has been replaced by more fee-based services that bring investors and borrowers directly in contact with each other. Financial intermediation in the form of traditional banking—mainly based on the operations of lending—has declined considerably in developed countries where market-based intermediation has become dominant.

In Islamic history, financial intermediation has established a historical record and has made significant contributions to economic development over time. The simplest manifestation of financial services within the early Muslim states took the form of money-changers (*sayarifah*; sing., *sarrafa*) who were also partially engaged in the holding of deposits and the short-term financing of trade (Chapra and Khan, 2000). Yet a more sophisticated form of banking finance for trade and government was represented by the *jahabidhah* (sing., *jahbadh*) who practiced much of the modern financing activities under the supervision of the Muslim state (Chachi, 2005). In the highly developed market economy of the Abbasid State, *jahabidhah* bankers proliferated throughout the state, even though they were mostly of Jews who enjoyed the status of *Ahl al-Kitab* origin (People of the Book) within the early Muslim state. The *jahabidhah* were basically trade vendors who concurrently practiced business of financing and commercial transactions to others. Banking operations were therefore ancillary to primary mercantile operations, yet they seemed to have grown to sizeable banking functions particularly when the *jahabidhah* accepted deposits in efforts to augment their own businesses. The high streets of Basra were so much supplied with money-changers and *jahabidhah* that the banking network in Basra was rightly called by a Western historian ‘the Wall-Street of the Middle Ages’ (Heck, 2006: 113). The famous Persian historian, *Nasir-i Khusraw*, was reported to have estimated the number of *jahabidhah* bankers in the state of Isfahan alone at 200 financial institutions (Heck, 2006: 113). It was such a complex network of banking activities that the call for appropriate government supervision and regulation was acknowledged by the Islamic state. To this effect, the Abbasid State established a central banking agency in year 316 H/ 929 A.D called *Diwan al-Jahabidhah* to foresee the performance and growth of banks within the empire. A similar central bank was established in Egypt by the Fatimid State by the name *Dar al-Mal* in the commercial capital of al-Fustat to supervise an equally intense *jahabidhah* banking activity in Fatimid Egypt. Among the most commonly practiced banking instruments were the *sakk* (the Arabic root of ‘cheque’) and the *suftajah* (which combined features of traveller cheques and letters of credit), the *hawalah* (which is a means credit transfer), *wadi’ah* (i.e. deposit), *ruq’ah* (which was a sort of promissory note). The use of cheque (*sakk*) was particularly known since the time of the Rightly-Guided Caliphs. A renowned historian, Ibn Abdel-Hakam, reported that Umar ibn al-Khattab paid for the grains delivered to the state warehouses by cheque and that he used to pay government wages by cheques signed by his treasurer Zaid ibn Thabit (Izhar, 2010).

This study has the following primary components: section two briefly discusses about the nature and origin of Islamic banks. Whereas sections three depicts the state of Islamic financial services industry, followed by four sub sections which analytically deliberates upon the issues such as 1) an inevitable shift towards the east, 2) current outlook of IFSI, 3) analysis of IFSI from a microeconomics perspective, and 4) analysis on whether IFSI has fulfilled its promises. Section four discusses income inequality in economic literature. Sections five presents the empirical analysis, and the conclusion is spelled out in section six.

2. Nature and Origin of Islamic Banks

The existence of an Islamic bank in the present days, hence, is believed to be a modern transformation of *jahbadh*.² As a matter of fact, such transformation started to materialise in Mit Ghamr, Egypt from 1963 to 1967 when there was an initiative by Mit Ghamr Savings Bank to mobilise small savings from the rural sector largely through savings account without any interest payment to the account holders. It was followed by the establishment of Nasser Social Bank in 1971, Dubai Islamic Bank and Islamic Development Bank as the first international Islamic financial institution in 1975. Moreover, Islamic banking industry witnessed a very rapid growth surpassing US\$ 100 billion worth during 1980-1990 (Iqbal and Molyneux, 2005).

Having been regarded as an alternative financial intermediary with profit and loss sharing contract (in *mudarabah* and *musharakah* contract) as its cornerstone, an Islamic bank is, theoretically, expected to bring more stabilisation and efficiency in resource allocation. In addition to that, an Islamic bank is also equipped with contracts which may, slightly, look similar to what a conventional bank has been commonly practising; *i.e.* debt financing (in *murabahah* contract). Nevertheless, the nature of debt in an Islamic bank is qualitatively different from that of conventional bank since debt contract in an Islamic bank requires to be tied to some underlying assets (Ahmed, 2005). Furthermore, a debt contract in Islamic financing scheme is not a *riba*-based contract, in contrast with the concept of a debt contract in conventional perspective. Consequently, the distinctive contractual structure that an Islamic bank embodies necessitates different treatment on the management of the operational system of an Islamic bank

As a modern form of *jahbadh*, an Islamic bank is an institution offering financial services which conforms with *shariah*. A set of *shariah* principles governing the operations of Islamic banks are (i) prohibition of dealing with interest (*riba*); (ii) financial contracts must be cleared from contractual uncertainty (*gharar*); (iii) exclusion of gambling (*maysir*) in any financial activity; (iv) profit must not be originated from *haram* economic and financial activities (prohibited industries such as those related to pork products, pornography, or alcoholic beverages); (v) each financial transaction must refer to a tangible, identifiable underlying asset; and (vi) parties to a financial transaction must share in the risks and rewards attached to it. The principles mentioned above must be, conceptually, inherent in Islamic banks, in order to distinguish them from conventional banks.

