

Islamic Inclusive Growth Index for the Organisation of Islamic Cooperation (OIC) Member Countries

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On the need to revisit the Islamic worldview and to develop a comprehensive measurement for Islamic economic performance and social progress based on Maqasid al-Shari'ah principle, this paper develops an Islamic Inclusive Growth Index (i-IGI) - a composite index of growth inclusiveness - for the Organisation of Islamic Cooperation (OIC) member countries. It comprises of three sub-pillars to measure the countries' performance based on three building blocks of inclusiveness: i) Islamic-adjusted economic growth incorporating Maqasid al-Shari'ah's principle; ii) performance of poverty reduction; and iii) performance of the society inequality and social inclusion. The results suggest that OIC member countries in the Central Asia, despite having a good performance on the three pillars of inclusiveness, is lagging behind in terms of its conformity with Maqasid al-Shari'ah principles. Contrarily, the low-income OIC member countries in the Sub-Saharan Africa, despite a low ranking on inclusiveness index is performing relatively better according to Maqasid al-Shari'ah principles.

Disclaimers: All findings, interpretations, and conclusions are solely of the author's opinion and do not necessarily represent the views of the institutions.

1. Introduction

The concept of inclusive growth has been debated substantially by policy-makers, researchers and practitioners in domestic and international political circles. The concept has inspired in many policies design and projects as well as impacted the views and the lives of many people in many countries. However, different interpretations of the concept of inclusive growth has been debated in the literature and policy

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circles. The concept is often used interchangeably with a suite of other terms, including ‘broad-based growth’, ‘shared growth’, and ‘pro-poor growth’. Nevertheless, by simple definition, inclusive growth focuses on both the pace and pattern of growth, a economic growth which is a necessary and crucial condition for poverty reduction.

In Islam, development has specific dimensions of self and spiritual development, of the physical development, and of the development of society. The essential framework for individual and collective human progress are presented in the Qur’an, and is, in turn, made operational by the traditions of the Prophet Muhammad (Peace be upon him). The core principles of Islam place great emphasis on social justice, inclusion, and sharing of resources among the society, rich and poor. From Islamic development perspective, Chapra (2008) classifies at least five essential elements for developing a human development and well-being model from the theory of Maqasid al-Shari’ah. Moreover, as classified by Imam Abu Hamid al-Ghazali, the discourse on the meaning of the term Maqasid al-Shari’ah itself is focused more on the categories of the Maqasid.

In order to measure the progress of development, creation of composite indicators to measure countries development performance has recently attracted the attentions of many scholars, policy-makers and institutions. Alternative measurements and concepts are being tested and increasingly used for policy-making at regional, national and international levels. However, the construction of these indicators have met with considerable criticism at least in three dimensions: (i) the ability of the index to give a suitable measure of development due to the quality and limitation of raw data (Stiglitz et al., 2009); (ii) the technical limits of the index, the so-called “weighting and aggregation problem” (Mazumbar, 2003); and iii) the need to take into account more information and other variables as well as accounted for what really matters for the society, i.e. sustainability, environment, happiness, religiosity (Nourry, 2008).

The need for additional indicators to assess the economic and social progress has called for revisiting the worldview to take into consideration of a comprehensive approach to measure Islamic economics performance and social progress based on Maqasid al-Shari’ah principles. Thus, the objective of the paper is to develop an

Islamic Inclusive Growth Index (i-IGI), a composite index of growth inclusiveness based on Islamic principles for OIC member countries. It comprises of three sub-pillars to measure the countries' performance based on three building blocks of inclusiveness: i) Islamic-adjusted economic growth incorporating Maqasid al-Shari'ah's framework; ii) Performance of poverty reduction; and iii) Performance of the society inequality and social inclusion.

The paper is structured as follows. Section 2 provides brief concept of inclusive growth and Maqasid al-Shari'ah. Section 3 provides the related literature review on the construction of economic and social index based on Islamic principles. Section 4 describes the methodology and data for constructing the i-IGI index. Section 5 analyses the results of the Inclusive Growth Index and Islamic Inclusive Growth Index (i-IGI) and Section 6 finishes with the main conclusions.

2. Defining the Concept of Inclusive Growth and Maqasid al-Shari'ah

2.1 Concept of Inclusive Growth

Over the past few years, inclusive growth has become a very popular topic among development practitioners. Despite broad use of the term, there seem to be different views on the issue of what may be called inclusive growth. Often, the concept of inclusive growth is identified with pro-poor growth, which differs from inclusive growth (Klasen, 2010). The absolute definition of pro-poor growth suggests that what matters is the absolute rate at which the incomes of the poor are rising (Ravallion and Chen, 2003; DFID 2004; Ianchovichina and Lundstrom, 2009). Inclusive growth on the other hand, refers to the broader idea of a growth process that includes all segments of the society. It is about the extent to which economic growth creates opportunities for poor women and men through active participation in markets, communities and states.

The Commission on Growth and Development (2008) notes that inclusiveness - a concept that encompasses equity, equality of opportunity, and protection in market and employment transitions - is an essential ingredient of any successful growth strategy. However,

attempts to measure inclusive growth have remained limited. Traditionally, poverty (or inequality) and economic growth analyses have been done separately. Recent work indicates that there may not be a trade-off between equity and efficiency as suggested by Okun (1975) and “that it would be a big mistake to separate analyses of growth and income distribution” (Berg and Ostry, 2011).

