Journal Pre-proof

Testing the Development Impact of Islamic Banking: Islamic Moral Economy Approach to Development

Alija Avdukic, Mehmet Asutay

Please cite this article as: Alija Avdukic and Mehmet Asutay, Testing the Development Impact of Islamic Banking: Islamic Moral Economy Approach to Development, *Economic Systems,* (2024)
doi:https://doi.org/10.1016/j.ecosys.2024.101229

This is a PDF file of an article that has undergone enhancements after acceptance, such as the addition of a cover page and metadata, and formatting for readability, but it is not yet the definitive version of record. This version will undergo additional copyediting, typesetting and review before it is published in its final form, but we are providing this version to give early visibility of the article. Please note that, during the production process, errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.

Testing the Development Impact of Islamic Banking: Islamic Moral Economy Approach to Development

Professor Alija Avdukic
Professor of Islamic Economics & Finance
School of Business, University of Dundee
Dundee, UK
Email: AAvdukic001@dundee.ac.uk
Professor Mehmet Asutay*
Professor of Middle Eastern and Islamic Political Economy & Finance
Durham Centre for Islamic Economics and Finance
Durham University Business School
Email: mehmet.asutay@durham.ac.uk
Corresponding author
Declarations of interest: none

Abstract

Redistributive justice and stakeholder development have been central objectives of the Islamic moral economy for which Islamic banking was considered a facilitatory operational tool. Being its institutional form, the emergence of Islamic finance is, therefore, related to rescuing 'human, land, labour and capital' so that extended stake-holding governance can be achieved. As opposed to the institutional logic of conventional finance, within the Islamic moral economy paradigm, Islamic finance, theoretically, is expected to essentialise justice and equilibrium and equalise development opportunities for all stakeholders to fulfil their development path towards perfection. To assess the Islamic moral economy performance of Islamic banking, this paper uses *HDI* and *GINI* as the dependent variables to determine short-run and long-run relationships between Islamic banking growth and the development of the economy through socioeconomic indicators. The data covers the period 2000-2021 with fourteen countries with a systemic presence of Islamic finance, The results show that although Islamic banks did not cause an increase in inequality, as opposed to expectations, they neither caused a decrease in the sampled countries. As for the effect of Islamic banking expansion on human development, it positively contributes to human development only in the long run under certain conditions, which cannot be established in the short run. If sustained, this should be considered positive progress as opposed to the experience observed in the initial period of Islamic banking.

Keywords: Economic development; human development; Income inequality; Islamic banking; Islamic moral economy

1. Introduction

Islamic banking and finance (IBF), theoretically, is based on the ethos of Islamic moral economy (IME) with an explicit value framework based on justice, equity, human dignity, freedom of enterprise and moderation by developing and harnessing economic resources to satisfy spiritual, material and social needs of all members of the community by essentialising substantive morality to also serve poor and destitute from the wealth generated. These consequence-oriented principles of IME define the underlying philosophy of Islamic finance

for the adjective 'Islamic' to have meaning in suggesting 'equilibrium/balance or *ihsani* based society' in making Islamic banking and finance (Asutay, 2007a, 2007b; Jan and Asutay, 2019). In other words, Islamic finance is expected to develop as an alternative way of 'financing' rather than contribute to further 'financialising' the economy. Therefore, in the moral economy understanding of Islamic finance, the question is not using the same metaphor to move capital around but instead developing a new metaphor to lead to transformational along transactional change (Asutay, 2007b, 2012, 2013).

Operationally, Islamic finance is described through its foundational principles of risk-sharing and profit-loss-sharing (PLS), which identify it as an equity-oriented and embedded 'financing' proposition that directly relates to the real economy (Asutay, 2013b; Sencal and Asutay, 2019). Such features and peculiarities distinguish Islamic finance from the conventional financial system, as through such peculiarities, the 'moral nature' of Islamic finance is revealed (Naqvi, 1994; Asutay, 2007b, 2013b). Thus, as a tool of IME, Islamic finance was initiated to deliver the expectations of Islamic ontology by providing new institutions and instruments to tackle development and distributive disadvantages.

Recalling that with the global financial crisis, the problem is located with the dis-embedded nature of conventional finance, which is no longer linked to the real economy. Islamic finance, therefore, in the aspirational sense of IME, represents an alternative financing paradigm through being embedded in the real economy and Islamic values and norms, identifying that non-economic matters and principles shape the nature as well as the operation and transaction of Islamic finance (Asutay, 2019a, 2019b).

The experience of IBF over the years, and in particular since the financialization stage commenced in the late 1990s with the competitive strategies under modernity and globalisation, suggests that Islamic finance has been converging towards conventional finance in its operations, institutionalisation and product level (El-Gamal, 2007; Asutay, 2007b, 2012; Zaman and Asutay, 2009, 2012; Khan, 2010; Salma, 2013) hence losing its ethos. Providing evidence for this statement, Aggrawali and Yousuf (2000), Asutay (2007b, 2012), and Jan and Asutay (2019) demonstrate that Islamic banks heavily rely on fixed-income-based debt instruments (cost-plus), including *murabahah* and *tawarruq* as opposed to PLS products and risk-sharing oriented financing, the latter of which should, however, be the main principles shaping the paradigm.

The distinction between Islamic and conventional finance has been withering away at the expense of the ethical universe of Islamic finance, which has been giving up its aspirational values and gradually converging towards the operational nature of conventional finance through mimicry. In other words, the historical experience of the conventional sector's dis-embeddedness seems to dominate Islamic finance's everyday practice and nature. This may indicate potential 'financial troubles', as it should be noted that the dis-embeddedness of conventional finance has been causing financial crises one after another.

In this paper, we argue that IBF has a role assigned by the initial writing of Islamic economists, who have focused on economic development and inequalities as the fundamental problem (Hasan, 1988; Naqvi, 1994; Ahmad, 1994; Chapra, 1993, 1996, 1998; Ul Haq, 1996). They argue that the main reason for imbalances among different countries and regions was the inability of Muslim countries to internalise the engine of growth through their own internal constructs and value systems beyond capitalism and socialism. However, most prior work on these issues has remained a theoretical proposition. In that proposition, Islamic finance is assumed to be an operational tool of Islamic economics to deliver catch-up and the big push for rapid growth and the development of Muslim countries (Al-Jarhi, 2004).

We challenge the assumption in the recent literature that the optimal objective is the *Shari'ah* or Islamic law compliance of Islamic finance, implying form compliance. This literature explores the performance of Islamic finance concerning economic expectations to keep the time value and return on investment (Lone and Ahmad, 2017), the empirical impact of Islamic finance on financial sector development (Gheeraert, 2014), enhancement of financial inclusion (Mohieldin, 2012; Ahmed, 2013; Abdul Razak and Asutay, 2022), the relationship between Islamic finance development and economic growth (Kassim, 2016; Zarrouk *et al.* 2016; Jobarteh and Ergec, 2017), stability of Islamic finance in comparison to conventional finance in reducing financial crisis (Derbel *et al.*, 2011), the performance of Islamic banking in contrast to conventional across the regions (Faye *et al.* 2013).

Specifically, our research question is whether Islamic finance, as an operational tool of the IME, fulfils the central objectives of human development and distributional justice. This paper, therefore, aims to test the IME performance of the Islamic finance industry through its impact on *GINI* and *HDI* indices as measures of development and distributive justice. Considering that Islamic finance, which emerged in the GCC and Southeast Asia, has evolved into a global industry with a presence in more than 80 countries in the world with USD 3 trillion industry in

3

2021 (IFSB 2022), it is important to examine the sector's impact on the development of those countries.

The rest of the paper is organised as follows: Section 2 presents the Islamic moral economy foundations of IBF as part of the problematisation of the research questions. Section 3 investigates the socio-economic performance of Islamic banks by providing a conceptual definition and methodology. Section 4 presents detailed empirical analyses of the sampled Islamic banks' developmental and distributive justice performance, and Section 5 concludes the paper.

2. Islamic Moral Economy and Islamic Development Ontology: Foundations of Islamic Finance - Problematization

The policy objective as a motivational source in the emergence of IME relates to enhancing economic and social welfare in the postcolonial Muslim world as a response to the observed development problems in the Muslim world. This new paradigm aimed to construct a human-well-being-centred development paradigm with authentic Islamic identity. According to Asutay (2007a, 2012, 2008, 2019a, 2019b) and Jan and Asutay (2019), this Islamic worldview-based paradigm, consequently, aims to emancipate and empower the individual through 'functioning individuals' and 'enabled and being individuals'. In essentialising micro-development, the following expectations are aimed at. It is also claimed that fulfilling micro-development conditions brings about a macro impact (Khan, 1984; Arif, 1985; Ahmed, 2003; Asutay, 2012; Mergaliyev *et al.*, 2021).

(i) Islamic moral filter is considered a mechanism to establish optimality in economic and social choices

(ii) a moral economy imagination rooted in transforming the economic structure of the society to generate the real economic effect by expanding economic and financial choices for individual and social development

(iii) economic restructuring based on Islamic norms so that embeddedness can be achieved

(iv) considering individuals as ends and their salvation (*falah*) through sustaining equilibrium (*ihsan*) as social capital to move from individual well-being to societal well-being.

4

The Islamic development ontology within the paradigm of IME is articulated through the axiomatic approach developed by Ahmed (1979, 1994), Chapra (1992, 1993, 1996, 2000, 2008), Naqvi (1981, 1994), Siddiqi (1981,1985), Ul-Haq (1995), Khan (1989), Arif (1989), and are re-oriented and given the following meanings by Asutay (2007a, 2007b, 2012, 2013a, 2019a, 2019b), Zaman and Asutay (2009), Jan and Asutay (2019).