3. State of Islamic Financial Services Industry (IFSI)

The central pillars of global financial system have endured a persistent scrutiny in the wake of the continuous changing international economic and political environment. Islamic financial institutions are demonstrating resilience as the world events continue to reshape the landscape of global financial services. The key matter, however, will be the way through which IFSI prepares

² See Chachi (2005), Chapra and Khan (2000), Izhar (2010), and Heck (2006).

itself for the opportunities and challenges posed by such a changing global economy. IFSI has demonstrated a remarkable growth, outpacing the growth of its conventional counterparts. The growth, as Islamic Finance Development Report (IFDR) 2017 forecast, is even expected to reach 9.5% per year on average, taking total assets to USD 3,8 trillion by 2022. Such data is based on disclosed assets by all Islamic finance institutions (full sharia-compliant as well as those with Sharia ‘windows’) covering commercial banking, funds, *sukuk*, *takaful*, and other segments. The IFSB Stability Report 2019 indicates that the breakdown of IFSI by sector can be decayed as follows:

Table 1
Breakdown of the Global IFSI by Sector and Region (USD billion, 2018)

Region	Islamic Banking	Sukuk Outstanding	Islamic Funds Assets	Takaful Contributions	Total	Share %
Asia	266.1	323.2	24.2	4.1	617.6	28.2%
GCC	704.8	187.9	22.7	11.7	927.1	42.3%
MENA (ex-GCC)	540.2	0.3	0.1	10.3	550.9	25.1%
Africa (ex-North Africa)	13.2	2.5	1.5	0.01	17.2	0.8%
Others	47.1	16.5	13.1	--	76.7	3.5%
Total	1,571.3	530.4	61.5	27.7	2,190	100.00%

Source: IFSB Stability Report 2019

Data are mostly taken from primary sources (regulatory authorities’ statistical databases, annual reports and financial stability reports, official press releases including the IFSB’s prudential and structural Islamic Financial Indicators Database. And for the purpose of regional classification, IFSB Stability Report 2019 excludes Iran in “MENA (ex. GCC)”, while Turkey is included in “Others”.

The global Islamic banking industry experienced only 0.9% growth in assets to close at approximately USD 1.57 trillion [2Q17: USD 1.56 trillion] and thus its share in the overall IFSI has slightly contracted to 71.7% [2017: 76%]. This lackluster growth over the period is due mainly to the depreciation of local currencies in terms of the USD, especially in some emerging economies with a significant Islamic banking presence. The major declines of asset values among the Islamic banking jurisdictions are in Iran and Sudan, which are among the largest Islamic banking asset domiciles. As for the takāful industry, the gross contributions of the global takāful industry also recorded a 6.1% increase to close at USD 27.7 billion as at end-2017 [2016: USD 26.1 billion], however its share in the global IFSI remains unchanged at 1.3% [SR20186: 1.3%].

IFSB Stability Report 2019 also lists out twelve (12) jurisdictions where Islamic finance has achieved domestic systemic importance in 2Q18, which is consistent with 2Q17. Furthermore, the two jurisdictions with more than a 50% share for Islamic banking – aside from Iran and Sudan – have further increased market penetration. Brunei continued as the most prominent, where Islamic banking now accounts for 63.6% [2Q17: 61.8%] of the domestic market. Saudi Arabia had a consistent penetration of a 51.5% share in 2Q18 [2Q17: 51.5%].

Improvements in market share were also made across other systemically important jurisdictions, including Kuwait at 40.6% (2Q17: 39.3%), Malaysia 26.5% (2Q17: 24.9%), UAE 20.6% (2Q17: 20.0%), Bangladesh 20.1% (2Q17: 19.8%) and Jordan 15.6% (2Q17: 15.5%). Qatar was still the only important jurisdiction that experienced a decline in market share, to 25.2% (2Q17: 25.7%). Collectively, the 12 systemically important Islamic finance jurisdictions are now host to a slightly decreased 91% of the global Islamic banking assets (2Q17: 92%) and also a slightly decreased 80% of the global sukūk outstanding (2Q17: 82%) (IFSB SR, 2019).