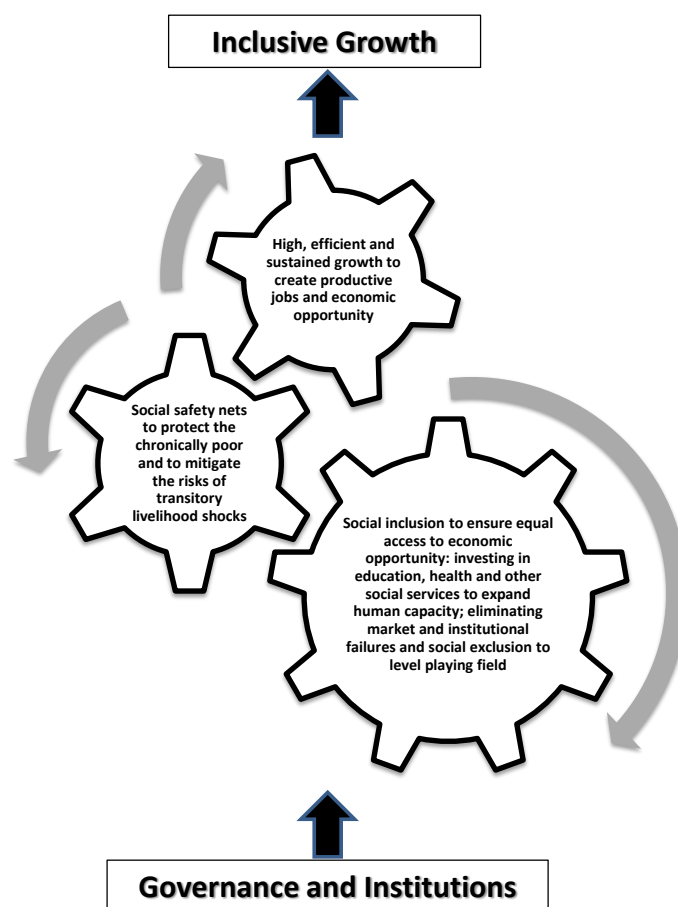
Inclusive growth is important for very salient reasons: i) ethical considerations of equity and fairness, growth must be shared and should be inclusive across different segments of populations and regions.; ii) growth with persisting inequalities within a country may endanger social peace and further weaken other disadvantaged and vulnerable sections of population- resulting in a waste of vast human capital that could otherwise be used productively in creating economic outputs for sustainable growth; iii) continued inequalities in outcomes and access to opportunities in a country may result in civil unrest and violent backlash from people who are continually deprived, derailing a sustainable growth process.

The concept of inclusive growth follows three policy pillars supported by good institutions and governance (Zhuang, 2010). As requirements to anchor inclusive growth strategy, the three pillars are aimed at high and sustained growth while ensuring that all members of the society benefit from growth: i) High, efficient, and sustained growth to create productive jobs and economic opportunity; ii) social inclusion ensures that all sections of the population, including those disadvantaged due to their individual circumstances, have equal opportunities; and iii) social safety nets are required to protect the chronically poor and to mitigate the risks and vulnerabilities associated with transitory livelihood shocks.

Figure 1 depicts the three policy pillars of an inclusive growth strategy. In order to operationalize the concept of inclusive growth, ADB (2011) proposes a framework of inclusive growth indicators. The proposed framework is not rigidly prescriptive to take into account gaps in the availability of timely and comparable statistics of good quality for a majority of the developing economies in the region. It ultimately attempts to help achieve the goal of reducing poverty and inequality (income and non-income) by measuring income and non-income outcomes and their distribution across population, as allowed by available data. The framework presents 35 quantifiable indicators to

measure - outcomes and components of the three policy pillars of inclusive growth, as well as the components of good governance and strong institutions, which form the foundation of any inclusive growth strategy.³

Figure 1: Policy Pillars of Inclusive Growth



Source: Adapted from Zhuang (2010)

³ Income - Proportion of population living below the national poverty line; Proportion of population living below US\$2 a day at 2005 PPP\$; Ratio of income/consumption of the top 20% to bottom 20%. Non-income - Average years of total schooling (youth and adults); Prevalence of underweight children under-five years of age; Under-five mortality rate.

2.2 Concept of Maqasid al-Shari'ah

Muslim scholars have developed a theory known as Maqasid al-Shari'ah (the objectives of the Shari'ah). According to al-Raysuni (1992), the theory can be traced back as far as the third century after Hijrah (9th Century A.D.). Most of the discussions in the past literature on Maqasid centered on its legal dimensions. The pioneering works emanated from scholars such as al-Shatibi (2004), al-Ghazali (1901), al-Juwayni (1979), and Ibn 'Ashur (1998). The application of al-Maqasid in various disciplines including economics and finance has been gaining prominence in recent years. Among the leading economists who have written on the subject are Chapra (1985 and 2000), Siddiqi (2000), Ahmad (2000), Atiyah (2008) and Al-Najjar (2008).

The general objectives of Shari'ah are commonly agreed by nearly all scholars of al-Maqasid, which are *Jalb al-Masalih* (to promote virtues) and *Dar' al-Mafasid* (to remove harm) (Ibn 'Ashur, 1998, 2006). Although there are some similarities in the principles (al-Raysuni, 1992), some of these scholars differ in their classification of the specific objectives. Maqasid al-Shari'ah provides a comprehensive framework that can be used to measure development. This framework is commonly represented by the three levels of *Maslahah* and the five universal values or essential elements (*al-Daruriyat al-Khams*).

The Maqasid al-Shari'ah is classified into five major categories according to Imam Al-Ghazali, a prominent and highly respected reformer in the eleventh century. He stated that the very objective of the Shari'ah is to promote the well-being of the people, which lies in safeguarding of faith (*Deen*), self (*Nafs*), intellect (*Aql*), posterity (*Nasl*) and wealth (*Mal*). By promoting cooperation and mutual support within the family and society, it is also envisaged to spread the ethical values of compassion and guidance, establish justice, eliminate prejudice and alleviate hardship. Hence, there is a general consensus that the primary objectives of the Shari'ah (*al-Maqasid*) is to preserve the five essential elements, namely *al-Din* (religion), *al-Nafs* (life), *al-Aql* (intellect), *al-Nasl* (family institution) and *al-Mal* (wealth).

Muslim scholars in the past, notably al-Ghazali (1901), al-Shatibi 2004) and Ibn 'Ashur (1998), besides having discussed the five essential elements of *al-Maqasid*, they also discussed the levels of *al-Maqasid*,

which termed as Maslahah. The three levels of al-Maqasid are explained by earlier scholar in an ascending order as: Daruriyat (Necessity), Hajiyat (Complement) and Tahsiniyat (Embellishment). From a Maqasid perspective, the three levels of Maslahah represent a growth path and stages of development. The first level, Daruriyat represents the minimum level that every individual, institution and nation must achieve. This level embodies the preservation of the five universal values or essential elements mentioned above. The second level, Hajiyat provides avenues for the growth of the five elements and the third level, Tahsiniyat represents the stage for their sustainability.

