

Developing an Index of Socio-Economic Development Consistent with *Maqāṣid al-Sharī'ah*

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Abstract. Human Development Index (HDI) is the most widely used index for assessing the level of economic development; however, it does not account explicitly for environmental degradation, social infrastructure, income distribution and poverty. This study strives to assist in building a comprehensive index that covers these elements which are considered important for ensuring sustainable development and that are also reflective of the *maqāṣid al-Sharī'ah*. Our findings represent striking differences between HDI and Extended HDI (E-HDI) rankings as we studied the position of 108 countries divided into non-OIC high-income countries (39 countries), non-OIC middle-income countries (26 countries) and OIC Muslim countries (43 countries). Among the 43 Organization of Islamic Cooperation (OIC) countries in our sample, 16 OIC countries improve their ranking in E-HDI as compared to HDI. Interestingly, other than Iraq, all of the OIC countries which improve their ranking are relatively poorer and non-oil rich countries. Strikingly, all 39 non-OIC high-income countries in our sample go down in E-HDI ranking as compared to their respective rank in HDI. Contrastingly, all non-OIC middle-income countries except Romania perform much better in E-HDI as compared to HDI. The top 19 countries in E-HDI all comprise of non-OIC middle-income countries in our sample. It shows that the broad-based indicators that we have included to account for non-income development aspects consistent with *maqāṣid al-Sharī'ah* make a significant impact on the rankings.

Keywords: Economic Development, HDI, Sustainable Development, *maqāṣid al-Sharī'ah*.

JEL Classification: L38, I31, O10.

KAUJIE Classification: H51.

1. Introduction

According to the World Bank, 767 million people are estimated to be living below the international poverty line of \$1.90 per person per day (World Bank, 2016, p. 3). On the other hand, a small minority has majority ownership over resources. According to Oxfam, the richest 62 people are as wealthy as half of the world's population⁽¹⁾. Piketty (2014, p. 221) writes that 60% of the increase in US national income in the 30 years after 1977 went to just the top 1% of the earners. The only segment of the American population that has done better than the top 1% is the top 10th of that 1%.

In mainstream economic literature, the development discourse has taken several steps in the right direction from an exclusive focus on economic growth and belief in social utility of greed and trickle-down theory to now embracing humans as the means and ends of development. While the concept of human capital development and sustainable development are richer than the exclusive focus on economic growth, the focus in the twenty-first century should now also lift from a human-centric focus of development to an ecological balance now and in future. Na'iyā (2007, p. 17) suggests that the effective solution to environmental problems rests on the overall worldview which spells out the relationship between man, nature and his Creator.

It is agreed in almost all cultures, comprehensive doctrines and social contracts that freedom must not be suppressed in many personal matters where social harm is not caused. But, that freedom must be checked and balanced with responsibility. ASTRÖM (2011, p. 79) explains that in a secular paradigm, people have the rights of limitless ownership without taking into account the responsibilities towards society and humanity.

What can or should make people more responsible? Can risk averse nature of humans in a Rawlsian framework be a sufficient mechanism in all cases to ensure equity and justice without compromising freedom? Should there be direct intervention through law by society?

Calling for stronger institutions could be the right policy advice. But, achieving that would necessarily involve strengthening the value system and a binding force that encourages ethical behavior in society. That is where the role of a conditioning mechanism is very important. It could be law or belief in a shared philosophy that can give birth to a credible social contract.

What will further help is having such a comprehensive doctrine that not only helps in coming up with a stable social contract but that can also define the purpose of human existence so that the social contract and its values/principles will not be operative only in particular situations, rather, they will become part of a society's core values at the micro level.

The Islamic worldview expands the responsibility of humans to the society, future generations, and other living species on the planet with afterlife accountability for every intentional act done by every human being. Islamic worldview regards humans as trustees of Allah for whatever material resources and mental faculties they come to possess in this world. Mortazavi (2004, p. 6) explains that Islamic economics is a value-driven discipline replete with moral values that limits individual's consumption, and imposes significant social and religious responsibilities on individuals as guardians of the natural environment for future generations.