Accordingly, as articulated by Asutay (2019a; 2019b) and Jan and Asutay, 2019), through the complementarity and unitarity implication of *tawhid*, each stakeholder is considered to complement each other so that unitarity (*tawhid*) can be achieved. It suggests that the interest of all the stakeholders should be represented in resource allocation to prevent any domination. This directly relates to justice (*adalah*) as the primary objective function of *iqtisad* (economics in Arabic) in every decision-making, which should be complemented by maintaining equilibrium (*ihsan*) in society and ecology. Consequently, the *tazkiyah* paradigm suggests growth in harmony so that all the interests of all the stakeholders can be maintained in the resource allocation. This is essentialised through the *rububiyah* axiom, which refers to enabling individuals, society and the natural environment to reach their respective perfection, namely sustainability. In addition to voluntary action, certain financial and economic obligations are instated as mandatory (*fard*) to overcome the conflict between individuals and society, such as paying *zakat* (almsgiving) out of wealth beyond a certain threshold level (Asutay, 2019a; 2019b).

Operational dimensions of these axioms can be offered through *maqasid al-Shari'ah*, defined as the higher objective of *Shari'ah*, which necessitates the essentialisation of the well-being of all the stakeholders by motivating economic forces for stakeholder governance and development (Chapra, 2008; Asutay and Yilmaz, 2018; Mergaliev *et al.*, 2021).

In this framework, prohibition of interest (*riba*) is considered a correction mechanism to prevent expropriation and hence overcome injustice due to capital domination (Asutay, 2019b) rather than an instrument of facilitating capital movement through form-oriented *Shari'ah* compliance. Thus, as the IME framework suggests, ethicality in this value proposition is not relegated to the prohibition of interest but also relates to more significant social and economic development objectives (Asutay, 2007b; Asutay, 2013a). In other words, IME conceptualises Islamic finance as a financing proposition shaped by the rules (*fiqh*) but also moral values of Islam constituting the 'substance' in a consequentialist manner (Asutay, 2008; Harningtyas and Asutay, 2015; Sencal and Asutay, 2020; Mergaliev *et al.*, 2021).

IME framework, thus, aims to shape the nature and operation of Islamic banking and finance beyond the prohibition of *riba* or interest. This moral-based financing proposition assumes a holistic approach to financing people and society. These Islamic financing-related values and norms derived from IME can be described as follows (Siddiqi, 1985; Asutay, 2007b, 2012, 2013a, 2013, 2019b; Ayub, 2007; Iqbal and Molyneux, 2005; Jan and , 2019):

As an articulation of IME, Islamic finance emphasises risk-sharing and partnership or profit-and-loss sharing PLS financing to achieve stakeholding governance through equity (Asutay, 2015, 2019a, 2019b). Accordingly, 'credit and debt products are discouraged' to prevent the creation of 'indebted human' and 'dependence' so that embedded financing could be developed by being embedded into the real economy and the value system of Islam. This is articulated in the principle of asset-backed transactions with investments in real and durable assets to contribute to developing value-added oriented real economy-based financing of economic activity. IME aims to create a framework of development and, hence, transformational financing, and therefore, instruments of poverty reduction and sustainable development are an inherent part of Islamic finance (Asutay, 2019a, 2019b; Assoouli and Asutay, 2022). In addition to Islamic financing of economic activity for development purposes, *zakah* (alms) and *waqf* (pious foundations) as Islamic social welfare institutions and *qard al-hasan* as Islamic social finance can be mentioned.

The principle of PLS can be related to *adalah* and *ihsan*, as these axioms constitute the essential axis for economic and business activity (Siddiqi, 1985). This prevents the capital owner from shifting the entire risk onto the borrower, which aims to establish justice between work effort and return and between work effort and capital (Asutay, 2012, 2016). This implies that PLS and risk-sharing is another important feature of IME. However, in their attempt to facilitate modern financial instruments, the new legal (*fiqh*) scholarship has replaced the above-mentioned axiomatic consequentialist reasoning and rationale (substance) with *dharura* (necessity) through *maslahah* (public interest) or delusional *maslahah* (Sencal and Asutay, 2019), where intentionalist understanding (form) generated a financial sector since its infancy it is disconnected from its moral base.

Another tension area is the growing criticism against the process of re-engineering financial products to make them *Shari'ah* compliant, as the process seems to be focused on the actual validity of the *fiqh* (jurisprudence) involved, which only works in the interest of the market system by neglecting the IME propositions. El-Gamal (2006) and Sencal and Asutay (2019)

have expressed unease at the fact that *Shari'ah* scholars who authenticate such contracts are themselves employed by the industry, while others have claimed that such contracts are designed to circumvent *Shari'ah* laws which violate broader principles or *maqasid* associated with the prohibition of *riba* (Mohd Noor *et al.*, 2019). The consensus of critics in this category is that *fiqh* or Islamic law provides only a technical approach to financial issues rather than considering policy dimensions, including socioeconomic development, as the latter version can offer the essential solution for the development problems of Muslim societies and communities (Zaman and Asutay 2009; Jan and Asutay, 2019).

In its current state, thus, IBF does not seem to share the foundational claims of IME, although the founding fathers, in a modern sense, aimed at creating an Islamic system of an economy with Islamic finance being the operational aspect of that system (Asutay, 2007b, 2012). The result, therefore, has been the divergence between the assumptions, normative principles and aspirations of IME as a system and Islamic finance as an instrument of that system (Asutay, 2007b, 2012, 2019a; Zaman and Asutay, 2009). This study, hence, aims to examine the IME performance of Islamic banking regarding human development and income distribution, which are the essential expectations of IME.

3. Hypothesis Development

In IME's system understanding, IBF was assigned an important role: socioeconomic development with the objective of human well-being and social justice. The initial experience of IBF in Egypt and Malaysia had such purposes as they were socially oriented institutions. For example, while Mith Ghamr in lower Egypt provided credit to small businesses, Tabun Haji, as an investment house, invested the savings of potential pilgrims in a socially and ethical manner (Asutay *et al.*, 2013b). However, since the 1990s, while the operations of Islamic finance and the nature of Islamic modes of financing have expanded and internationalised, socioeconomic development objectives have been completely ignored. The result, therefore, has been the divergence between the assumptions, normative principles and aspirations of the Islamic moral economy as a system and Islamic finance as an instrument of that system (Asutay, 2007b, 2012; Zaman and Asutay, 2009; Jan and Asutay, 2019).

It should be noted that attempting to achieve economic, social and human development through commercial banks indicates an institutional logic-related inconsistency. Although IME suggests an extended stakeholder-based development paradigm, Islamic finance has been

constructed around commercial bank institutional logic instead of the initial Mith Ghamr experience. Thus, instead of a large stakeholding type banking model, such as social banking, IBF has given way to the pressures by the markets by adapting the so-called realities of financial markets to be institutionalised around shareholder value maximisation, which prioritises economic incentives of the shareholders by ignoring the stakeholder interests as IME suggests as part of religious behavioural norms.

IBF has become part of the international financial system by accepting the hegemony rather than remaining counter-hegemony. In other words, IBF had to give up the 'substance' oriented claim to be qualified as part of the international financial system, whereby it accepted the Islamised version of the existing metaphor to facilitate the move of *halal* capital. This process has resulted in hegemonic global markets treating IBF as heterogeneous financial products deprived of their value system (Asutay, 2012, 2013, 2019a, 2019b). As a consequence, with its current structure, Islamic finance has not been able to affect nor has it aimed at affecting the economic development in the light of *maqasid al-Shari'ah* (Nouman *et al.*, 2021). This does not mean that Islamic finance does not impact economic growth; on the contrary, as evidenced, financial development and the pooling of funds contribute to economic growth (Boukhatem and Moussa, 2018). However, economic development is beyond the growth of the economy, which is a broader concept (Ul-Haq, 1995).

Exploring the development impact of Islamic banking

The primary goal of development in the light of higher ethical objectives of *Maqasid al-Shari'ah* or the higher objective of *Shari'ah* is to create an environment that enables people to enjoy spiritual, moral and socioeconomic well-being in this world and success in the hereafter (*falah*) (Mergaliyev et al., 2021). The implication of *falah* is creating an environment within societies through their institutional framework, which works to remove sources of human deprivation in multiple dimensions by essentialising equilibrium. Hence, IBF is expected to contribute to the development process beyond focusing on economic growth (Asutay, 2012; Jan and Asutay, 2019).

IME defines dimensions of development by essentialising fundamental Islamic principles (Asutay, 2019a), as described above. The available analytical tool that captures specific

dimensions of human development is *HDI*[1], which is used as a dependent variable in IBF (Jan and Asutay, 2019a). The HDI can be regarded as the pioneering index that assesses progress by encompassing factors outside economic growth. It incorporates life expectancy, years of schooling, and GNI per capita. Several empirical research, including Outreville (1999), Baddeley (2011), and Alam *et al*. (2016), indicate that there is a positive correlation between financial development and several factors such as GDP per capita, life expectancy, and education expenditure with human development. Therefore, Islamic financial institutions are anticipated to favourably correlate with the Human Development Index (HDI). Hence, the following hypothesis is proposed:

Hypothesis 1: Islamic banks' total financing has a positive impact on development through *HDI*.

Exploring the redistributive impact of Islamic banks

IME axioms, as identified above, requires equilibrium (*ihsan*) and justice (*adalah*) to consider the interest of all the stakeholders in their development towards perfection, which endorses equality (*musawat*), which emphasizes humanity's unity of origin and the essence of human fraternity. This reinforces the general equality of all human beings in their equal access to the resources created by Allah.

The principle of justice (*adl*) is not only a social concept (corrective and distributive aspects) but is also a personal moral virtue (Emamzadeh, 2020). Moreover, it is the articulation of the absolute, just and coherent unity of existence, namely *tawhid*, referring to the mutual responsibility of individuals and societies (Jan and Asutay, 2019).