In recent years, the application of Maqasid al-Shari'ah has varied across several disciplines. Many of the contemporary applications have been in the legal circle where Maslahah has been used by Shari'ah Advisory Councils of many Islamic banks as the basis for issuing fatwas. Although the parameters for the application of Maslahah have been defined by several Shari'ah bodies and academies, these applications have hardly been extended beyond the fatwa sessions. On the other hands, in economics and finance, several literature on Maqasid al-Shari'ah is essentially theoretical in nature, for example Chapra (1985; 2008), Siddiqi (2000), Hasan (2004) and Ahmad (2000). Nevertheless, there are few studies that have attempted to operationalize Maqasid al-Shari'ah principles in the areas of economics and finance.

3. Related Literature on Measuring Islamic Economy and Social Progress

There have been numerous attempts to construct indicators or composite indices in the mainstream economic to measure economic welfare, sustainable development quality of life and well-being. Among others are Human Development Index (HDI); the Quality of Life Index (QLI); the Happy Planet Index (HPI); Gross National Happiness (GHI); the Legatum Prosperity Index (LPI); the Multidimensional Poverty Index (MPI); Genuine Progress Indicator (GPI); and the Meaning of Life Index (MLI). HDI is a composite index widely used by international organizations to evaluate and rank countries in terms of three main indicators of economic and social welfare - income, health and education attainments.

In the Islamic literature, however, very few have attempted to integrate the religious aspect of development that reflects spiritual well-being, which has been recognized as an important component in the construction of the indices. Several indices have developed a methodological framework, while others have constructed the indices as potential alternatives to more commonly used indices based on conventional views of economic and social progress. However, there are few studies in the literature that develop Islamic indices among others are: i) the Ethics-Augmented Human Development Index (E-HDI) by Dar (2004); ii) the Islamic Human Development Index (I-HDI) by Anto (2009); iii) the Integrated Development Index (I-Dex) by Amin et al. (2013) and iv) the Islamicity Index (I^2) by Rehman and Askari (2010).

Dar (2004) proposes an ethics-augmented human development index (E-HDI) as a new indicator of socio-economic change and development. The E-HDI incorporates freedom, faith, environmental concerns and the institution of family in the HDI and ranks countries of the world accordingly. The study constructs the E-HDI based on Maqasid al-Shari'ah and it conceptualizes social change and development for all countries. However, the ranking of countries in the study is based on the ordinal measure using the Borda Rule instead of on the actual values of E-HDI computed for all countries. Hence, there is a need to develop a comprehensive development index based on Maqasid al-Shari'ah that can actually be computed for the ranking of countries' level of development.

Anto (2009) attempts to develop Islamic Human Development Index (I-HDI). The paper argues that the existing HDI is not fully compatible and sufficient in measuring human development from Islamic perspective. The index is comprised of Material Welfare Index (MWI) and Non-material Welfare Index (NWI), representing the five basic needs in Maqasid al-Shari'ah. It also includes the Freedom Index and the Environment Index. The findings show that the rank composition between I-HDI and HDI is slightly different. A number of countries enjoy a better rank in I-HDI compared with HDI, while several countries suffer a marked deterioration of rank. The high score group in I-HDI is still dominated mostly by countries in the MENA region, while at the bottom group is still dominated by countries in Africa region.

Rehman and Askari (2010) propose to measure the degree of religiosity of Islamic countries. It uses four sub-indices namely the Economic Islamicity Index (EI²), the Legal and Governance Islamicity Index (LGI²), the Human and Political Rights Islamicity Index (HPI²), and the International Relations Islamicity Index (IRI²) to measure government's adherence to Islamic principles in economics; legal integrity and governance environment; degree of civil and political rights; and relationship with the global community. The study shows that Islamic countries are not as Islamic as one might expect, at least in the realm of economics.; Instead it appears that the most developed countries tend to place higher on this Islamic Economic Index.

Amin et al. (2013) proposes to develop an integrated Islamic development framework and index based on, and representing the Maqasid al-Shari'ah or noble objectives of the Shari'ah for OIC and non-OIC countries. The Integrated Development Framework is based on Maqasid al-Shari'ah principles and follows the works by al-Ghazali and Abu Zaharah. Based on content analysis, the operational definitions of each component of Maqasid al-Shari'ah are derived, and the dimensions are identified based on the scope of the definitions. The elements have been selected for each dimension based on the relevant existing indicators. However, data availability poses a major constraint in selecting relevant indicators. Hence, the study does not proceed further to construct the actual index.

On the other hands, several studies attempt to incorporate the concept of Maqasid al-Shari'ah approach into the field of Islamic finance. Dusuki (2007) and Hamdan (2014) attempt to relate Maqasid al-Shari'ah to corporate social responsibility (CSR) and argue that the concept of CSR is not alien to Islam and any corporation that claims to follow Shari'ah-based principles should naturally practice CSR, as it enshrines Islam's true spirit. Similarly, Hameed et al. (2005) develop Islamicity Disclosure Index to measure and compare the performances of two Islamic banks. Mustafa et al. (2008) refine the research and develop a quantitative performance measure for Islamic banking from the theory of al-Maqasid. While Larbani and Mohammed (2012), develop a decision-making tool based on Maqasid al-Shari'ah and their levels of Maslahah for managers of firms to use in allocating their investible resources to vital sectors of the economy.

Bedoui (2012) proposes a framework to manage ethical (financial and non-financial) performances based on the concept of Maqasid al-Shari'ah. The paper argues that considering the fact that business ethics is one of the most needed in the market nowadays, this framework is a solution for Islamic financial institutions and can be used for other organizations looking for ethical investments. The proposed framework is considered akin to a rating model to benchmark organizations based on the five pillars of Maqasid al-Shari'ah. The graphical method used in the paper assigns a score 'the performance' to each axis in which represent one objective of the five dimensions of Maqasid al-Shari'ah.

4.Data and Methodology

4.1 Data Descriptions

In this section, we provide data descriptions used in the construction of Islamic-Inclusive Growth Index (hereafter i-IGI) for OIC member countries. Table 1 presents the main indicators of i-IGI, which are the Gini index, poverty index, GDP growth and ratio of non-interest income to total assets (see Appendix 1 for details) used in the index computation. According to Table 1, Comoros is the most unequal country in our sample based on the inequality indicator, with the Gini index at 64.3 percent, while Kazakhstan is the most equal country in terms of income distribution with the Gini index at 29 percent.