Regionally, the GCC continued as the largest domicile for Islamic finance assets; in 2018, the region experienced a modest increase in its share in global Islamic finance assets to 44.9% (SR2017: 42.0%).³ The share of MENA excluding GCC (MENA ex-GCC) has also increased moderately to 34.4% (SR2017: 29.1%). Asia is the only region that showed a decreased market share of the global IFSI, to 16.9% (SR2017: 24.4%), although asset values are increasing.

In terms of the top jurisdictions for Islamic banking assets, Iran sustained its historical position as the largest market, accounting for a slightly decreased 32.1% of the global Islamic banking industry in 2Q18. This is followed by Saudi Arabia at 20.2% (2Q17: 20.4%), Malaysia 10.8% (2Q17: 9.1%), UAE 9.8% (2Q17: 9.3%) and Kuwait 6.3% (2Q17: 6.0%), which complete the top five. In 2018, Malaysia in particular experienced an increase of estimated Islamic financing market share by about 71%, which became the key driver of the growth of Islamic finance in the region. The other countries in the top 10 Islamic banking jurisdictions, in order of size, are Qatar, Turkey, Bangladesh, Indonesia and Bahrain (IFSB SR, 2019).

Overall, the global IFSI is well placed to maintain its positive growth trajectory, experiencing asset increases across all three of its main component markets. Despite the slower growth due to the depreciation of local currencies, which affected the Islamic banking asset values; the market has managed to increase the value of its assets, from the USD 2 trillion mark it attained for the first time in 2017 to USD 2.19 trillion. More importantly, it has achieved domestic market share entrenchment for its Islamic banking sector in at least 20 countries.

3.1. Inevitable Shift Towards the East

Such astounding growth and development prospects, one way or the other, have accelerated the eastward shift in the world's economic "centre of gravity." Economies of the Middle East and Asia, as a result, are inevitably seen as vital. The Group of 20 – a summit that plays a key role in international economic policy – now includes three OIC member countries (Indonesia, Turkey, and Saudi Arabia).

The eastward shift, hence, creates numerous opportunities for Islamic finance industry, including (a) managing the savings and wealth being created, (b) supporting ongoing economic growth by providing financing, and (c) exercising increased influence in global forums and decision-making bodies. These global forums include both forums that have traditionally been dominated by Western economies (such as the G20, International Monetary Fund (IMF), and World Bank) and new forums that provide greater focus on emerging economies in the Middle East, Asia, and Africa.

³ SR2017 refers to IFSB Stability Report 2017.

Investigating from the viewpoint of the significance of oil sector in their respective economies, countries within the MENA region can be classified into two groups; i.e. 1) –oil exporting, and 2) oil importing countries. It doesn't come as a surprise that all GCC states belong to the former group, while Egypt, Jordan and Lebanon are in the latter. Amongst the GCC states, Saudi Arabia has the highest proven oil reserves and is thus the most oil-dependant economy. Bahrain, on the other hand, has minimum reserves with oil contributing approximately 26% to its GDP.

With shrinking oil resources as well as the realization that oil-based economy cannot be sustained over the long-term, the six GCC countries have followed the strategy of economic diversification. Typically, the lack of diversified economy is characterized by three main categories—the oil sector's contribution to gross domestic product (GDP), its share of total exports and share of government fiscal revenue. In an attempt to amplify such a realization, the Kingdom of Saudi Arabia recently launched a breakthrough initiative, namely the 2030 vision⁴. The latest development in KSA for instance, is the operationalization of VAT effective from 1 January 2018. Many would argue that the magnitude of economic progression in the years to come is likely to be adversely impacted, should a persistent diversified economy is not aptly addressed and overcome. As such, it is viewed that the penetration level of Islamic finance to other non-oil sector might also be hindered although the potential of non-oil sector cannot simply be taken lightly, especially from the economic regional perspective.

In a study on economic interconnectivity in GCC countries for instance; Cashin, Mohaddes, and Raissi shows that there are sizeable positive spillover effects from non-oil activity in Saudi Arabia. The model demonstrates that a one percent increase in Saudi non-oil GDP is estimated to increase GDP in its neighbor countries such as Jordan, Lebanon, Syria, and in other GCC countries by between 0.2 and 0.4 percent (IMF, 2012). This also shows an enormous potential in which Islamic finance can play its role in non-oil sector, especially when taking into account its faster growth average in the region.

Since 2008, the world has also witnessed waves of successive financial crises. Ranging from institutional crises (e.g. the failure of Lehman Brothers) to systemic crises (e.g. the virtual collapse of European debt markets) to sovereign debt and currency crises (e.g. fundamental challenges to the euro-zone), the very pillars of the global financial system have been shaken up. The ongoing financial crises have certainly prompted a high level of re-questioning of the conventional financial system. This creates an unprecedented opportunity for IFSI to contribute to a global dialogue on the very nature of the robust and resilient financial system which would, hopefully, generate developmental impact on the society.