Social solidarity and mutual responsibility (*takaful*) define the relationship between individuals and their families, between an individual and their neighbours, between an individual and society, and between community and other communities in all its various shapes and forms for establishing society's welfare. Furthermore, the social solidarity principle defines the relationship on the institutional level where Islamic financial and non-financial institutions are

---

[1] HDI has been used as a dependent variable in this study which represents the human-centric development. HDI has limitations in addition being the product of Eurocentric worldview, it remains one of the best proxies to reflect human development. The observed short-comings in HDI has not stopped researchers to use it as a variable for human development as there is a vast literature in development field utilising HDI as a benchmark (see: Mergaliyev et all, 2021: 806)

expected to implement their policies and strategies towards furthering the welfare of all individuals within a society.

Financial growth can contribute to income equality in two ways: directly, by financing people experiencing poverty, or indirectly, by improving economic performance and creating better employment prospects (Kappel, 2010). Islamic economics, being a moral economy, seeks to achieve equality through social justice (*adalah*) and beneficence (*ihsan*) (Asutay, 2019b). Consequently, Islamic finance is anticipated to have an inverse correlation with income inequality, as measured by the *GINI* coefficient. Hence, while the initial equation aims at equilibrium, in the case of any deviation, Islamic institutions exist to overcome such failures through a redistributive system. Thus, to test the impact of Islamic banks on income distribution, the following hypothesis is proposed:

Hypothesis 2: Islamic banking as a tool of IME positively impacts distributive justice.

Despite the raised criticism, GDP per capita is used to measure the level of income, which, by definition, strongly impacts physical and human capital (Ding *et al*., 2021). Therefore, a stable GDP in a country is expected to promote investment and increase the standard of living (Hsiao and Shen, 2003). Furthermore, government expenditures on education are also an important explanatory variable to explain income inequality, as education determines individual opportunities for finding an occupation (Fields, 1980; Hashim, 1998). In other words, education results in better economic conditions and human development. Therefore, higher government spending on education is expected to reduce income inequality, which is used as a control variable in the estimations.

Government expenditure on health is another factor that impacts human development, as health improvements result in increasing human capital development to improve the quality of life expectancy and longevity, leading to better HDI (Razmi *et al*., 2012; Banik *et al*., 2023). Therefore, the econometric model in this study employs these two as control variables.

Hypothesis 3: GDP growth positively impacts human development (*HDI*) and distributional justice (GINI).

Hypothesis 4: Government expenditure on education and health positively impacts human development (*HDI*) and distributional justice.

The discussion so far identifies that IBF is constructed to work within IME's normative world by being the financing instrument contributing to a society's economic and social development. This research, hence, aims to empirically explore the performance of the IBF industry concerning the discussed moral objectives above.

4. Research Methodology

4.1. Data

Table 1 lists the variables, their definitions and measurements. The data covers the period 2000-2021 with 14 countries with a systemic presence of Islamic finance: Bahrain, Bangladesh, Egypt, Indonesia, Iran, Jordan, Kuwait, Malaysia, Pakistan, Qatar, Saudi Arabia, Sudan, Turkey and the United Arab Emirates.

Table 1: Variable Definitions

	Definition and Measurement	*Source*
HDI	Human development index	UNDP Website
GINI	GINI coefficient	World Bank data
TFIslamic	Total financing of Islamic banks (% of GDP)	The Banker, Top Islamic Financial Institutions PSIFIs Data World Bank Data for GDP
TFConventional	Domestic credit provided by the financial sector (% of GDP)	World Bank data
GDP	Gross Domestic Product per capita	World Bank data
EDE	Government education expenditure (% of government expenditure)	World Bank data
HLTH	Government expenditure on health (% of GDP)	World Bank data
LEGAL	Legal system of the country	JuriGlobe database of Ottawa University
COMPETITIVENESS	The Global Competitiveness Index (GCI)	World Bank data
CULTURE	Cultural variables are variations in attitudes, experiences, and values between individuals from different cultures.	Hofstede Website

4.2. Model Selection and Econometrics Process

The dataset in this study consists of aggregated Islamic banking total financing and conventional domestic credit in several countries over several years, resulting in the suitability of employing panel data analysis. The Islamic and conventional financing is the aggregate data of the total Islamic and conventional financial institutions, while the sources of growth are at the country level; hence, pooled data analysis is employed. In order to examine the robustness

of the analysis, the analysis is conducted on a country-level over time dataset for both dependent and independent variables, analysing the data set in static and dynamic panel econometrics models.

For this study to be meaningful, the inequality index in the form of the GINI coefficient is considered an important benchmark for identifying the redistributive impact of IB financing. At the same time, the Human Development Index (*HDI*) is used as a proxy to assess the developmental impact. Thus, the empirical analysis used in this section employs the *GINI* coefficient and *HDI* as dependent variables.

As identified with IME, the expansion of Islamic financing should increase human development and produce a better income distribution through embeddedness, cooperation, redistribution and reciprocity to ensure justice (*adalah*) and equilibrium (*ihsan*). Therefore, the following model is offered:

$$EDI_{i,t} = \beta_0 + \beta_1 \, TFIslamic_{i,t} + \beta_2 \, TFConventional_{i,t} + \beta_3 GDP_{i,t} + \beta_4 EDE_{i,t} + \beta_5 HLTH_{i,t} + \tau_i + \varepsilon_{i,t} \quad (1)$$

where,

EDI (Economic Development Indices) refers to either:

> *GINI*: Gini coefficient as a measure of socio-economic development in the form of income distribution

> *HDI*: Human Development Index as a measure of socio-economic development in the form of human development impact

TFIslamic   = Total Islamic financing extended by Islamic banks;

TFConventional = Domestic credit provided by the financial sector;

GDP: Gross domestic product per capita

EDU: Government expenditures on education

HLTH: Government expenditures on health

τ_i: country-specific effects (Brooks, 2014)

$\varepsilon_{i,t}$: remainder disturbance that varies across countries and over time

i is for country = 1,…, 14 *i* and *t* is for year = 1,…20

It should be noted that the natural logarithms of the variables are used to estimate the models.

The first step in the empirical process is to test the variables for the unit root test to avoid the problem of spurious regression when the variables in the panel dataset are *I*(1); they are integrated in order 1 (Breitung and Pesaran, 2008). Three-panel unit root tests from the first generation of panel unit root tests are employed in this paper (Levin *et al*., 2002) (*LLC*) and

(Im *et al.*, 2003) (*IPS*), with the null hypothesis of unit root (non-stationary) and alternative hypothesis of a homogeneous stationary autoregressive parameter (*LLC*) and heterogeneous autoregressive parameters (*IPS*) (Breitung and Pesaran, 2008; Chen and Vujic, 2016). For the second generation of the panel unit root test that allows for cross-sectional dependence in the errors (Breitung and Pesaran, 2008), this paper employs the cross-sectional Im *et al.* (CIPS) test of Pesaran (2007).

The econometric model expressed above is estimated first using pooled OLS, which assumes that observations on the variables are conditionally independent (Bell *et al.,* 2019). However, suppose unobserved heterogeneity exists and is unaccounted for. In that case, it will cause 'omitted variables bias' when these omitted factors are correlated with the explanatory variables in the model, *i.e.,* the estimated parameters will be biased. Consequently, inferences will be distorted (Gormley and Matsa, 2014). Therefore, this paper will also use the fixed and random effects models to estimate the model.

In addition to exploring the static relationship between *HDI* and *GNI* index and total IBF, it is of interest to examine the dynamic model, which allows for estimating the long-run relationship (Ditzen, 2019). Understanding the long-run relationship and the speed at which short-run deviation adjusts to long-run equilibrium is highly important (Pesaran *et al.*, 1999). Therefore, this paper employs the panel autoregressive distributed lag ARDL (*p, q, q,…q*) model (Pesaran *et al.*, 1999: 623):

$$EDI_{i,t} = \sum_{j=1}^{p} \partial_{ij} EDI_{i,t-j} + \sum_{j=0}^{q} \acute{\delta}_{ij} x_{i,t-j} + \mu_i + \nu_{i,t} \qquad (2)$$

which can be reparametrized as an error correction model (ECM):

$$\Delta EDI_{i,t} = \lambda_i (EDI_{i,t-1} + \acute{\theta}_i x_{i,t}) + \sum_{j=1}^{p-1} \partial_{ij}^* \Delta EDI_{i,t-j} + \sum_{j=0}^{q-1} \acute{\delta}_{ij}^* \Delta x_{i,t-j} + \mu_i + \nu_{i,t} \qquad (3)$$

where

$EDI_{i,t}$ as above is an index of economic development which refers to GINI or HDI indices

∂_{ij} are lagged GINI or HDI indices coefficients,

$x_{i,t}$ is a ($\ell*1$) vector of independent variables for country *i*, which are total financing of Islamic banks, domestic credit provided by the financial sector, GDP per capita, government expenditure on education and government expenditure on health,

$\acute{\delta}_{ij}$ is the transpose of ($\ell *1$) vector of the coefficients of independent variables,

13

μ_i is individual country fixed effect and

$\nu_{i,t}$ is the country error term

p is the lag length of *EDI,* and

q is the lag length of the independent variables

Δ is the change

λ_i is – (1- $\sum_{j=1}^{p} \partial_{i,j}$) is the speed of adjustment to the long run relationship

(*t-1*) denotes a lagged variable

the long run coefficient vector $\theta_i = \frac{\sum_{j=0}^{q} \delta_{i,j}}{1- \sum_{j=1}^{p} \partial_{i,j}}$ and the short run coefficients, $\partial_{ij}^* = -\sum_{m=j+1}^{p} \partial_{i,m}$, where *j* = 1, 2, .. *p-1*, and $\delta_{i,j}^* = -\sum_{m=j+1}^{q} \delta_{i,m}$, where *j* = 1, 2, .. *q-1* (Pesaran *et al*., 1999; Chen and Vujic, 2016).