Table 1: OIC Member Countries Based on Three Pillars of Inclusiveness (average 2007-2011)

	Poverty Headcount Ratio at \$1.25 a day (PPP) (% of population)	GINI index	GDP Growth (% annual)	Non-interest Income as a Ratio of Total Assets
Albania	0.6	34.5	4.7	1.738
Azerbaijan	0.4	33.7	10.0	0.0001
Benin	47.3	38.6	3.7	N.A
Burkina Faso	44.6	39.8	4.9	2.968
Bangladesh	43.3	32.1	6.2	0.934
Cote d'Ivoire	23.8	41.5	1.1	N.A
Comoros	46.1	64.3	1.5	N.A
Djibouti	18.8	40.0	5.1	N.A
Egypt	1.7	30.8	5.2	1.437
Gabon	4.8	41.5	3.5	2.32
Guinea	43.3	39.4	2.5	N.A
Gambia	33.6	47.3	3.6	7.442
Guinea-Bissau	48.9	35.5	4.8	NA
Indonesia	20.3	35.9	5.9	2.371
Iran	1.5	38.3	4.0	N.A
Iraq	2.8	30.9	5.6	1.64
Jordan	0.1	34.6	5.2	0.912
Kazakhstan	0.1	29.8	5.6	0.423
Kyrgyz	5.3	35.4	5.1	N.A
Morocco	2.5	40.9	4.5	1.304
Maldives	1.5	37.4	6.6	11.32
Mali	50.4	33.0	4.5	N.A
Mozambique	59.6	45.7	7.0	5.102
Mauritania	23.4	40.5	2.6	4.169
Malaysia	0.0	46.1	4.4	0.956
Niger	43.6	34.6	4.5	4.675
Nigeria	68.0	48.8	6.9	3.343
Pakistan	21.0	30.0	2.8	1.516
Sudan	19.8	35.3	3.6	4.931
Senegal	29.6	40.3	3.5	0.672
Sierra Leone	51.7	35.4	5.6	N.A
Syria	1.7	35.8	4.9	0.498
Tajikistan	10.6	31.7	6.7	NA
Tunisia	1.1	36.1	3.0	2.116
Turkey	0.8	39.2	3.7	1.855
Uganda	38.0	44.3	7.4	3.848
Yemen	17.5	37.7	1.6	1.353
Average	22.4	38.3	4.6	2.687

Note: N.A stands for not available.

Source: World Bank Group Database; Bankscope

In terms of poverty, Nigeria has the highest percentage of population under the poverty line (\$1.25 a day) at 68 percent, followed by Mozambique at 59 percent, while Azerbaijan has the smallest percentage of population under poverty line (\$1.25 a day) at 0.4 percent, followed by Albania at 0.6 percent. In term of economic growth, Azerbaijan has experienced the higher growth of 10 percent on average over 2007-2011, while Cote d'Ivoire has experienced the lowest growth at 1.1 percent. On non-interest income, interestingly, Maldives has the highest non-interest income as percentage of total assets at 11.3 percent, while Azerbaijan has the least percentage of non-interest income over total assets at less than 0.0001 percent.

4.2 Methodology

There have been some methodologies in the literature suggested by different scholars and institutions such as Asian Development Bank⁴ and Africa Development Bank to measure inclusive growth index. However, most of the methodologies require extensive data requirements, which can explain the reason why none has numerically developed inclusive development index in the literature to date. Having known these limitations on the extensive data requirements, we introduce an innovative simple Islamic inclusive growth index using three most important components that can be derived from the definition of growth inclusiveness.

According to the classical definition of inclusive development (or growth), a growth is called inclusive if all the society will benefit from the growth process, especially the poor segment of the society. Alternatively, inclusiveness simply refers to the broader idea of a growth process that includes all segments of the society. In this context, the i-IGI is a summary measure of inclusive growth in OIC member countries. It intends to measure country's average achievements in three basic dimensions of inclusiveness: economic growth adjusted to take into account for Shari'ah's aspects, country's performance on reducing proportion of population under poverty line, and performance in reducing the level of inequality. The i-IGI is the geometric mean of normalized indices measuring achievements in each dimension.

⁴ See Appendix 2 for definition of indicators.

Using this definition as a starting point, our inclusive growth index comprises of three components; i) GDP growth representing the growth component, ii) inequality proxy by the Gini index to reflect the extent of inequality among the society, and iii) the poverty index representing the proportion of population under the poverty line at \$1.25 a day (measured at PPP). Another innovation in the paper is to take into account the Maqasid al-Shari'ah's role in advancing growth inclusiveness. Since the aims on reducing poverty and inequality are universal across the countries irrespective of Muslim or non-Muslim countries, we make adjustments to the growth dimension of the index to reflect the Islamic principle of growth by using the "ratio of average non-interest income to total assets".

In order to control for the cyclical effects in the components of the index (especially for the 2007-2009 global financial crisis) and a way of preventing the under-representativeness or over-representativeness of a specific year, we use an average of those indicators over 2007-2011 period. In addition, since an economy with higher equality, lower poverty and higher growth is the chief target and main objective of these countries, we need to transform the poverty and Gini indexes into comparatively consistent numbers. Figure 1 presents the flowchart in term of steps taken for computing the i-IGI. In this regard, we make two transformations - inverse⁵ and subtract the indicators from 100) - on the poverty and inequality data for the purpose of consistency and usability of the i-IGI. Using two ways transformations also work as a robustness check for the final inclusive growth indices.

In computing the index, we use two well-known but different methods: i) MinMax method as suggested in Human Development Index (HDI) report, and ii) standardization method. Under the MinMax method, the first step is to create sub-indices for each dimension. Minimum and maximum values (known as goalposts) need to be set in order to transform the indicators into indices between 0 and 1. Because the geometric mean is used for aggregation, the maximum value does not affect the relative comparison (in percentage term) between any two