This opportunity has been further bolstered by (1) the increased clout of member countries (three of which are members of the influential G20) and (2) the active attention the industry has already received in international commentaries on the financial system. Some observers believe the IFSI has not played an active enough role in the dialogue – further underscoring the present opportunity. Indeed, contributing to the global dialogue cannot only boost IFSI industry itself, but it can also pave the way for it to have genuine impact on the broader financial system by sharing and transferring valuable principles.

⁴ Although its key success will depend primarily on the implementation of 2030's vision.

3.2. What is the Current Outlook of IFSI?

Many are of the view that IFSI commenced with an introduction of Islamic banks in the mid-1970s. In the very beginning stage, the operationalization of Islamic banks were underpinned by the principle of *two-tier mudaraba*; that is on the liabilities side of the balance sheet, the depositor would be the financier and the bank the entrepreneur; and on the assets side, the bank would be the financier and the person seeking funding for the entrepreneur. Currently, however, the bulk of assets and liabilities are predominantly inhabited by *murabaha* modes of finance.

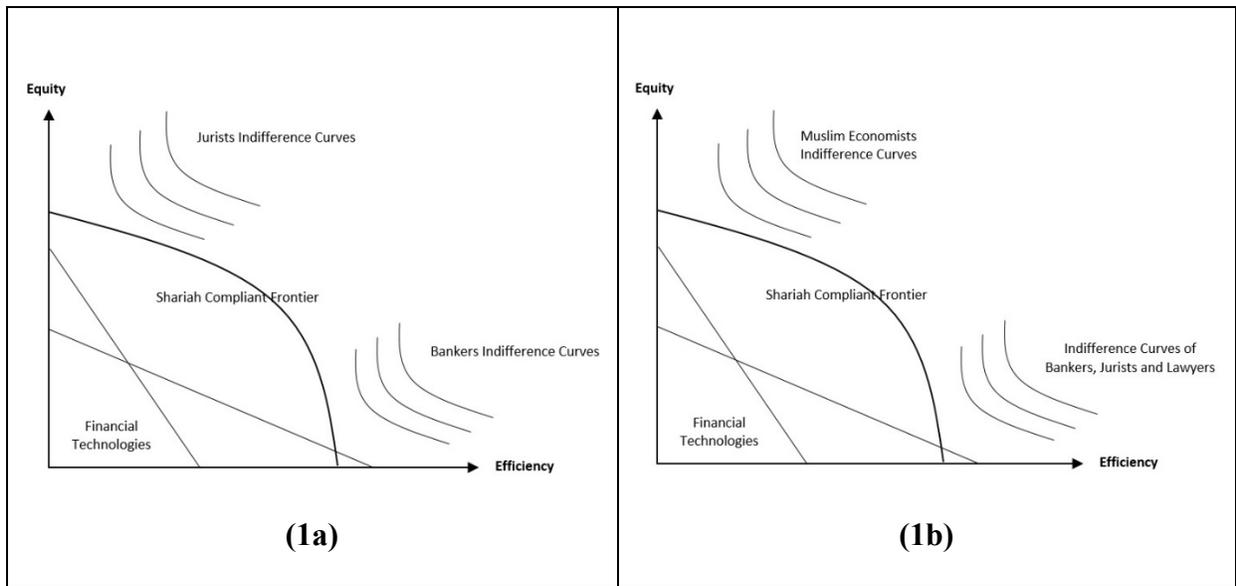
Following ‘a four-stage’ evolution, that is composed of four distinct phases: 1) the early years (1975-1991); 2) the era of globalization (1991-2001); 3) the post-September 11, 2001 period; and 4) an era after the 2008 global financial crisis (Izhar et. al, 2018); an important question which timely begs for an investigation is ‘where does the IFSI currently stand?’.

3.3. IFSI from the Perspective of Microeconomics

In order to address this question, let us first of all revisit El-Gamal’s depiction on how IFSI has been shaped over time (El-Gamal, 2000). Using a microeconomic analysis, as shown in Figure 1a, he portrays the indifference curves of *fuqaha* (jurists) that are assumed to be geared towards equity (*al-‘adl*) relative to the weight given to considerations of economic efficiency (*al-kafa’a al-iqtisadiyya*). El Gamal contends that such indifference curves by jurists are based on the manifestations of their understanding of the objectives of Islamic law (*maqasid al-sharia*). In contrast, it is assumed that the preferences of bankers are more biased toward considerations of efficiency relative to those of Islamic jurists. Hence, the latter preferences are drawn more vertical than the former.

The nature of different preferences between jurists and bankers are clearly depicted in figure 1a which shows two axes, labeled “efficiency” and “equity”, reflecting the trade-offs in any economic system between efficiency (the size of the economic pie to be shared by economic agents) and equity (how justly, and how equally, the pie shares are determined). Another element in figure 1a and 1b is financial technologies that render certain types of contracts and transactions feasible. Each technology allows for linear trade-offs between efficiency and equity by simply allowing for redistribution schemes. The Shariah boundary, namely Shariah Compliant Frontier is drawn as a convex set. This is to signify the Islamically permissible set of allocations within the frontier.