The following steps are performed to estimate the ARDL model: first, the variables' order of cointegration is determined to ensure that no variable is integrated of more than *I*(1) (Attard, 2019). Second, the optimal lag length of the model is chosen based on an information criterion (Pesaran *et al*., 1999; Halicioglu and Dell'Anno, 2009), and the most common lag order among the countries is used (Pesaran *et al*., 1999). Third, the potential long-run cointegrating relationship between the economic development index and the rest of the variables is identified using Pedroni's (1999; 2004) residual-based panel cointegration test (Attard, 2019).

Finally, three estimation methods are employed to estimate the ARDL model: PMG, MG and DFE.

5. Findings and Discussion

This section presents the empirical process of the models developed in the previous section to examine distributive justice and human development *vis-a-vis* Islamic financial development in fourteen Muslim countries from 2000 to 2021.

Table 2: Descriptive Statistics

	N	Mean	Median	Minimum	Maximum	SD

HDI	308	0.7113	0.7355	0.403	0.911	0.1226
GINI	308	0.4242	0.404	0.283	0.762	0.1095
TFIslamic	308	0.2387	0.0836	0	7.5399	0.6901
TFconventional	308	52.543	44.8365	2.268	138.858	30.1713
GDP	308	14,869.22	5,244.09	378.158	98,041.36	19,220.88
EDE	308	14.7187	14.0385	5.967	26.334	4.9998
HETH	308	4.1987	3.849	1.6	9.885	1.796

Table 2 presents a summary of descriptive statistical results for the studied variables. The summary statics of the natural logarithm of the variables are shown in Appendix. As can be seen from Table 2, the dependent HDI variable is above the average of 0.5, whereas GINI is close to the average value. Nevertheless, both variables indicate that the sample performs well on both indicators. All other independent variables, particularly GDP, *TFIslamic* and *TFconventional,* have significantly large scales; therefore, a natural logarithm was taken for all variables before using them in the models.

Table 3 presents the correlation matrix for the variables. The Spearman correlation matrix indicates no sign of multicollinearity among the independent variables, as the highest correlation coefficient is 0.5807.

Table 3: Correlation Matrix

	LHDI	*LGINI*	*LTFIslamic*	*LTFconventional*	*LGDP*	*LEDE*	*LHLTH*
LHDI	1.000						
LGINI	0.6005***	1.000					
LTFIslamic	0.5150***	0.4709***	1.000				
LTFconventional	0.7840***	0.4924***	0.4919***	1.000			
LGDP	0.8706***	0.6579***	0.5272***	0.5807***	1.000		
LEDE	0.2368***	0.2827***	0.1721***	0.3237***	0.0678	1.000	
LHLTH	0.1127**	-0.0460	0.2683***	0.0975*	-0.0765	-0.0398	1.000

Notes: Significance levels: *** p<0.01, * p<0.05 and * p<0.1

Figure 1 plots the variables over time. As can be seen, all variables except *LEDE* (government expenditure on education as a percentage of *GDP*) show an upward trend, implying that they have increased over time on average. It also can be observed from Figure 1 that government expenditure on education decreased as a percentage of *GDP* in the sampled countries; however, the explanation of that can be related to the increased pace in the *GDP* or increase in spending on education does not match the increase in the *GDP*.

Figure 1: Scatterplot of the Cross-Sectional Average of the Variables Over Time
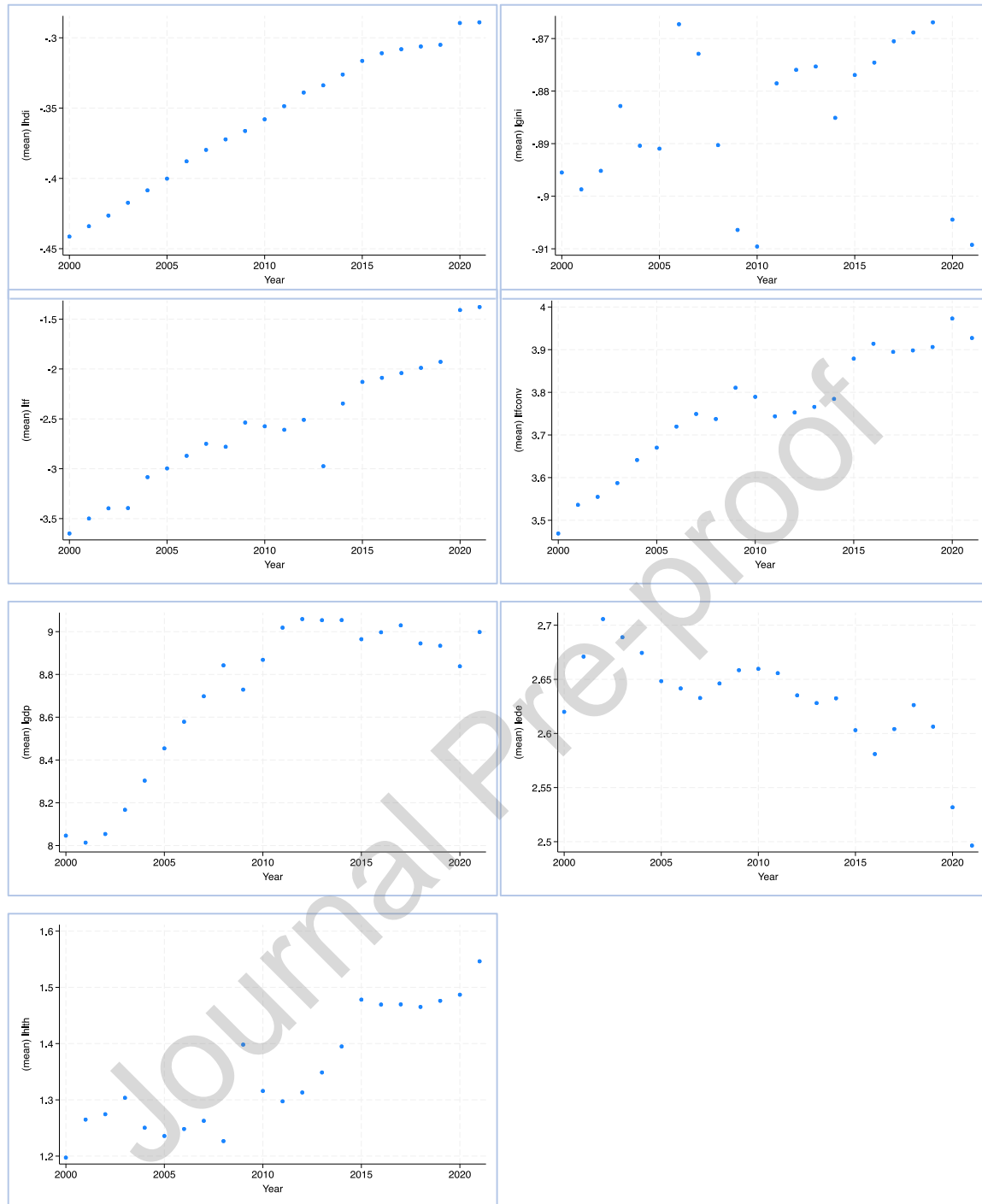
The panel characteristic of the sample requires checking the data for the presence of unit root (stationarity), for which the Levin-Lin-Chu (*LLC*), Im-Pesaran-Shin (*IPS*) and Fisher (*ADF &* *PP*) unit-root test were performed for all variables. The results presented in Table 4 for the 'level' indicate that all the variables have unit roots (non-stationary) according to at least one test. Therefore, the unit root tests were performed using the first differences of the variables. As shown in Table 4 under the 'first difference' column, the results show that all variables become stationary. However, *LLC, IPS, ADF* and *PP* tests do not account for cross-sectional

dependence. Therefore, *CIPS* is performed at both levels and the first difference for all variables. The results confirm that all the variables are of *I*(1).

Table 4: Panel Unit Root Test Statistics for the Variables

A: **First Generation Panel Unit Root Test - Under Cross Sectional Independence**

Variable	Individual effects				Individual effects, individual linear trends			
	Levin, Lin & Chu	Im, Pesaran and Shin	ADF - Fisher	PP - Fisher	Levin, Lin & Chu	Im, Pesaran and Shin	ADF - Fisher	PP - Fisher
				Level				
LHDI	-2.9637***	2.1813	27.1664	30.4790	3.6998	4.6973	10.8044	10.7454
LGINI	-0.4065	-0.5499	35.0640	42.6101	1.2539	0.5627	34.2330	43.7352**
LTFIslamic	-2.4007***	1.4449	26.9348	39.3182*	-0.2510	0.3157	30.5210	32.9066
LTFConventional	-2.2000**	-1.0112	42.0161**	114.3690***	-0.7923	-0.4994	33.2961	151.0780***
LGDP	-3.9513***	-2.0904**	46.8764**	24.3166	-0.9273	1.1047	20.2764	9.2609
LEDE	-1.0893	-1.3291*	39.5947*	37.6295	0.6927	0.1046	26.8953	26.9355
LHLTH	-0.9638	0.1718	24.9876	27.9904	0.8067	0.3166	23.5599	42.0989*
				First Difference				
LHDI	-1.6991*	-2.8803***	53.0156***	134.5470***	-2.9414***	-3.0047***	52.5009***	143.9280***
LGINI	-4.0008***	-4.8045***	87.5215***	273.4780***	-1.6647**	-2.5563***	64.5019***	228.2940***
LTFIslamic	-7.0047***	-7.0216***	104.8040***	241.7290***	-6.0457***	-5.6802***	84.8531***	224.7760***
LTFConventional	-4.9856***	-5.5207***	82.1866***	376.2780***	-4.0888***	-3.8320***	62.5894***	357.8120***
LGDP	-4.4435***	-5.1160***	76.3222***	116.7840***	-4.0287***	-4.9064***	72.0672***	125.7400***
LEDE	-6.0652***	-8.0960***	119.4130***	209.2550***	-5.9175***	-7.5279***	104.8470**	235.9880***
LHLTH	-4.8205***	-7.1966***	104.3090***	332.9150***	-3.2591***	-5.5318***	80.6947***	276.6950***