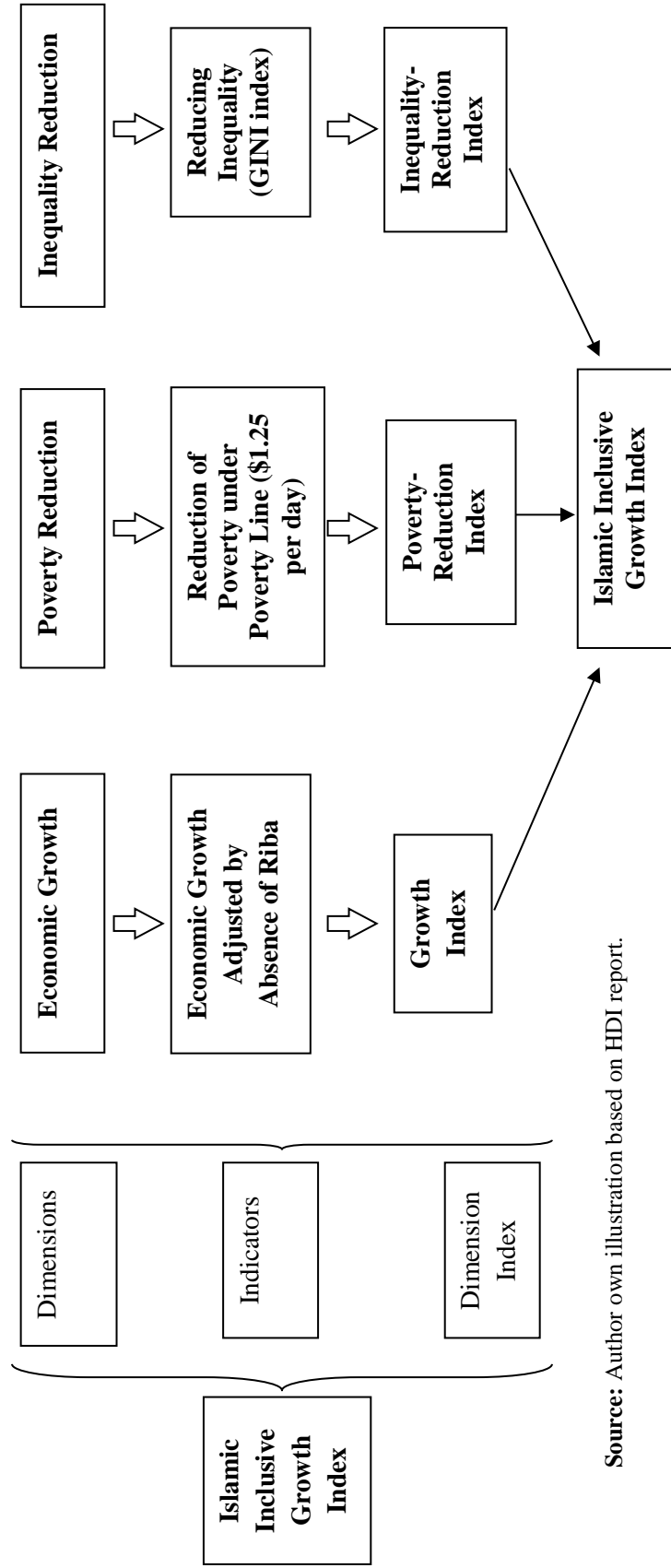
⁵ Inverting means that we transform poverty and Gini indexes as follows: 1/Poverty ratio, and 1/Gini Index. In the same way, subtracting from 100 means: 100-Poverty Index, and 100-Gini Index.

countries or over period of time (HDI 2013). The maximum values are set to the actual observed maximum values of the indicators on a cross-section basis, average of 2007-2011 from the countries.

The minimum values are set at 32 for poverty headcount ratio at US\$1.25 a day (PPP) using the inverse transformation (0.015 using second transformation), while for GINI index variables at 35.7 (0.016 using second transformation) and for GDP growth (percent annual) at 1.1. Hence, progress is measured against minimum levels that a society needs to survive over time. Following HDI methodology and having defined the minimum and maximum values, the sub-indices are calculated as follows:

$$\textit{Dimension Index} = \frac{\textit{actual value} - \textit{minimum value}}{\textit{maximum value} - \textit{minimum value}} \quad (1)$$

Figure 2: Calculating the Islamic Inclusive Growth Index: A Graphical Flowcharts



Source: Author own illustration based on HDI report.

For each dimension, Eq.1 is applied to each of the subcomponents and a geometric mean of the index is created. This is equivalent to applying Eq. 1 directly to the geometric mean of the sub-components. Because each dimension index is a proxy for capabilities in the corresponding dimension, the transformation function from income to capabilities is likely to be concave (Anand and Sen, 2000). Therefore, the i-IGI is the geometric mean of the all dimension indices as follows:

$$i-IGI = (I_1^{1/3} * I_2^{1/3} * I_3^{1/3}) \quad (2)$$

where 3 represents the number of sub-indices, and I represent the sub-indices. Eq.2 embodies imperfect substitutability across all i-IGI dimensions. It is thus addressed one of the most serious criticisms of the linear aggregation formula, which allowed for perfect substitution across dimensions. Some substitutability is inherent in the definition of any index that increases with the values of its components (HDI 2013).

Under the standardization method the same methodology is applied except that instead of defining the goalposts (minimum and maximum values), each sub-index is standardized by the conventional standardization methodology. In other words, each sub-index is subtracted from the average of that sub-index for the whole group of countries and then it is divided by the standard deviation of the sub-index. In addition, under standardization method since some negative sub-indexes will be appeared, we shift the distribution of the sub-indices merely to get positive numbers. It is worth mentioning that shifting the distribution will not affect the overall results.

5. Empirical Findings

Table 2 presents the ranking of the OIC member countries in term of inclusive growth indices and Islamic inclusive growth indices.⁶ The ranking is based on both MinMax and standardization methods. In general, the results are different from the findings of existing models in the literature (Rehman and Askari, 2010; Anto, 2009; Dar, 2004), but pointed to the same conclusion that majority of the OIC member

⁶ See Appendix 3 for the values correspondent to the rankings.

countries are not conforming to Maqasid al-Shari'ah and Islamic principles, at least in the realm of economic and development.

According to the ranking, over 2007-2011 period, Azerbaijan has ranked first on all growth indices using various methodologies due to its strong performance on growth dimensions during the period as well as very low proportion of population under the poverty line. However, when it comes to the Islamic Inclusive Growth Index (i-IGI), due to extremely low level of non-interest income of this country (compared to its assets), its ranking drops significantly to 26th place except for the case where MaxMin is built based on the second method of transformation.

The same findings can be observed in the case of Kazakhstan. Having high growth and low poverty have helped the country to rank 2nd based on the inclusive growth index, while it drops to rank around 20th after taking into account the Maqasid al-Shari'ah aspects of the index (Table 3). On the other extreme, Nigeria ranks 26th in terms of inclusive growth index due to its high levels of poverty and to some degree relatively high inequality, followed by Mozambique ranked at 25th.