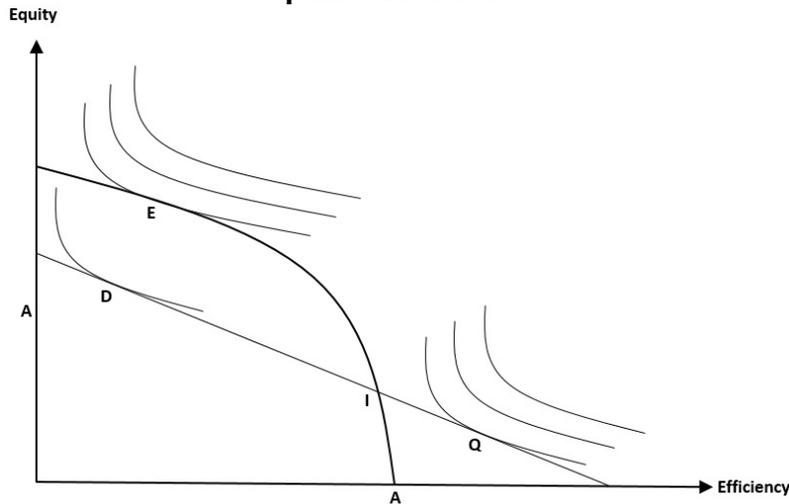
Figure 1.
Indifference Curve of IBF Stakeholders



While El-Gamal’s analysis is insightful at the time, such a delineation may no longer reflect the current preferences of IFSI stakeholders. We would argue that the jurists have become more pragmatic in their approach; therefore, their indifference curves, we believe, have shifted towards more efficiency (see figure 1b). What makes things more interesting now is that the bulk of indifference curves located at the Southeast region of figure 1b does not only correspond to jurists, but also to denote the preferences of bankers and lawyers. The explanation is very simple and straight forward: the bankers need Shariah scholars (who also are the employees of the banks) to endorse their products; subsequently they will need lawyers to make the products legal and hence can be offered in the market. Moreover, since financial technology evolved; in response to the secular financial needs of economies worldwide, it tends to cater to the banker, jurists and lawyers preferences, thus producing the status quo tangency point Q, in the Southeast part of the figure, which affords society a high level of economic efficiency, at the expense of low levels of equity (see figure 2).

The muslim economists, in contrast, who are now known as being more concerned about the realization of *maqasid al shariah* aims to describe and analyse the point that is optimal to Islamic economics and finance, that is the tangency point E in the Northwest region (shown in Figure 2).

Figure 2
Optimal Preferences



Nonetheless, recognizing the difficulties surrounding the development of a financial technology that passes through the ideal point E, muslim economists may compromise by turning to point D, at which the preferences are maximized subject to the current financial technologies constraints; although this point can easily be viewed by as socially inefficient.

Point I, located at the intersection of the current financial technology and the permissibility frontier, is perhaps closer to the current reality of IFSI as it may be relatively easy to accomplish. This is due to the increasingly prominent role of Shariah scholars in driving the era of Islamic financial engineering.

3.4. Has IFSI Fulfilled Its Promises?

Despite having undergone ‘a four-stage evolution’ mentioned above; the Islamic financial services industry is still perceived to have failed to deliver its promises on fairness, equity and inclusion. As such, this has been due to the industrialization along with its inevitable commercialization along the way.

Rightly so, the contemporary age of Islamic financial engineering that has been characterized by a greater reliance of plugging ‘classical Islamic financial contracts’ into an Anglo Saxon based banking model and a conventional securitization technique in Sukuk issuance has proven to have made Islamic finance appear to be having no different than its conventional counterpart. Such an era, which commenced in mid-nineties has been considerably exacerbated by the introduction of; *first*, *wa’ad* technique (especially double *wa’ad*) applied to Islamic financial contracts. The white paper by Deutsche Bank in 2007 was perhaps the first documented articulation on the use of double *wa’ad* in contemporary Islamic financial engineering (Deutsche Bank, 2007). *Second*, the deployment of commodity *murabaha* through the use of *tawarruq* for both liquidity management and personal financing purposes. *Third*, the operationalisation of the concept of beneficial ownership (Haneef, 2005), and the extension of the *khulta* (mixture) principle to the field of commercial transactions (Thomas and Adam, 2004); of which Islamic capital market through sukuk issuance has undoubtedly the great beneficiary of the implementation of such concepts.

These three components have altered the profile or body of Islamic financial contracts resulting in the financialization of the entire Islamic financial services industry.

In the process, one of the unpreventable outcomes is a ‘shift’ in the natural domain of contract; from initially being classified as a *benevolent contract* to now being a *commercial contract*; one example is *kafalah* contract; upon which a fee is now permissible (Bakar, 2016). This is possible since in the contemporary practice, *kafalah* has essentially been molded into ‘*shirkatul wujud*’ using the principle of *tab’iyyah*⁵ or subordination.