In this study, we examine how far these ideals exist in the Organization of Islamic Cooperation (OIC) as well as non-OIC high-income and middle-income countries. Section 2 presents the concept of human welfare in an Islamic framework. In section 3, we discuss the construction and methodology of E-HDI, the variables used, rationale for their selection and data sources. In section 4, we present the results of HDI and E-HDI and analyze the key findings of the study with section 5 concluding the paper.

2. Human Welfare in an Islamic Framework

Sadeq (1987, p. 36) explains that Islam emphasizes the achievement of human welfare which is more comprehensive than economic welfare. Chapra (1999, p. 1) also explains that while economic development is indispensable, it is not sufficient to

(1) <https://www.oxfamamerica.org/press/62-people-own-same-wealth-as-half-the-world/>.

realize overall human well-being by default. In recent years, even the western concept of development has recognized the wider dimensions of human development and the role of institutions (Mirakhor and Askari, 2010, p. xv).

However, human welfare in Islam encompasses economic welfare but comprises much more than that. The achievement of human welfare is sought in both aspects of human life, i.e. worldly life and eternal life in the hereafter. Hence, the human welfare function can be represented by:

$$W_h = f(\alpha W_t, \alpha^m W_e)$$

Where W_h is total human welfare in both aspects of human life. W_t is human welfare in worldly life. W_e is human welfare in eternal life in the hereafter. We can further explain this function to define W_t and W_e . Both these functions are defined as follows:

$$W_t = f(Z_t)$$

Where Z_t is a vector of variables which belong to the category of 'individual-specific positive utility gaining choices'. The constrained set which is a union of three sets is defined as follows:

$$C_S = \{ C_{\text{worship}} \} \cup \{ C_{\text{self}} \} \cup \{ C_{\text{society}} \} \cup \{ C_{\text{people}} \}$$

$$C_{\text{worship}} = \{ \text{five times prayers, one month fasting, obligatory charity, hajj pilgrimage once} \}$$

$$C_{\text{self}} = \{ \text{Acts which harm a person's own ethical and spiritual existence} \}$$

$$C_{\text{society}} = \{ \text{Acts which harm society and its institutions} \}$$

$$C_{\text{people}} = \{ \text{Acts which harm other people, their rights, freedom or property} \}$$

Hence, Islam does not deny individuals to fulfill their specific material and desires. It also does not deny temporary indebtedness to smooth the intertemporal consumption. Islam intervenes in identifying for our own benefits the moral ills in potential acts which may harm us and/or the society and hence reduce the overall human and societal welfare. It is possible that we feel temporary satisfaction in some potential acts, but their long-term impact on our spiritual and ethical existence and collective impact on society may reduce the overall human and societal welfare. We can define the eternal life welfare function as follows:

$$W_e = f(Z_e)$$

Where Z_e is a vector of variables which belong to the category of 'following Allah's commands which will bring non-decreasing positive utility gain in the life hereafter'. These commands do not segregate a human's life in two compartments. Rather, these commands help humans to live this worldly life in the best possible manner of obedience to Allah while being responsive and sensitive to the duties that they have to carry out in different roles of life.

Eternal life has no constraint set. Hence, unlike the usual constraints in economics which limit the optimum value of a function, our constraint sets in worldly life are welfare-maximizing in the long run for individuals. The worship set also reinforces the commitment not to violate the other three sets of constraints. The last three constraints which belong to the category of *ḥuqūq al-ibād* are necessary conditions for welfare maximization of an individual. When they are not violated by individuals, the society also benefits. Islam emphasizes that humans should embrace spiritual rationality as a compliment to material rationality so as to achieve total human welfare.

The achievement of lasting happiness and non-decreasing positive utility will only happen through maximizing both the functions, especially the eternal life function. For ensuring no corner solution, we shall have both $W_t > 0$ and $W_e > 0$.

Moreover, Islam requires people to live modest but decent lives and fulfill their own needs and family needs. Islam does not permit monasticism and does not encourage celibacy. Hence, W_t not only shall be positive but also achieve a threshold 'w' where the 'w' represents welfare from a minimum level of standard of living that qualifies as a balanced standard of living within the bounds of Islamic injunctions without lavishness and violating the constraint sets.