Table 2: Ranking of Inclusive Growth and Islamic Inclusive Growth
Index for OIC Member Countries

	IGMM T1	iIGM MT1	IGMM T2	iIGM MT2	IGSTD T1	iIGST DT1	IGSTD T2	iIGST DT2
Azerbaijan	1	26	1	4	1	26	1	26
Kazakhstan	2	20	2	1	2	19	2	20
Iraq	3	3	3	2	3	3	3	14
Maldives	4	1	4	26	4	1	4	8
Egypt	5	9	5	5	5	8	5	16
Jordan	6	14	6	3	6	14	6	10
Albania	7	7	7	6	7	7	7	1
Syria	8	22	8	8	8	22	8	6
Indonesia	9	4	9	11	9	4	9	11
Morocco	10	15	10	7	10	15	10	23
Turkey	11	13	11	9	11	13	11	2
Tunisia	12	11	12	10	12	10	12	21
Malaysia	13	19	13	12	13	20	13	17
Gabon	14	12	14	14	14	12	14	5
Sudan	15	2	15	13	15	2	15	3
Bangladesh	16	21	16	20	16	17	16	9
Pakistan	17	17	17	23	17	21	17	4
Uganda	18	6	18	15	18	6	18	22
Senegal	19	24	19	17	19	24	19	15
Niger	20	8	20	25	20	9	20	18
Mauritania	21	10	21	18	21	11	21	12
Burkina Faso	22	16	22	24	22	16	22	25
Yemen	23	23	23	21	23	23	23	19
Gambia	24	5	24	16	24	5	24	13
Mozambique	25	18	25	19	25	18	25	24
Nigeria	26	25	26	22	26	25	26	7

Source: Authors calculations

Note: IGMMT1 refers to Inclusive Growth based on MaxMin method using the Transformation 1, and IGSTD1 refers to Inclusive Growth based on standardization method using Transformation 1. i at the beginning refers to Islamic.

In general, interestingly the OIC member countries in Sub-Saharan Africa improves in terms of the ranking when it comes to i-IGI. The main reason can mainly due to low levels of the overall bank assets. It can also be explained by the existence of foreign-banks that have been established by others OIC member countries particularly from the Gulf region. In addition, there are some countries, particularly Tunisia and Turkey for which a consistent pattern of ranking is observed where their rankings are remained almost similar for both IGI and i-IGI indices.

Table 3: Inclusive Growth and Islamic Inclusive Growth Index for OIC Member Countries

	IGMMTI	IGMMTI	IGMMTI2	IGMMTI2	IGSTDTI	IGSTDTI	IGSTDTI	IGSTDTI2	IGSTDTI2
Azerbaijan	0.883906	0.032563	0.531728	0.317032	4.500171	0.17	4.90429	0.18	
Kazakhstan	0.775093	0.462134	0.52842	0.413207	3.944257	2.35	4.845404	2.89	
Iraq	0.757441	0.708992	0.526939	0.405625	3.851285	3.60	4.420788	3.40	
Maldives	0.747065	1.331496	0.404139	0.014889	3.786545	6.75	4.218708	3.95	
Egypt	0.743269	0.665751	0.273043	0.260561	3.77822	3.38	4.207175	3.26	
Jordan	0.72043	0.554571	0.220472	0.392948	3.654019	2.81	4.136592	3.71	
Albania	0.700129	0.668124	0.218718	0.213332	3.548933	3.39	3.904797	6.96	
Syria	0.693939	0.436824	0.213592	0.191316	3.514975	2.21	3.843655	4.07	
Indonesia	0.66014	0.698728	0.193098	0.121552	3.339066	3.53	3.796912	3.62	
Morocco	0.636389	0.551835	0.1916	0.195257	3.207496	2.78	3.671317	2.31	
Turkey	0.62113	0.605834	0.184969	0.173138	3.131605	3.05	3.655002	4.85	
Tunisia	0.610001	0.621644	0.153569	0.133165	3.078116	3.14	3.648479	2.85	
Malaysia	0.594654	0.465	0.112041	0.117724	2.977073	2.33	3.494384	3.19	
Gabon	0.583163	0.612742	0.087545	0.092663	2.931261	3.08	3.433033	4.27	
Sudan	0.579714	0.783194	0.075114	0.10148	2.923944	3.95	3.373158	4.56	
Bangladesh	0.566268	0.439334	0.072616	0.066211	2.854665	2.60	3.356973	3.83	
Pakistan	0.565654	0.51576	0.069918	0.054245	2.848897	2.21	3.271225	4.47	
Uganda	0.545345	0.678285	0.065712	0.081731	2.72432	3.39	3.220921	2.79	
Senegal	0.504166	0.350539	0.060334	0.080072	2.526133	1.76	3.217799	3.28	
Niger	0.502666	0.667111	0.059398	0.041298	2.519732	3.34	3.206684	3.13	
Mauritania	0.489357	0.625129	0.058586	0.074841	2.448933	3.13	3.021254	3.59	
Burkina Faso	0.477576	0.544749	0.057476	0.050457	2.383663	2.72	3.016212	2.10	
Yemen	0.472443	0.414752	0.056927	0.064934	2.360995	2.07	2.956464	3.11	
Gambia	0.443089	0.686622	0.052046	0.080653	2.196836	3.40	2.78145	3.55	
Mozambique	0.36115	0.493471	0.051968	0.071008	1.743618	2.38	2.629709	2.31	
Nigeria	0.196874	0.233664	0.046612	0.055322	0.682074	0.81	2.603899	4.04	

Source: Authors calculations

IGMMTI refers to Inclusive Growth based on MinMax method using the Transformation 1. IGSTDTI refers to Inclusive Growth based on standardization method using Transformation 1. i at the beginning refers to Islamic.

6. Conclusions

This paper is the first step towards establishing and constructing an Inclusive Growth Index and Islamic Inclusive Growth Index (i-IGI) based on Maqasid al-Shari'ah to gauge the performance of the OIC member countries on inclusive-related issues including economic growth, poverty and inequality. Moreover, this framework is one of the solution for OIC member countries to measure and benchmark their overall performance based on the Maqasid al-Shari'ah principles. In this study, different transformations and methods have been applied to ensure the data requirements for inclusive index calculation is consistent and at the same time can be used as a robustness check for the final results.