Notes: * indicates significance at the 10% level, ** indicates significance at the 5% level, and ** indicates significance at the 1% level

B: Second Generation Panel Unit Root Test – Under Cross-Sectional Dependence

Cross-Sectional Im, Pesaran, and Shin (CIPS) by Pesaran, 2007

	Constant	Constant and Trend	Constant	Constant and Trend
	Level		First Difference	
LHDI	-0.471	-1.433	-2.671***	-3.452***
LGINI	-1.559	-2.219	-4.141***	-4.293***
LTFIslamic	-2.184*	-2.547	-4.735***	-4.896***

LTFConventional	-2.120	-2.768*	-4.024***	-4.114***
LGDP	-1.828	-2.708*	-3.564***	-3.366***
LEDE	-2.140*	-2.559	-4.465***	-4.668***
LHLTH	-1.946	-2.760**	-4.833***	-4.759***

Notes: * indicates significance at 10% level, ** indicates significance at 5% level and ** indicates significance at 1% level

This study runs an econometric analysis with the models defined above for *HDI* and *GINI* to examine whether the identified independent variable *TFIslamic* has a significant impact on *HDI* and *GINI* by employing pooled, fixed and random effects with clustered standard errors as demonstrated by equation 1.

Table 5 reports the estimation results of pooled OLS, fixed and random effects of the *GINI* index model (Panel A) and *HDI* (Panel B). The variables are used in the first differences as they are *I*(1) as they are not stationary at level. The appropriate model for estimating the impact on the *GINI* index is pooled regression, as neither the null hypothesis of all individual effects is insignificant nor the Hausman test null hypothesis is rejected. F-test and Hausman test results are, respectively, depicted in Table 5. Regarding the *HDI* index, the appropriate model is random effects because the null hypothesis of all individual effects is insignificant and rejected, while the Hausman test null hypothesis is not rejected.

The findings suggest that *TFIslamic* does not have an effect on the *HDI* and *GINI* across all estimation methods. However, *TFconventional* has a negative impact on *GINI* as it increases inequality while it has a positive impact on *HDI*. The positive effect of financing on HDI conforms with previous studies (Raza *et al*., 2019; Soyemi *et al.,* 2020). On the other hand, Islamic finance has not been able to support nor impact the socio-economic indicators, which contradicts the aspiration of IME, as discussed above. Hence, this brings the question of the credibility of Islamic banking as an operational tool of IME regarding assigned expectations to deliver developmental goals and social justice. This can be explained by shareholder-based institutional logic adopted by Islamic banks, which internalises the market expectations through *fiqh* or Islamic law.

Regarding the other variables, the only other variable to be significant is *GDP* growth. The GDP causes improvement in the quality of life in the form of significant improvement in the *HDI* index ranking at a significance level of 1%. Therefore, the improvement in *GDP* in the sampled countries contributed to human development due to growth in the real economy. However, it should be noted that GDP growth also increases inequality in the sampled

countries, similar to the effect of *TFconebntional,* which causes financialization and disembeddedness in the real economy.

As for the independent variables *EDU* and *HEALTH*, the findings in Table 5 show unexpectedly that the government expenditure on education and health services does not contribute to human development or equality. This can be explained by the quality of education and the lack of opportunity for suitable employment, which may not positively change the lives of educated ones.

In reflection, the growth of *TFIslamic* should contribute to the overall economic growth by mobilizing the necessary resources. However, development is a micro reality in developing the enabled and functioning people. Therefore, economic growth may not be translated into economic or human development due to the difficulties in the transformational power and redistributive mechanisms prevailing in the country. The results also suggest that richer countries have a higher advantage in developing their human capital in comparison to poorer countries. However, as results suggest, the financing injected into the economic system through *TFIslamic* or *FTconventional* does not significantly impact the efforts to narrow this gap for the sample countries, but it increases.

As one of the objectives of IME is to include the lower income classes in the financial system through Islamic finance by empowering them, it is expected that this should boost their motivation to develop themselves and increase their quality of life (*HDI*). Hence, *TFIslamic* should have a positive impact on human development. Furthermore, as stated by Jalilian and Kirkpatrick (2002), improving the financial inclusion of the poor can increase their productivity, enhance their productive assets and facilitate the achievement of their livelihood. However, this statement cannot be supported by the findings in our sample.

As we already established, all the variables are *I*(1), which enables us to disentangle the long-and-short-run relationships between the *GINI* index/*HDI* and the explanatory variables using the ECM-ARDL model (Ahmed *et al*., 2020). Therefore, the Pedroni cointegration test (1999, 2004) is used to examine the presence of panel cointegration (Ahmed *et al*., 2020). The results, reported in Table 6, reject the null hypothesis of no panel cointegration for three out of seven tests for *GINI* and four out of seven tests for *HDI*. Therefore, the Padroni test suggests a long-term cointegrating relationship between the variables, allowing us to examine the short-and-long-run dynamics between the variables using the ECM-ARDL model.

19

Table 5: The Findings on Income Inequality, Human Development, and Islamic Financial Development

	Panel A: Dependent Variable: D.LGINI								Panel B: Dependent Variable: D.LHDI							
	Pooled Regression		FEM		REM		Pooled OLS with Clustered Standard Errors		Pooled Regression		FEM		REM		REM with Clustered Standard Errors	
	Coeff.	t-Statistic	Coeff.	t-Statistic	Coeff.	z-Statistic	Coeff.	t-Statistic	Coeff.	t-Statistic	Coeff.	t-Statistic	Coeff.	z-Statistic	Coeff.	t-Statistic
Constant	-0.0033	-0.99	0.0032	0.94	0.0033	0.99	-0.0033	-1.95*	0.0062	10.15***	0.0062	10.89***	0.0062	5.25**	0.0062	5.54**
D.LTFIslamic	-0.0005	-0.11	0.0005	0.12	0.0005	0.11	-0.0005	-0.28	0.0006	0.67	0.0004	0.57	0.0005	0.60	0.0005	0.61
LTFconventional	0.0409	1.31	0.0401	1.22	0.0409	1.31	0.0409	2.20**	0.0180	3.13**	0.0195	3.50**	0.0192	3.48**	0.0192	3.03**
D.LGDP	0.0360	1.73*	0.0346	1.62	0.0360	1.73*	0.0360	2.24**	0.0123	3.21**	0.0114	3.17**	0.0116	3.24**	0.0116	3.11**
D.LEDE	-0.0245	-0.96	0.0273	1.05	-0.0245	0.96	-0.0245	-0.41	0.0020	0.43	0.0027	0.62	0.0026	0.59	0.0026	0.31
D.LHLTH	0.0014	0.06	0.0008	0.03	-0.0014	0.06	0.0014	0.06	0.0014	0.32	0.0021	0.51	0.0020	0.48	0.0020	0.30
R-squared (%)		1.67%		1.63%		1.67%		1.67%		5.85%		6.88%		5.80%		5.80
F-statistic / Wald Chi2 (Prob)		0.98 (0.4312)		0.91 (0.4723)		4.89 (0.4292)		3.48 (0.0323)		3.58 (0.0037)		4.06 (0.0014)		20.45 (0.0001)		31.27 (0.0000)
F- test: All individual effects are insignificant (Prob)				0.34 (0.9848)								4.38 (0.0000)				
Hausman test						0.46 (0.9936)								3.30 (0.6542)		

Note: N=294 observations, significance levels: *** p<0.01, * p<0.05 and * p<0.1.

Table 6: Pedroni's Cointegration Tests:

Test Statistic	Income Inequality Model GINI		Human Development Index HDI	
	Panel	Group	Panel	Group
v	-.08225		-1.019	
rho	.3421	2.026**	2.88***	4.577***
t	-4.873***	-4.075***	.7886	.6942
adf	.4244	-.7179	3.924***	2.134**

Note: Significance levels: *** p<0.01, ** p<0.05 and * p<0.1

Table 7 reports the findings for the *GINI* index in Panel A and those for *HDI* in Panel B. According to the Hausman test, the appropriate estimation method for the *GINI* ARDL model is the Dynamic Fixed Effect (*DFE*), which shows a convergence towards long-run equilibrium, as shown in the error correction term (*ECT*). The finding of the *DFE* method shows that only *TFconventional* significantly impacts the *GINI* index in the long run, which is negative as it increases inequality. This finding is consistent with the findings in Table 5. The results of the short-run effect of *TFIslamic* and *TFconventional* on *GINI,* as presented in Table 7 Panel A, do not show any impact on social equality *GINI* or any of the control variables. Therefore, the insignificance of the *TFIslamic* on *GINI* confirms the previous findings in the literature (Putriani and Prastowo, 2019; Widodo, 2019) that an increase in Islamic bank financing does not decrease inequality. In fact, it does not have any significant impact in increasing or decreasing social injustice due to the current nature of Islamic finance, that being a financialization tool of the Islamic financial industry instead of being the tool of embedding the finance into the real economy (Aksak and Asutay, 2015; Hartington *et al*., 2015; Asutay, 2019b; Mergaliyev et al., 2021).