Financialization, as Palley contends, is a process whereby financial markets and financial institutions gain greater influence over economic policy and economic outcomes leading to a supreme superiority of financial sector over real sector (Palley, 2007). The consequential impacts of this process would be a) an elevated significance of the financial sector relative to the real sector; b) income transfer from the real sector to the financial sector; c) increase income inequality; and d) propagation of debt creation instead of wealth creation.

Having said the above, it has become clear that under the existing commercial institutional set-up, reducing inequalities and being more inclusive have never been the ultimate ‘natural’ objective of Islamic financial institutions; hence it may not necessarily be attainable.

Nowadays, where the innovations are characterized by the use of artificial intelligence (AI), fintech, and internet of things (IoT), or collectively known as the Fourth Industrial Revolution; Islamic finance, being in its 5th phase of development, is encountered with the situations where such innovations are creating substantial displacements in industry and employment in major economies around the globe.

It is imperative; therefore, that Islamic finance has no other choice but to change. Furthermore, there is also a genuine demand and opportunity to redirect innovations towards services and products that create more economic opportunities, jobs and financial inclusion for those who have been on the sidelines of the Islamic finance revolution. Coincidentally, we are witnessing the propagation of Environmental, Social and Governance (ESG) discourse, which refers to the three central factors in measuring the sustainability and ethical impact of an investment in a company or business; combined with proliferation of the immense potential of Islamic Social Finance. The terminology Islamic Social Finance itself was only prominently introduced in 2014 by Islamic Research and Training Institute through its Islamic Social Finance Report⁶.

A change of the look and direction in the industry is needed. Malaysia’s recent movement of Value Based Intermediation in Islamic finance can be considered as evidence of such change. Another one is the issuance of Khazanah sustainable and responsible investment (SRI) sukuk. Waqf linked sukuk is another breakthrough championed by the Ministry of Finance Indonesia in partnership with Badan Wakaf Indonesia (BWI) and Bank Indonesia.

It is becoming apparent that the drivers of the change now is no longer driven by an entirely profit geared motive; rather it emphasizes upon creating social and environmental impact. In other words,

⁵ The authors is grateful to Dr. Sami Al Suwailem for his explanation on *tab’iyyah* concept

⁶ IRTI, *Islamic Social Finance Report*, Islamic Research and Training Institute, (2014).

it is an admission that that the deviations caused by the operation of Islamic finance in relation to the expected or aspired paradigmatic knowledge, theory and institutional emergence have to be corrected. One way to do that is through the introduction of ESG, Impact Investing and Islamic Social Finance.

More importantly, in the wake of the industrial revolution 4.0 that is somewhat synonymous with the use technology and digitalization; we could perhaps hope it would pave the way for Islamic finance to be more appealing for not only its inclusivity but also the universality of its fundamental principles as an ethical, socially responsible and fair system of finance not just for Muslims but for the whole world.

4. Income Inequality in Economic Literature

Current economic development around the world has been accompanied with rising income inequality across most of the countries, which in turn has led to political instability. Indirect evidence of that is outcomes of elections in most of developed countries with populist winning the elections on the platforms of economic nationalism usually blaming globalization for economic problems and promising a retreat to national economies, emphasizing local needs. Unlike politicians, economists point to technological advances especially in the IT industry as the main culprit in contributing to income inequality. There is no consensus on the causes of inequality even among economists. However, what they agree on is that inequality within countries is higher than what it was 25 years ago (World Bank, 2016, p. 2).

Often overlooked is the fact that the share of financial services in real economies around the world has been at historical maximums. Philippon and Reshef (2012) report that much of the increase in financial activity has not come from traditional finance but from services created for purely speculative purposes. Bolton, Santos, and Scheinkman (2016) argue that a significant portion of these new services simply increase transaction costs for the real economy, even though technological advancements should have decreased them. Philippon (2012) says, that “Technological improvements in finance have mostly been used to increase secondary market activities, i.e., trading. Trading activities are many times larger than at any time in the previous history”. He also points out that financial transaction costs in the U.S. financial sector was only 1.6 cents on the dollar immediately after World War II but climbed to 2.4 cents on the dollar in 2011.

Stiglitz (2015) defines financialization as the growth of the financial sector and its dominance over the real sector. He states that financial sector’s power to influence values and practices on the rest of the society has contributed substantially to growing inequality.

The main objective of the financial sector is to allocate capital to those activities, which are most productive and socially useful. However, as it currently stands the financial sector has devised various mechanisms and has developed complicated products reducing its main function to extracting rent. In many cases, customers simply do not understand these products. Stiglitz (2012, p. 41) points out that financial services are “getting income not as a reward to creating wealth but by grabbing a larger share of the wealth that would otherwise have been produced without their effort” (p. 41).