The overall observation is that despite the significant performance of Central Asian OIC member countries on various pillars of inclusiveness, their performances in terms of conforming with the Maqasid al-Shari'ah (specifically *riba*-free economy) are considerably low. On the other hand, the low-growth of the OIC member countries in Sub-Saharan Africa have a promising performance based on the Shari'ah-compliance aspects. The findings are different from the findings of existing models in the literature, but pointed to the similar conclusions that OIC member countries are not fully conforming to Maqasid al-Shari'ah principles, at least in the realm of economic and development.

For future research, the most vital step in constructing a more accurate and comprehensive inclusive index based on the Maqasid al-Shari'ah principle is to compile more data covering the important dimensions of the principles. Furthermore, in order to add further research contribution, it is also vital to provide an empirical assessment and discussion on the i-IGI's determinants for OIC member countries. This future research will answer the usefulness and relevance of the Islamic inclusive growth index (i-IGI) in explaining the variation of economic development in the OIC member countries.

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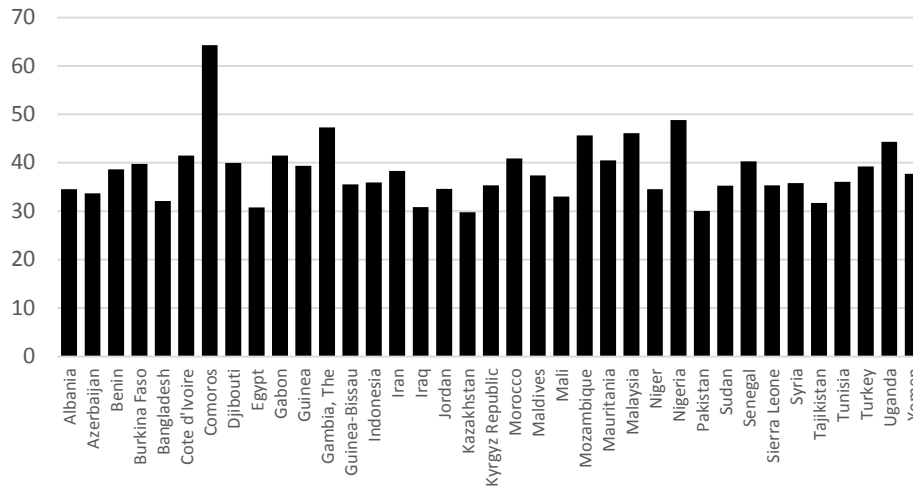
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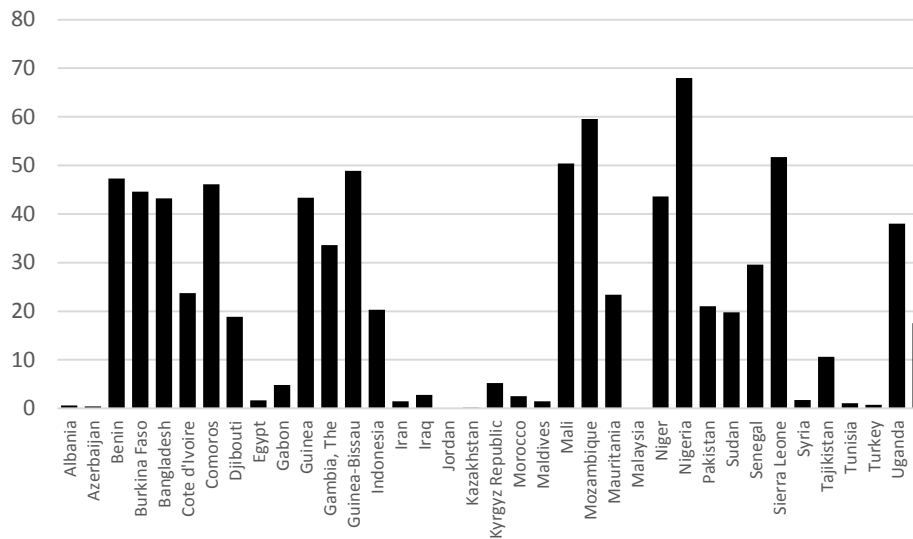
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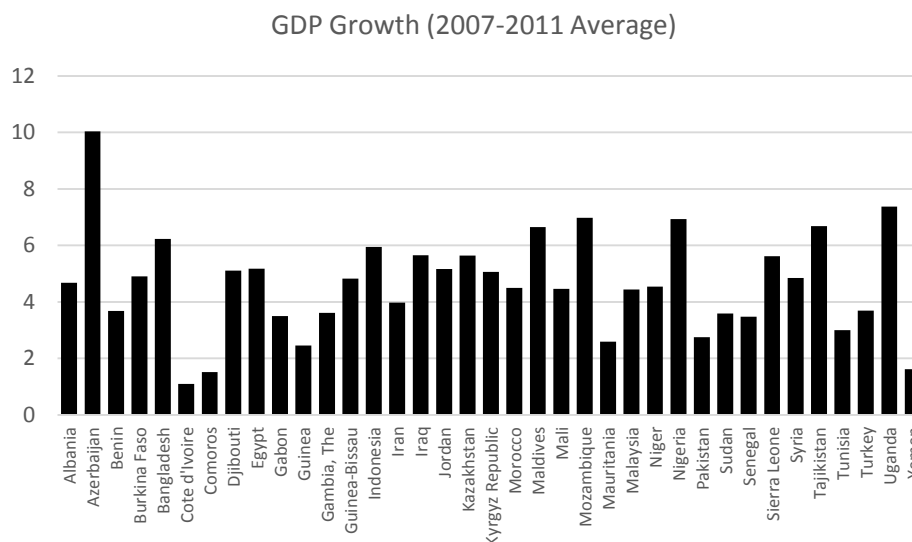
Appendix 1: Gini Index, Poverty Index, and GDP Growth

Gini (Inequality) Index (2007-2011 Average)



Poverty Index (2007-2011 average)