The constraints of the life may sometimes require a tradeoff between the two functions. In such instances, the trial is to choose the right path ordained by Allah so as to achieve the maximum human welfare in the eternal life. Things that we enjoy in this world will be replaced by similar things in the afterlife, but they will provide much

more utility and they will not be finite nor will our satiation at any time have binding constraints. The difference between the utility of same bundles traded off in this life for the afterlife will be given by the positive multiplier ($m > 1$) in the exponent of parameter ' α ' that is part of the eternal life function.

3. Extended Human (Economic) Development Index - E-HDI

3.1. Need for a Separate Index

The benefit of using an index is that it enables us to get a representation of reality by looking at summary measures. It can be used for relative comparison and assessment of policies, actions, performance and achievement in different socio-economic contexts.

In the early literature on development, per capita GDP was considered a sufficient enough barometer to judge the level of development in a country. Back then, the long run macroeconomic literature focused on capital accumulation as one of the primary instruments to ensure development. Haq (1963) gave the concept of functional inequality in the 1960s. Based on his praise for Harrod (1939)-Domar (1946) and Solow (1956) growth models, he reasoned:

There exists, therefore, a functional justification for inequality of income if this raises production for all and not consumption for a few. The road to eventual equalities may inevitably lie through initial inequalities. Haq (1963, p. 3).

However, in the 1960s, functional inequality of income and social utility of greed could not ensure trickle down of economic growth benefits. Pakistan is a prime example of that failure. Despite exemplary growth in the 1960s, the country got divided. One of the prime reasons for that unfortunate episode was considered to be widespread regional disparities of income (Zaidi, 2005).

Haq (1995, p. 16) later on accepted that humans are 'means' as well as 'ends' of any development process or initiative. He finally accepted that 'ends' cannot be sacrificed for the future. Even when benefits are certain, ignoring 'ends' undermines the entire development process. HDI was developed by Mehboob-ul-Haq and Amartya Sen. It put the focus on human development, especially in the sphere of education and health besides per capita income.

But, during the last 30 years, a lot of other challenges have sprung up which require a renewed focus on environmental resource conservation, equitable income distribution, intergenerational equity and enhancing social infrastructure. Is rapid growth accompanied by equally rapid depletion of environmental resources and high fiscal deficit and public debt burden a truly admirable growth model? Just at the right time, the concept of sustainable development has come to the shore. It is realized that for growth to be sustainable, the growth shall provide widespread benefits and must not come at the expense of worsening income distribution and environment quality.

Çizakça (2007, p. 1) notes that the most important values behind the political and economic success of the West can actually be found in a reinterpretation of *maqāṣid al-Sharī'ah*. In light of this need, we propose a new index that is consistent with the ethos and philosophy of Islam when it comes to human development in the economic sense of the term. The spiritual sense of human development and welfare would encompass purification of the soul and will reflect in all human endeavors and relations, be they economic, social or personal. Hence, we limit our scope to make an effort in building an index that can at least reflect human development in the economic sense of the term.

In one of the early studies, Dar (2004) introduces ethics-augmented HDI by including life expectancy index rank, education index rank, GDP index rank, carbon dioxide emission (per metric tons) rank, freedom score rank, family index rank and faith index rank. There has been another successful and noteworthy attempt by Anto (2010) to construct an Islamic-HDI. However, we try to make the exercise simpler by removing duplicity of similar indicators. Our study also includes non-Muslim majority countries that belong to high-income and middle-income categories and hence it will be possible to see the contrast between E-HDI and HDI in inter-group comparisons.

In a more recent research, Amin et al. (2015) propose to develop an integrated Islamic development framework and index based on the *maqāṣid al-Sharī'ah* by defining the operational definitions of each component of *maqāṣid al-Sharī'ah*. They

identify the dimensions based on the scope of the definitions and then select elements for each dimension based on the relevant existing indicators. Ghazal and Zulkhibri (2016) develop an Islamic Inclusive Growth Index to measure the OIC countries' performance based on three building blocks of inclusiveness: (i) Islamic-adjusted economic growth incorporating *maqāṣid al-Sharī'ah* principle; (ii) performance of poverty reduction; and (iii) performance of the society inequality and social inclusion.