Piketty, Saez, and Zucman (2018) state that in the United States in 1980 the average income of the top 1 percent was 27 times that of the bottom 50 percent, but it was 81 times in 2018. The share of income of the bottom 90 percent has decreased from 20 percent in 1980 to 12 percent in 2018, while that of the top 1 percent has increased from 12 percent to 20 percent for the same period. That is a redistribution of 8 percent of income or roughly \$2 trillion from the bottom to the top.

The role of financialization in this redistribution of income is often ignored as noted by Epstein (2005) but that is how it works. Piketty, Saez, and Zucman (2018) further state that the top 0.1 percent or 234,400 households own as much wealth as owned by the bottom 90 percent or 210,960,000 households. Their conclusion is that in the last 30 years in the United States financialization is the main contributing factor in the rising wealth and income inequality.

5. Empirical Analysis

5.1. Data and Method

Since the structure of the United States financial system is projected on those of other countries around the world including those of member countries of the Islamic Development Bank (IsDB), it seems reasonable to assume that similar patterns are present in other financial systems. However, since most of IsDB members are developing economies the scope and extent of those problems might be different. At early stages of economic development when financial markets are not fully operational and credits are not available to most of the population introduction of Islamic financial services might mean additional credit to the consumers which is scarce even in the conventional non-Islamic form. At those levels efficiency gained from more productive and socially useful allocation of capital may exceed the negative effects of increased transaction costs generated by financialization such that the overall effect might be reducing income inequality.

We follow the approach of De Haan and Sturm (2017) in selecting the dependent variable measuring income inequality and use their data to construct a data set for our study. Our dependent variable is the Gini coefficient based on households' income from Solt (2009) Standardized World Income Inequality Database (SWIID). Specifically we use the version of GINI coefficient calculated based on household's income before taxes, to isolate the effect of income redistribution through the taxes done by the governments since it is difficult to control for heterogeneity of how successful governments are in that on the country levels. Delis, Hasan and Kazakis (2014) and Solt (2015) note that the SWIID database allows comparison across countries because it standardizes income. The Gini coefficient ranges from 0 (perfect equality) and 100 (perfect inequality). Other measures of income inequality, such as the share of income of the lowest quintile, have been used, but our study uses the GINI coefficient. Next we list all the variables used in our analysis presented in Table 1.

We use a measure of financial development defined as private credit divided by GDP. That includes both credits given by conventional and Islamic banks. We also use a measure for financial sector liberalization, which was constructed by Abiad et al. (2010) and used by De Haan and Sturm (2017). It is based on seven indices of financial sector liberalization. built a sum based on six of these. We also utilize a different measure constructed by summing four economic freedom sub-indices (3D, 4 C, 4D and 5 A) from the Fraser Institute economic freedom database. De Haan and Sturm (2017) have more details on how this measure is constructed. We also employ the inflation rate and growth rate of GDP.

Our measure of the credit loaned by Islamic financial institutions is derived from the Bankscope Data Base for the period from 2000 to 2012. The data set includes 14 countries, however, after merging two data sets the sample is reduced to only 8 countries because of missing data on gini coefficient values. The total credit loaned by Islamic banks is calculated at the country level as the sum of all credits given by all Islamic banks in the country. Finally, we divide these measure by the country's total population to find the value of Islamic credit per capita. First, we estimate the fixed and random effects specifications of the following panel data model for the entire time period between 2000-2012:

$$GINI_MARKET_{it} = \beta_0 + DOMCREDPGDP_{it}\beta_1 + FINREFORM_CORR_{it}\beta_4 + FFW_AVG_{it}\beta_4 + GRRGDP_{it}\beta_4 + INFLATION_{it}\beta_5 + ICREDITPC_{it}\beta_6 + \beta_i + \varepsilon_{it}.$$

The results are given in Table 2. The most important result is that the credit per capita loaned by Islamic banks lowers income inequality. The point estimate is negative and statistically significant for both model specifications, however, because some of the included explanatory variables missing values, the results are based only on 5 countries and 30 observations. As a robustness check we estimate a random effect specification for the same period between 2000-2012, but with only one exogenous variable *ICREDITPC*. That increases the number of countries to 8 and the number of observations to 81 and the effect is still negative and significant.

5.2. Findings

Overall, *ICREDITPC* lowers income inequality, however, there is a great deal of heterogeneity in when different Islamic banks at the country levels started giving loan. Table 3 presents a list of the bank together with the year in which the bank loaned its first credit. Starting 2007 most of the Islamic banks in the list became operational. We run one more model specification restricting the sample to only 2007-2012 observations and including a single explanatory variable. The effect of *ICREDITPC* is positive consistent with the measure of Islamic credit increasing income inequality. This can potentially be explained by the fact that by 2007 Islamic finance became a real force in the financial markets and a possibility that Islamic banks started finding ways to create new financial products increasing transaction costs and leading to financialization. Perhaps, at the beginning credits were given to most productive and socially useful causes but as the consumer base of the banks increased that gave greater potentials for redistribution of wealth coming from financialization. However, this conclusion is just a potential hypothesis. In order to be able to answer such questions more detailed data are needed at the micro levels, and that would be an important topic for future research.