The results for the long-run impact based on the appropriate model (DFE) show that neither *TFIslamic* nor *TFconventional* has an impact on the *HDI*. However, *TFconventional* has a positive short-term effect on human development. Furthermore, only *GDP* and *EDE* are found to impact HDI in the long run with positive and negative effects, respectively. Correspondingly, *TFconventional* and *GDP growth* have a positive short-term impact on *HDI* at a 5% and 10% significance level. The lack of *TFIslamic* impact on *HDI* performance as a proxy for IME expectations to respond to human-centric development increases the concern about the legitimacy and credibility of Islamic finance to fulfil the assigned expectations of human development and distributional justice (Aksak and Asutay, 2015).

Table 7: The Findings on Income Inequality, Human Development, and Islamic Financial Development- ECM- ARDL

	Panel A: GINI						Panel B: HDI					
	DFE – Dynamic Fixed Effect (homogeneous)		PMG- Pooled Mean Group (LT homogenous, ST heterogeneous)		MG- Mean Group (heterogenous)		DFE – Dynamic Fixed Effect (homogeneous)		PMG- Pooled Mean Group (LT homogenous, ST heterogeneous)		MG- Mean Group (heterogenous)	
	Coefficient	z-statistic	Coefficient	z-statistic	Coefficient	z-statistic	Coefficient	z-statistic	Coefficient	z-statistic	Coefficient	z-statistic
ETC – long term												
LTF-Islamic	-0.0188	-1.24	0.0499	17.87***	-0.4105	-1.28	0.0024	0.12	0.1773	0.88	0.0328	1.32
LTF-Conventional	0.0884	2.19**	-0.0207	-5.83***	1.2301	1.14	0.0611	1.02	-0.0182	-0.13	-0.0332	-0.68
LGDP	0.0198	0.92	-0.0039	-1.69*	0.3065	2.21**	0.0582	1.88*	-0.5393	-0.66	-0.0487	-0.54
LEDE	0.0579	0.99	0.0759	11.36***	0.4800	0.95	-0.2521	-1.92*	-0.7998	-0.77	0.0669	1.84*
LHLTH	-0.0103	-0.20	-0.0071	-1.15	-0.3348	-2.00**	0.0491	0.68	1.0629	0.81	0.1626	0.81
SR- short term												
ECT	-0.4044	-6.41***	0.1489	0.72	-1.3916	-2.01*	-0.0536	2.57***	-0.0030	0.51	-1.0526	-3.8***
LEDI- LD	-0.0904	-1.41	-0.2699	-1.53	0.1366	0.39	-0.0639	-0.99	-0.2254	-2.54**	0.1003	0.47
LTF-Islamic - D1	0.0062	1.03	-0.0014	-0.06	0.0481	0.32	0.0006	0.52	0.0043	0.98	-0.0165	-1.41
LD	0.0056	1.08	-0.0228	-0.50	-0.0281	-0.20	0.0002	0.26	-0.0016	-0.35	-0.0165	-1.57
LTF-Conventional - D1	0.0279	0.86	-0.0588	-0.67	-0.3939	-1.06	0.0125	2.08**	0.0283	2.34**	0.0856	2.58***
LD	0.0223	0.68	0.0527	0.60	-0.0648	-0.44	-0.0074	-1.21	0.0076	0.33	-0.0080	-0.53
LGDP – D1	0.0275	1.31	-0.0065	-0.10	0.1302	1.17	0.0071	1.71*	0.0255	2.20**	-0.0405	-1.23
LD	0.0256	1.15	0.0607	0.78	0.1635	1.98*	0.0083	1.88*	-0.0022	-0.22	-0.0567	-1.75*
LEDE - D1	-0.0444	-1.56	0.0031	0.04	-0.1502	-0.62	0.0085	1.60	0.0028	0.23	-0.0401	-0.95
LD	-0.0088	-0.32	-0.0368	-0.77	-0.1734	-1.18	0.0063	1.25	-0.0029	-0.40	-0.0677	-1.56
LHLTH - D1	0.0008	0.03	-0.1169	-2.01**	0.7352	1.14	0.0004	0.07	0.0171	0.93	-0.1376	-1.61
LD	-0.0163	-0.58	-0.1816	-2.09*	0.3976	1.04	0.0071	1.34	0.0179	0.84	-0.0515	-1.68*
Constant	-0.6433	-4.25	0.1688	0.91	-3.6664	-2.10*	-0.0198	-0.60	0.0187	0.62	-1.0300	-1.69*
	DFE						**DFE**					

23

Hausman Test		PMG				PMG
No. of Observations	280	280	280	280	280	280

In summary, the findings confirm that H_1 'the Islamic banking as a tool of IME has a positive impact on *HDI*' is rejected. The regression estimates of pooled OLS, fixed effects, and random effects estimation of *HDI* index models produced insignificant *TFIslamic* (Jan *et al.,* 2018). This result is also confirmed by the ARDL model, as it is found that *TFIslamic,* as well as *TFconventional,* have no impact on *HDI* in the long-run.

Regarding H_2, 'The Islamic banking as a tool of IME has a positive impact on distributive justice (*GINI*)' is also rejected. As for the implications of the results, Islamic finance emerged as an Islamic response to restore the balance of income distribution, as emphasised by IME. However, such foundational claims have been distorted by the global credit system (Rosly and Bakar, 2003), into which Islamic finance has evolved. Therefore, financialization in Islamic finance has resulted in not having any significant impact on the expansion of equity. Thus, the combined results of the hypotheses regarding the influence of Islamic banking on the *HDI* and *GINI* demonstrate the socio-economic failure of Islamic finance concerning human development and social justice as the fundamental objectives of the IME (Asutay, 2007; 2019a; Mergaliey *et al*., 2021).

With regard to the third hypothesis, H_3 -'The *GDP* growth has a positive impact on *HDI* and *GINI*', the static model-based findings support the positive impact on *HDI* but not on *GINI*. *GDP* growth has a negative impact on *GINI* as it increases inequality. For the dynamic model, the results show that *GDP* has no effect on *GINI* but has a positive impact on *HDI* both in the short and long run; hence, the hypothesis is partially rejected.

In the analysis, social indicators, such as expenditure on health and education, are included in measuring development and reducing inequality; as stated by H_4, 'the government expenditure on education and health has a positive impact on *HDI* and *GINI'*. Therefore, to support socioeconomic development, it is believed that financing is necessary to provide funds to build the required infrastructure or contribute to economic growth to increase human development through education and health. Employing a static and dynamic empirical model, the results show that the *EDE* has no significant impact on social justice or *GINI*. On the other hand, applying a dynamic empirical model, *EDE* produces a negative impact on *HDI,* and hence the hypothesis is rejected. However, as evidenced, *HLTH* has not been able to support socio-

economic development or social justice with static or dynamic models. In addition, additional social variables have been considered, such as legal framework (*Shari'ah*, civil and common laws), competitiveness and cultural indexes (see Appendix), which have not been significant on any dependent variables.

Given that Islamic finance has a distinct ontology and epistemology from neoclassical economics, which is by definition ahistorical, static, and focused on primary technological devices (Brohman, 1995), neoclassical economics is not compatible with the nature of Islamic financial institutions. Given the criticisms levelled against neoclassical economics for failing to take into account the dynamics of development, it is possible that Islamic finance's operational activities will encounter challenges in carrying out its proper responsibilities, like profit-loss sharing, embeddedness in the real economy, reciprocity and will instead choose to emulate its counterpart by utilising fixed-income instruments (Nagaoka, 2012). Therefore, independent of their intrinsically moral conceptions, Islamic finance is shaped by the institutional logic of banking and capital markets (Asutay, 2019b).

7. Conclusion

As the preceding analysis indicates, we fail to see a positive relationship between Islamic banking financing and income inequality reduction in our sample countries. The solid growth of the Islamic financial industry around the globe is normally expected to underpin the fall of the unfair income distribution. However, the findings in this section provide a picture that requires redirection. Therefore, as discussed in the initial sections, the stakeholder-based development of IME with emancipation and empowering individuals should be converted into strategies and policies to complement and support macroeconomic approaches in solving the income gap and human development.

An important caveat should be considered as a limitation: the size of Islamic banking as a percentage share of each sample country as it remains very much in infancy between 5% to 25% of the financial system in the countries covered by this study. Therefore, it might be rather difficult to expect such a small-scale asset and financing size to have a visible impact on the results. Thus, the impact of Islamic banking might have been hampered as opposed to the aspirational expectations.

Secondly, an important existential question is whether commercial banks should be expected to contribute to economic development beyond economic growth. While this could be the case

for conventional commercial banks, the definition of Islamic financing, whether in Islamic banks or other institutional forms, is attached to the IME, which essentialises individual and societal development. In other words, 'Islamic' as a prefix in IBF necessitates that they are distinct in terms of their institutional logic and that 'difference' is determined through their embedded nature (Asutay, 2007b, 2012, 2019a). Therefore, expecting Islamic banking to contribute to economic development beyond economic growth is essentialised.

IME, being the paradigm, identifies moral and developmental objectives for Islamic financial institutions, while the form of Islamic banking that emerged so far is mainly Islamic commercial banking. Commercial banks, however, by definition, provide financial intermediary and hence can contribute to economic growth, but isolating their contribution to economic development will be rather difficult. Thus, there is an inconsistency between the aims of the IME and the nature of Islamic banks (Asutay, 2007b, 2012). This requires Islamic non-banking financial institutions, Islamic social banks, and other forms of financing institutions to be developed beyond confining the financing spheres to 'Islamic banking'. The recent emergence of increased interest in Islamic social welfare institutions (*zakat* and *waqf*) and Islamic social finance (*qard al-hassan*) without defining capital and *riba* conundrum is an indication of the social failure of Islamic banking as highlighted by El-Gamal (2006), Asutay (2007a, 2007b, 2012, 2019b) and Khan (2010) some years ago.

Bibliography

Aggrawali, R.K. and Yousef, T. (2000). 'Islamic Banks and Investment Financing', *Journal of Money, Credit and Banking,* 32(1), 93-120.