3.2. Sampling Methodology

We have taken three groups of countries, i.e.

- 1) High-income countries excluding OIC countries.
- 2) Middle-income countries excluding OIC countries.
- 3) OIC countries.

For the definition of high-income and middle-income groups, we followed the classification in World Development Indicators (WDI) database. We had to exclude some countries due to data unavailability. But, in all, we have taken data for 39 countries in the high-income category, 26 countries in the middle-income category and 43 countries in the OIC category.

3.3. Definition of Data

In Table 1, we report the variables that are used in constructing E-HDI. We have categorized these variables in three categories:

- 1) Human capital.
- 2) Income.
- 3) Social *maqāṣid al-Sharī'ah*.

Table (1). Definition of Variables

Indicator Name	Category
Adult literacy rate, population 15+ years, both sexes (%)	Human Capital
Government expenditure on education, total (% of GDP)	Human Capital
Net enrollment ratio, primary, both sexes (%)	Human Capital
Health expenditure, total (% of GDP)	Human Capital
Hospital beds (per 1,000 people)	Human Capital
Improved sanitation facilities (% of population with access)	Human Capital
Improved water source (% of population with access)	Human Capital
Life expectancy at birth, total (years)	Human Capital
GDP per person employed (constant 2011 PPP \$)	Income
GINI index (World Bank estimate)	Income
Poverty headcount ratio at \$1.90 a day (2011 PPP) (% of population)	Income
Labor force participation rate, male (% of male population ages 15+)	Social <i>maqāṣid</i>
Strength of legal rights index (0=weak to 12=strong)	Social <i>maqāṣid</i>
Unemployment, total (% of total labor force)	Social <i>maqāṣid</i>
CO ₂ emissions (metric tons per capita)	Social <i>maqāṣid</i>
Gross fixed capital formation (% of GDP)	Social <i>maqāṣid</i>

Data has been taken from WDI. For each country, average value of each variable is taken for the period 2006-2015. It enables us to overcome any gaps in reporting of data and to avoid any irregularity or outliers. For some countries, where data is missing, we had taken the most recent data available from CIA Factbook.

3.4. Rationale for Selection of Variables

If we glance over the early Islamic literature, al-Ghazali (d. 505/1111) divided *maqāṣid al-Sharī'ah* into five categories: Protection of religion, life,

reason, progeny and property. In addition to these factors, some Muslim economists like Siddiqui (2009) argue that objectives should not be limited to the protection from harm, but should also include securing benefits. Hence, one can include basic freedom, justice, equity, poverty alleviation and equitable income distribution to name a few important concepts.

In the WDI database, there are hundreds of indicators available. The benefit of indices is to give summary measures with few important indicators so that the information content reflect and approximate complex reality. Use of a small number of indicators also enables maximum data availability from many countries. Hence, we have tried to include few specific indicators in each category with a view to ensure that *maqāsid* al-Sharī'ah are adequately reflected in the indicators. For the purpose of this index, the included variables have to be broadly consistent with *maqāsid* al-Sharī'ah directly or indirectly, but not necessarily have to be Sharī'ah based.

In the human capital category, we combine different health and education indicators. Since there are Mosque-based educational institutions in some Muslim majority countries which contribute to improving literacy rate despite low net enrollment in schools, we include both adult literacy rate as well as net enrollment rate indicator. We include net enrollment instead of gross enrollment since the latter does not take account of dropout rate and where the enrolment rate could exceed 100. We also include government expenditure on education as a percent of GDP so as to reflect not only the current standing but also the policy direction which could reflect as to what extent the country could potentially improve given the level of priority given to education. Countries can differ in their initial endowments and infrastructure, but they can catch up with policy directed towards human capital development. In the health indicators, we include outcome indicators like life expectancy at birth, policy variables like total public and private health expenditure as a percent of GDP, and infrastructure variable like per capita availability of hospital beds to account for current infrastructure availability for boosting human capital. We include hospital beds measure since the use of hospital beds is highly rival in nature of use, i.e. simultaneous use is not possible. We also include hygiene and basic rights indicators like improved access to sanitation and water source so as to account for Islam's emphasis on hygiene (*tahārah*) and basic rights for mass level access to the use of fundamental natural resources, such as water.