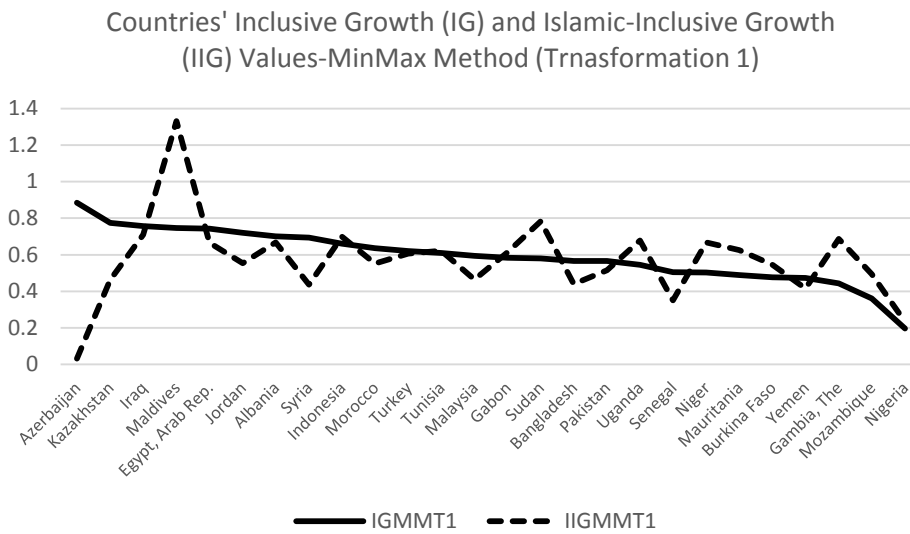
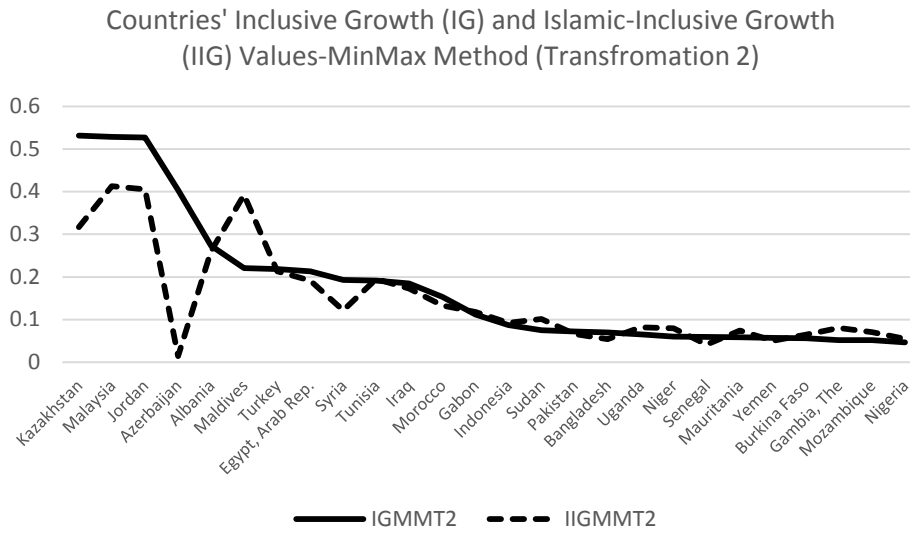
Appendix 2: Comprehensive Framework of Islamic Inclusive Growth Index: Pillars and Indicators

Dimension	Indicator
1. Income poverty and inequality	
1.1. Income	1. Proportion of population living below the national poverty line 2. Proportion of population living below \$2 a day at 2005 PPP\$ 3. Ratio of income or consumption of the top 20% to bottom 20%
1.2 Non-income	4. Average years of total schooling (youth and adults) 5. Prevalence of underweight children under five years of age 6. Under-five mortality rate
2. Pillar 1: Growth and Expansion of Economic Opportunities	
2.1 Economic Growth and Employment	7. Growth rate of GDP per capita at PPP (constant 2005 PPP\$) 8. Growth rate of average per capita income/consumption 2005 PPP\$ (lowest quintile, highest quintile, and total) 9. Employment rate 10. Elasticity of total employment to total GDP (employment elasticity) 11. Number of own-account and contributing family workers per 100 wage and salaried workers
2.2. Key Infrastructure Endowments	12. Per capita consumption of electricity 13. Percentage of paved roads 14. Number of cellular phone subscriptions per 100 people 15. Depositors with other depository corporations per 1,000 adults

3. Pillar 2: Social Inclusion to Ensure Equal Access to Economic Opportunity	
3.1 Access and Inputs to Education and Health	16. School life expectancy (primary to tertiary) 17. Pupil-teacher ratio (primary) 18. Diphtheria, tetanus toxoid, and pertussis (DTP3) immunization coverage among 1-year-olds 19. Physicians, nurses, and midwives per 10,000 population 20. Government expenditure on education as percentage of total government expenditure 21. Government expenditure on health as a percentage of total government expenditure
3.2 Access to Basic Infrastructure Utilities and Services	22. Percentage of population with access to electricity 23. Share of population using solid fuels for cooking 24. Percentage of population using improved drinking water sources 25. Percentage of population using improved sanitation facilities
3.3. Gender Equality and Opportunity	26. Gender parity in primary, secondary, and tertiary education 27. Antenatal care coverage (at least one visit) 28. Gender parity in labor force participation 29. Percentage of seats held by women in national parliament
4. Pillar 3: Social Safety Nets	
4.1 Social Safety Nets	30. Social protection and labor rating 31. Social security expenditure on health as a percentage of government expenditure on health 32. Government expenditure on social security and welfare as a percentage of total government expenditure
5. Pillar 4: Maqasid al-Shari'ah Principles	
5.1 Hifdh al-Din	33. Percentage of total expenditure in religious education 34. Corruption index 35. Zakat estimates
5.2 Hifdh al-Aql	36. Primary enrollment rate 37. Secondary enrollment rate 38. Literacy rate
5.3 Hifdh al-Nafs	39. Universal Human Rights Index 40. Incidence of crime
5.4 Hifdh al-Mal	41. International Property Rights Index
5.5 Hifdh al-Nasl	42. Divorce rate 43. Fertility rate
6. Good Governance and Institutions	
6.1 Good Governance and Institutions	33. Voice and accountability 34. Government effectiveness

Source: Adapted from ADB (2011)

Appendix 3. IGI and i-IGI: MinMax and Standardization Methods



Islamic Inclusive Growth Index for the Organisation of Islamic Cooperation (OIC) Member Countries