Ahmed, F.; Kousar, S.; Pervaiz, A. Ramos-Requena, J.P. (2020). 'Financial Development, Institutional Quality, and Environmental Degradation Nexus: New Evidence from Asymmetric ARDL Co-Integration Approach', *Sustainability*, 12(18), 1-21.

Ahmed, H. (2013), 'Financial Inclusion and Islamic Finance: Organizational Formats, Products, Outreach, and Sustainability', in Z. Iqbal and A. Mirakhor (eds.), *Economic Development and Islamic Finance*. Washington: The World Bank.

Ahmed, K. (1979). 'Economic Development in an Islamic Framework', in K. Ahmad and Z. I. Ansari (eds.), *Islamic Perspectives: Studies in Honour of Mawlana Sayyid Abul A'la Mawdudi*. Leicester and Jeddah: Islamic Foundation and Saudi Publishing House, pp. 223-240.

Ahmed, K. (1994). *Islamic Approach to Development: Some Policy Implications*. Islamabad: Institute of Policy Studies.

Ahmed, K. (2003). 'The Challenge of Global Capitalism: An Islamic Perspective', in John. H. Dunning (ed.), *Making Globalization Good: The Moral Challenges of Global Capitalism*, Oxford: Oxford University Press, pp.181-209.

Al-Jarhi, M.A. (2004). *Islamic Finance: An Efficient & Equitable Option*. IRTI, Islamic Development Bank.

Alam, M.S.; Shahbaz, M. and Paramati, S.R. (2016). "The Role of Financial Development and Economic Misery on Life Expectancy: Evidence from Post Financial Reforms in India", *Social Indicators Research*, 128(2), 481-497.

Arif, M. (1985). 'Toward a Definition of Islamic Economics: Some Scientific Considerations*', Journal of Research in Islamic Economics*, 2(2), 79-93.

Arif, M. (1989). 'Towards Establishing the Microfoundations of Islamic Economics: The Basis of the Basics', in A. Ghazali and S. Omar (eds.), *Readings in the Concept and Methodology of Islamic Economics*. Selangor Darul Ehsan: Pelanduk Publications.

Asutay, M. (2007a). 'A Political Economy Approach to Islamic Economics: Systemic Understanding for an Alternative Economic System', *Kyoto Bulletin for Islamic Area Studies*, 1(2), 3-18.

Asutay, M. (2007b). 'Conceptualization of the Second Best Solution in Overcoming the Social Failure of Islamic Banking and Finance: Examining the Overpowering of Homoislamicus by Homoeconomicus', *IIUM Journal of Economics and Management*, 15(2), 167-195.

Asutay, M. (2008). 'Islamic banking and finance: social failure', *New Horizon*, 169, pp.1-3, October-December 2008.

Asutay, M. (2012). 'Conceptualising and Locating the Social Failure of Islamic Finance: Aspirations of Islamic Moral Economy vs. the Realities of Islamic Finance', *Journal of Asian and African Studies*, 11(2), 93-113.

Asutay, M. (2013). 'Islamic moral economy as the foundation of Islamic finance', in *Islamic Finance in Europe: Towards a Plural Financial System*. Cattelan, V. Cheltenham: Edward Elgar Publishing.

Asutay, M. (2016). Reflecting on the Political Economy Trajectory of The Muslim World: The Need for Substantive Morality beyond *Maslaha* as a Legitimacy Tool. Derin Ekonomi/*Deep Economy*. Special Issue on OIC Islamic Summit 2016. pp. 70-72.

Asutay, M. (2019a). *An Introduction to Moral Economy and Rationalising Islamic Moral Economy*. Working Paper, Durham Centre for Islamic Economics and Finance, Durham University Business School, Durham University, UK..

Asutay, M. (2019b). *Islamic Political Moral Economy: Critical Perspectives on the Emergence of a New Paradigm*. Working Paper, Durham Centre for Islamic Economics and Finance, Durham University Business School, Durham University, UK.

Asutay, Mehmet; Aysan, Ahmet Faruk and Karahan, Cenk (2013b). 'Reflecting on the Trajectory of Islamic Finance: From Mit Ghamr to the Globalisation of Islamic Finance', *Afro Eurasian Studies*, 2(1&2), pp. 2-14.

Asutay, Mehmet and Harningtyas, A.F. (2015). 'Developing Maqasid al-Shari'ah Index to Evaluate Social Performance of Islamic Banks: A Conceptual and Empirical Attempt', *International Journal of Islamic Economics and Finance Studies*, 1(1), 5-64.

Asutay, M. and Yilmaz, I. (2018). 'Re-embedding Maqasid al-Shari'ah in the Essential Methodology of Islamic Economics', in Mohamed El-Tahir El-Mesawi (ed.), *Maqasid Al-Shari'ah: Explorations and Implications*. Kuala Lumpur: Islamic Book Trust.

Attard, J. (2019). *Public Debt and Economic Growth nexus: A Dynamic Panel ARDL Approach*. MPRA Paper No. 96023. Munich Personal RePEc Archive.

Ayub, M. (2007). *Understanding Islamic Finance*. London: John Wiley and Sons Ltd.

Abdul Razak, A.B. & Asutay, M. (2022) 'Financial Inclusion and Economic Well-Being: Evidence from Islamic Pawnbroking (*Ar-Rahn*) in Malaysia'. *Research in International Business and Finance,* 59 (January).

Baddeley, M. (2011). *Civil War and Human Development: Impacts of Finance and Financial Infrastructure. Cambridge Working Papers in Economics.* Cambridge: Faculty of Economics, University of Cambridge.

Banik, B.; Roy, C.K. and Hossain, R. (2023). "Healthcare expenditure, good governance and human development", *EconomiA*, 24(1), 1-23.

Bell A.; Fairbrother M. and Jones K. (2019). "Fixed and random effects models: making an informed choice", *Quality & Quantity: International Journal of Methodology*, 1051–1074.

Boukhatem, J. and Moussa, F. B. (2018). 'The effect of Islamic banks on GDP growth: Some evidence from selected MENA countries', *Borsa Istanbul Review*, 18(3), 231-247.

Breitung, J. and Pesaran, M.H. (2008). 'Unit Roots and Cointegration in Panels'. In: Mátyás, L., Sevestre, P. (eds) *The Econometrics of Panel Data. Advanced Studies in Theoretical and Applied Econometrics*. Springer, Berlin, Heidelberg.

Brohman, J. (1995). "Economism and critical silences in development studies: A theoretical critique of neoliberalism", *Third World Quarterly*, 16(2), 297-318.

Chapra, M.U. (1992). *Islam and the Economic Challenge*, Leicester: The Islamic Foundation.

Chapra, M.U. (1993). *Islam and Economic Development*. Herndon, VA: International Institute of Islamic Thought.

Chapra, M.U. (1996). *What is Islamic economics?* Jeddah: Islamic Research and Training Institute, Islamic Development Bank.

Chapra, M.U. (2000), *The Future of Economics an Islamic Perspective*, Leicester: The Islamic Foundation.

Chapra, M.U. (2008), *The Islamic Vision of Development in the Light of the MaqasidAl-Shariah*, Jeddah: Islamic Development Bank.

Chen, W. and Vujic, S. (2016). *A reassessment of the relationship between income inequality and economic growth: new empirical evidence from China*. Available at: https://businesslaw. curtinedu.au/wp-content/uploads/sites/5/2016/07/panel-data-conference-areassessment-ofthe-relationhip-between-income-inequality-and-economic-growth-newempirical-evidence-from-china.pdf. Accessed date: 12th May 2021.

Derbel, H.; Bouraoui, T. and Dammak, N. (2011). Can Islamic Finance Constitute a Solution to Crisis?, *International Journal of Economics and Finance*, 3(3), 75-83.

Ditzen, J. (2019). *Estimating long run effects in models with cross-sectional dependence using xtdcce2*. Centre for Energy Economics Research and Policy (CEERP) Working Paper No, 7.

Ding, X.; Huang, Y.; Gao, W. and Min, W. (2021). "A comparative study of the impacts of human capital and physical capital on building sustainable economies at different stages of economic development", *Energies*, 14(19), 6259.

El-Gamal, M.A. (2006). *Islamic Finance: Law, Economics and Practice*. New York: Cambridge University Press.

Emamzadeh, M.R.A. (2020). 'Analysis of economic convergence of Islamic justice in selected

Islamic countries', *Journal of Economic Structures*, 9(1), 1-10.

Faye, I.; Triki, T. and Kangoye, T. (2013). 'The Islamic finance promises: evidence from Africa', *Review of Development Finance*, 3(3), 136-151.

Fields, G.S. (1980). *Education and income distribution in developing countries: A review of the literature*. The World bank.

Gheeraert, L. (2014). 'Does Islamic finance spur banking sector development?', *Journal of Economic Behaviour & Organisation,* 103, 4–20.

Gormley, T.A. and Matsa, D.A. (2014). 'Common errors: How to (and not to) control for unobserved heterogeneity', *The Review of Financial Studies*, 27(2), 617-661.

Halicioglu, F. and Dell'Anno, R. (2009). 'An ARDL model of unrecorded and recorded economies in Turkey', *Journal of Economic Studies*, 37(6), pp. 627-646.

Hasan, Z. (1988). *Distributional equity in Islam*. MPRA Paper 2785, University Library of Munich, Germany.

Hashim, S.H. (1998). *Income Inequality and Poverty in Malaysia*. Oxford: Rowman & Littlefield Publishers.

Hsiao, C. and Shen, Y. (2003). "Foreign direct investment and economic growth: the importance of institutions and urbanization", *Economic development and Cultural change*, 51(4), 883-896.

IFSB (2022). *Islamic Financial Services Industry Stability Report 2022*. Kuala Lumpur: IFSB.

Im, K.S.; Pesaran M. H. and Shin Y. (2003). 'Testing for unit roots in heterogeneous panels', *Journal of Econometrics*, 53–74.