In the income category, the three indicators we choose take three different objectives into account. It is possible that a country has high GDP per

person employed as well as high poverty rate and high inequality of income. Such a phenomenon is missed in HDI since only per capita income is taken in HDI construction. In line with *maqāsid* al-Sharī'ah, poverty rate and income inequality should also simultaneously reduce for income growth to reflect any meaningful broad-based development. We take GDP per person employed instead of GDP per capita since in some traditional Muslim countries, it is quite common that women remain voluntarily out of the labor force. Instead of taking nominal figures for income and poverty measures, we use purchasing power parity adjusted figures which better reflect the purchasing power across the border in different countries.

In the social *maqāsid* category, we take five indicators. In line with the Islamic social system in which men are made chiefly responsible to earn for their family, we take labor force participation rate for males. We must caution the reader that Islam does not disallow women to work and earn for their family. Indeed, they can, but they are not made chiefly responsible.

For assessing the economic policymaking, we also take the unemployment rate as an indicator. The unemployment rate in recent years had been as high as 30% to 40% even in rich countries. Such phenomenon is not conducive for sustainable development. Very high unemployment will necessarily involve more taxation, more transfer payments and increased size of government. In times when fiscal deficit is high and the economy is in a recession, this may not even be possible as the evidence from the recent European crisis has shown.

For ensuring equity in environmental resource quality and quantity between present and future generations, environmental degradation must be taken negatively for its effect on sustainable development. We account for this by using per capita emission of CO₂ instead of using total emissions so as to account for heterogeneity in size of population and economy.

In line with Islam's emphasis on circulation of wealth and promotion of productive enterprise, we take into account gross fixed capital formation. High rates of investment ensure circulation of capital and employment generation. This is a better measure than

savings since there can be a gap between savings and investment in an open economy framework and especially when the public sentiments are bearish on the economy. In a liquidity trap, people may be saving for cautionary reasons often out of the financial system, but such savings may not go into investment directly.

Since an effective social infrastructure ensuring legal rights is pivotal to promote the Islamic ideal of ‘*adl*’ and to avoid ‘*fasād fi al-arḍ*’ (spreading mischief in land), we include the strength of legal rights index. Countries with greater strength of legal rights are in a better position to realize the

establishment of ‘*adl*’. This is a better and more comprehensive measure than the freedom index used by Dar (2004).

3.5. Construction Methodology

In Table 2, we report the weights given to each indicator in each category. Within each category, the weights sum to unity. In the computation of index value for a country, one-third weight is assigned to each category. In equation (i), we present the formula for E-HDI:

$$E - HDI = \frac{1}{3}(Human\ Capital) + \frac{1}{3}(Income) + \frac{1}{3}(Social\ Maqasid) \quad \dots (i)$$

Table (2). Weights for Each Indicator

Indicator Name	Weights
Adult literacy rate, population 15+ years, both sexes (%)	0.1250
Government expenditure on education, total (% of GDP)	0.1250
Net enrollment ratio, primary, both sexes (%)	0.1250
Health expenditure, total (% of GDP)	0.1250
Hospital beds (per 1,000 people)	0.1250
Improved sanitation facilities (% of population with access)	0.1250
Improved water source (% of population with access)	0.1250
Life expectancy at birth, total (years)	0.1250
GDP per person employed (constant 2011 PPP \$)	0.3333
GINI index (World Bank estimate)	0.3333
Poverty headcount ratio at \$1.90 a day (2011 PPP) (% of population)	0.3333
Labor force participation rate, male (% of male population ages 15+)	0.2000
Strength of legal rights index (0=weak to 12=strong)	0.2000
Unemployment, total (% of total labor force)	0.2000
CO ₂ emissions (metric tons per capita)	0.2000
Gross fixed capital formation (% of GDP)	0.2000