6. Conclusion

Data limitation prevents us from conducting comprehensive analysis for all countries where Islamic Finance has become an important part of financial markets. Nevertheless, we find that the available data have an important structural break at year 2007 when Islamic credits become more sizable. We find empirical evidence that expansion of Islamic credit, given to consumers, increases income inequality for the period of 2007-2012. As mentioned before these results are conditional on data availability.

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Table 2. Definition of Variables Used in the Analysis

Variable Name	Definition
Gini_market	Gini coefficient using (pre-tax, pre-transfer) household income
domcredgdp	Domestic credit to private sector (% of GDP)
finreform_corr	Financial liberalisation: Abiad et al. index
ffw_avg	Average of EFW-areas 3D, 4C, 4D and 5A
grrgdp	GDP growth (annual %)
inflation	Inflation, consumer prices (annual %)
icreditpc	Total of Credit given by Islamic Banks per capita

Table 3. Gini and Financial Credit: Panel Data Estimates

Years	2000- 2012	2000- 2012	2000- 2012	2007- 2012
	Fixed Effects	Random Effects	Random Effects	Random Effects
(Intercept)	27.47 (7.67)	19.83 (4.99)	40.65 (1.38)	39.32 (1.22)
domcredgdp	.079 (.042)	.063 (.035)		
finreform_corr	.317 (.517)	1.501 (.802)		
ffw_avg	1.024 (.339)	-.538 (.796)		
grrgdp	-.073 (.066)	.293 (.171)		
inflation	-.030 (.031)	.217 (.111)		
icreditpc	-.047 (.008)	-.045 (.022)	-.0012 (.0005)	.0006 (.0002)
Observations	30	30	81	32
R-squared	0.4341	0.7821	0.0983	0.3651
Number of Countries	5	5	8	8

Table 4. Countries, Banks and First Year of Crediting

Country	Banks	First Credit
EGYPT	Faisal Islamic Bank of Egypt	2000
	Al Baraka Bank Egypt SAE	2002
	Islamic International Bank for Investment & Development	2012
IRAN	Bank Mellat	2003
	Bank Melli Iran	2002
	Bank Saderat Iran	2000
	Bank Tejarat	2000
	Parsian Bank	2000
	Bank Sepah	2000
	Bank Maskan	2008
	Bank Pasargad	2010
	Bank Keshavarzi-Agricultural Bank of Iran	2000
	Eghtesad Novin Bank PJSC-EN Bank	2009
	Saman Bank	2010
	Bank Refah	2000
	Bank of Industry and Mine	2000
	Export Development Bank of Iran	2000
	Karafarin Bank	2009
Bank Sarmaye	2007	
JORDAN	Parsian Bank	2003
	Jordan Islamic Bank	2000
	Islamic International Arab Bank	2000
MALAYSIA	Jordan Dubai Islamic Bank	2000
	Affin Islamic Bank Berhad	2006
	HSBC Amanah Malaysia Berhad	2008
	Kuwait Finance House (Malaysia) Berhad	2007
	EONCAP Islamic Bank Berhad	2006
	Alliance Islamic Bank Berhad	2008
	Al Rajhi Banking & Investment Corporation (Malaysia) Berhad	2007
	Standard Chartered Saadiq Berhad	2008
	OCBC Al-Amin Bank Berhad	2008
	Asian Finance Bank Berhad	2006
	AmIslamic Bank Berhad	2007
	Bank Islam Malaysia Berhad	2006
	Bank Muamalat Malaysia Berhad	2005
	CIMB Islamic Bank Berhad	2005
	Hong Leong Islamic Bank Berhad	2006
	Maybank Islamic Berhad	2008
	Public Islamic Bank Berhad	2008
RHB Islamic Bank Berhad	2005	
MAURITANIA	Banque Al Wava Mauritanienne Islamique-BAMIS	2000
PAKISTAN	Meezan Bank Limited	2004
	Albaraka Bank (Pakistan) Limited	2006
	BankIslami Pakistan Limited	2009

TURKEY	Dubai Islamic Bank Pakistan Limited	2000
	Albaraka Islamic Bank BSC (EC) - Pakistan Branches	2003
	Burj Bank Limited	2006
	Standard Chartered Modaraba	2005
	First Habib Modaraba	2006
	First National Bank Modaraba	2005
	Turkiye Finans Katilim Bankasi AS	2006
	Albaraka Turk Participation Bank-Albaraka Turk Katilim Bankasi AS	2006
	Ihlas Finans Kurumu A.S.	2012
	Asya Katilim Bankasi AS-Bank Asya	2007
	Kuveyt Turk Katilim Bankasi A.S.-Kuwait Turkish Participation Bank Inc	2005