Iqbal, M. and Molyneux, P. (2005). *Thirty Years of Islamic Banking: History, Performance and Prospects*, London: Palgrave-Macmillan.

Jalilian, H. and Kirkpatrick, C. (2002). 'Financial development and poverty reduction in developing countries', *International Journal of Finance & Economics*, vol. 7(2), 97–108.

Jan, S. and Asutay, M. (2019). *A Model for Islamic Development: An Approach in Islamic Moral Economy*. Cheltenham: Edward Elgar Publishing.

Jan, S.; Khan, Z. and Karimullah (2018). 'Institutionalising Justice in Islamic Finance', *Journal of Islamic Economics, Banking and Finance*, 14(1), 205-216.

Jobarteh, M. and Ergec, E. H. (2017). 'Islamic Finance Development and Economic Growth: Empirical Evidence from Turkey', *Turkish Journal of Islamic Economics*, 4(1), 31-47.

Kassim, S. (2016). 'Islamic finance and economic growth: the Malaysian experience', *Global Finance Journal,* 30, 66–76.

Kappel, V. (2010). The effects of financial development on income inequality and poverty. *CER-ETH Economics Working Paper Series*. https://doi.org/10.3929/ethz-a-006032047

Khan, F. (2010). 'How "Islamic" is Islamic banking?', *Journal of Economic Behavior & Organization*, 76(3), 805-820.

Khan, M.A. (1984), 'Islamic Economics: Nature and Need', *Journal of Research in Islamic Economics*, 1(2), 51-55.

Khan, M.A. (1989). "Methodology of Islamic Economics," in A. Ghazali and S. Omar (eds.), *Readings in the Concept and Methodology of Islamic Economics*. Selangor Darul Ehsan: Pelanduk Publications.

Levin, A.; Lin, C-F. and James Chu, C-S. (2002). 'Unit root tests in panel data: asymptotic and finite-sample properties', *Journal of Econometrics*, 108(1), 1–24.

Lone, F. A. and Ahmad, S. (2017). 'Islamic Finance: More Expectations and Less Disappointment', *Investment Management and Financial Innovations*, 14(1), 134-141.

Mergaliev, A.; Asutay, M.; Avdukic, A. and Karbhari, Y. (2021) "Higher Ethical Objective (*Maqasid al-Shari'ah*) Augmented Framework for Islamic Banks: Assessing the Ethical Performance and Exploring its Determinants", *Journal of Business Ethics*, 170 (4): 797–834

Mohieldin, M. (2012). *Realizing the Potential of Islamic Finance*. Poverty Reduction and Economic Management Network (PREM) No. 77. Washington, DC.: World Bank. https://openknowledge.worldbank.org/handle/10986/10051.

Mohd Noor, N.S.; Mohd Shafiai, M.H. and Ismail, A.G. (2019). "The derivation of Shariah risk in Islamic finance: a theoretical approach", *Journal of Islamic Accounting and Business Research*, 10(5), 663-678.

Raza, M.S.; Tang, J.; Rubab, S. and Wen, X. (2019). "Determining the nexus between financial inclusion and economic development in Pakistan", *Journal of Money Laundering Control*, 22(2), 195-209.

Nagaoka, S. (2012). Critical Overview of the History of Islamic Economics: Formation, Transformation, and New Horizons. Asian and African Area Studies, 11(2), 114-136.

Naqvi, S.N.H. (1981). *Ethics and Economics: An Islamic Synthesis*. Leicester: Islamic Foundation.

Naqvi, S.N.H. (1994). *Islam, Economics, and Society*, London: Kegan Paul International.

Nouman, M.; Siddiqi, M.F.; Ullah, K. and Jan, S. (2021). "Nexus between higher ethical objectives (Maqasid Al Shari'ah) and participatory finance", *Qualitative Research in Financial Markets*, 13(2), 226-251.

Outreville, J. (1999). *Financial Development, Human Capital and Political Stability* (No. 142). United Nations Conference on Trade and Development.

Pedroni, P. (1999). 'Critical values for cointegration tests in heterogeneous panels with multiple regressors', *Oxford Bulletin of Economics and Statistics,* 61(1), 653–670.

Pedroni, P. (2004). 'Panel cointegration: asymptotic and finite sample properties of pooled time series tests with an application to the PPP hypothesis', *Econometric theory*, 20(3), 597-625.

Pesaran, M.H. (2007). 'A simple panel unit root test in the presence of cross-section dependence', *Journal of Applied Econometrics*, 22(2), 265-312.

Pesaran, M.H.; Shin, Y. and Smith, R.P. (1999). 'Pooled mean group estimation of dynamic heterogeneous panels', *Journal of the American statistical Association*, 94(446), 621-634.

Putriani, D. and Prastowo, P. (2019). 'Financial inequality nexus and Islamic banking', *Jurnal Ekonomi & Keuangan Islam*, 5(2), 43-52.

Razmi, M.J.; Abbasian, E. and Mohammadi, S. (2012). "Investigating the effect of government health expenditure on HDI in Iran", *Journal of Knowledge Management, Economics and Information Technology*, 2(5).

Raza, M.S.; Tang, J.; Rubab, S. and Wen, X. (2019). "Determining the nexus between financial inclusion and economic development in Pakistan", *Journal of Money Laundering Control*, 22(2), 195-209.

Rosly, S.A. and Bakar, M.A. (2003), 'Performance of Islamic and mainstream banks in Malaysia', *International Journal of Social Economics,* 30(12), 1249-1265.

Salma, S.B. (2013). 'Evaluating the corporate social performance of Islamic financial institutions: an empirical study', *International Journal of Islamic and Middle Eastern Finance and Management*, 6(3), 238-260.

Sencal, H. and Asutay, M. (2019). 'Ethical disclosure in the Shari'ah annual reports of Islamic banks: discourse on Shari'ah governance, quantitative empirics and qualitative analysis', *Corporate Governance: The International Journal of Business in Society,* 21(1), 175-211.

Siddiqi, M.N. (1981). *Muslim Economic Thinking: A Survey of Contemporary Literature*. Leicester: Islamic Foundation.

Siddiqi, M.N. (1985). *Partnership and Profit-Sharing in Islamic Law*. Leicester: Islamic Foundation.

Soyemi, K.A.; Olowofela, O.E. and Yunusa, L.A. (2020). "Financial inclusion and sustainable development in Nigeria", *Journal of Economics and Management*, 39(1), 105-131.

Ul-Haq, I. (1995). *Economic Doctrines of Islam: A Study in the Doctrines of Islam and Their Implications for Poverty, Employment, and Economic Growth*. Herndon, Virginia: IIIT.

Widodo, A. (2019). 'The Role of Integrated Islamic Commercial and Social Finance in Reducing Income Inequality in Indonesia', *Journal of Islamic Monetary Economics and Finance*, 5(2), 263-286.

Zaman, N. and Asutay, M. (2009). 'Divergence between Aspirations and Realities of Islamic Economics: A Political Economy Approach to Bridging the Divide', *IIUM Journal of Economics and Management* 17(1), 73-96.

Zarrouk, H.; Jedidia, K.B. and Moualhi, M. (2016). "Is Islamic bank profitability driven by same forces as conventional banks?", *International Journal of Islamic and Middle Eastern Finance and Management,* 9(1), 46-66.

Appendix:

Descriptive Statistics

	N	Mean	Median	Minimum	Maximum	SD
LHDI	308	-0.3575	-0.3072	-0.9088	-0.0932	0.1901
LGINI	308	-0.8857	-0.9063	-1.2623	-0.2718	0.2297
LTFIslamic	308	-2.5878	-2.4816	-11.9706	2.0202	1.612
LTFconventional	308	3.7593	3.803	0.8189	4.9335	0.7096
LGDP	308	8.7112	8.5637	5.9353	11.4931	1.4484
LEDE	308	2.6294	2.6418	1.7862	3.2709	0.3504
LHETH	308	1.3511	1.3478	0.47	2.291	0.405

The Findings on Income Inequality, Human Development, and Islamic Financial Development (controlling for legal, competitiveness and culture factors)

	Panel A: Dependent Variable: D.LGINI		*Panel B: Dependent Variable: D.LHDI*	
	Pooled OLS with Clustered Standard Errors		*REM with Clustered Standard Errors*	
	Coeff.	t-Statistic	Coeff.	t-Statistic
Constant	-0.0046	-1.10	0.0089	3.55***
D.LTFIslamic	0.0001	0.05	0.0003	0.4
LTFconventional	0.0529	1.78*	0.0152	1.73*
D.LGDP	0.0491	2.16**	0.0092	2.27**
D.LEDE	0.0160	0.32	0.0009	0.09
D.LHLTH	0.0042	0.14	0.0007	0.09
LEGAL	0.0004	0.12	-0.0025	-1.39
D.LCOMPETITIVENESS	-0.0006	-0.04	-0.0038	-1.15
D.LCULTURE	0.0050	0.16	0.0014	0.28
R-squared (%)	2.73%		6.21%	
F-statistic / Wald Chi2 (Prob)	6.17 (0.0021)		19.60 (0.0120)	

Data Statement:
The data were assembled from publicly available statistical sources, which will be made available upon request.

Highlights:

- Islamic finance is expected to essentialise the financing of development opportunities.

- To assess the Islamic moral economy performance of Islamic banking, this paper uses *HDI* and *GINI* as the dependent variables to determine short-run and long-run relationships between Islamic banking growth and the development of the economy through socioeconomic indicators.

- The data covers the period 2000-2021 with fourteen countries with a certain systemic presence of Islamic finance,

- Although Islamic banks did not cause an increase in inequality, they neither caused a decrease in the sampled countries.

- Islamic banking expansion positively contributes to human development only in the long run under certain conditions, which cannot be established in the short run.