To normalize the index value, we use the following procedure in line with HDI:

Indicator Index Value

$$= \frac{Actual\ Value - Minimum\ Value}{Maximum\ Value - Minimum\ Value} \quad \dots (ii)$$

For some indicators, the higher value has a negative interpretation, for instance, unemployment rate, Gini coefficient, CO₂ emissions and poverty rate. Index value for such indicators is taken with negative sign in the E-HDI computation.

4. Results and Findings

In Table 3, we report the HDI and E-HDI values for high-income countries. The country having HDI rank

of 1 has the highest level of human development in the sample. E-HDI rank is interpreted the same way.

The last column takes the difference between HDI and E-HDI rank. If the difference deviates from zero in either direction, it represents that E-HDI offers some additional information content over HDI. Negative value of the difference shows that the country had a better rank in HDI as compared to E-HDI. Positive value of the difference shows that the country had a worse rank in HDI as compared to E-HDI.

Interestingly, all non-OIC high-income countries in our sample go down in E-HDI ranking as compared to their respective rank in HDI. It shows

that the broad-based indicators that we have included to account for non-income development aspects consistent with *maqāṣid* al-Sharī'ah make significant impact on the rankings of high-income countries. Luxembourg is the highest ranked country in E-HDI with a rank of 20 even though in HDI, all top ranked countries come from high-

income countries. Countries with difference in rank exceeding 30 include Greece (-55), Israel (-55), Singapore (-54), Italy (-52), Spain (-43), Germany (-40), United Kingdom (-40), Netherlands (-39), Chile (-38), Ireland (-33), United States (-33) and Trinidad and Tobago (30).

Table (3). HDI and E-HDI Value and Ranking of High Income Countries

Country	HDI Value	HDI Rank (HIC)	HDI Rank (All)	E-HDI Value	E-HDI Rank (HIC)	E-HDI Rank (All)	Difference
Australia	0.935	2	2	0.3523	6	29	-27
Austria	0.885	21	21	0.3288	10	34	-13
Belgium	0.89	19	19	0.3038	23	47	-28
Canada	0.913	9	9	0.3174	14	38	-29
Chile	0.832	33	37	0.2336	36	75	-38
Croatia	0.818	36	42	0.2687	29	62	-20
Cyprus	0.85	29	29	0.3193	12	36	-7
Czech Republic	0.87	26	26	0.3106	19	43	-17
Denmark	0.923	4	4	0.3425	8	31	-27
Estonia	0.861	28	28	0.2992	25	49	-21
Finland	0.883	22	22	0.3594	5	27	-5
France	0.888	20	20	0.3082	21	45	-25
Germany	0.916	6	6	0.3051	22	46	-40
Greece	0.865	27	27	0.2289	38	82	-55
Iceland	0.899	14	14	0.3700	3	22	-8
Ireland	0.916	7	7	0.3132	16	40	-33
Israel	0.894	16	16	0.2494	34	71	-55
Italy	0.873	25	25	0.2321	37	77	-52
Japan	0.891	18	18	0.3166	15	39	-21
Korea, Rep.	0.898	15	15	0.3186	13	37	-22
Latvia	0.819	35	41	0.3006	24	48	-7
Lithuania	0.839	32	33	0.2759	28	57	-24
Luxembourg	0.892	17	17	0.3748	1	20	-3
Netherlands	0.922	5	5	0.3082	20	44	-39
New Zealand	0.913	10	10	0.3397	9	32	-22
Norway	0.944	1	1	0.3631	4	25	-24
Poland	0.843	31	32	0.2872	26	52	-20
Portugal	0.83	34	38	0.2674	30	63	-25
Russian Federation	0.798	37	45	0.2457	35	73	-28
Singapore	0.912	11	11	0.2645	31	65	-54
Slovak Republic	0.844	30	31	0.3107	18	42	-11
Slovenia	0.88	23	23	0.3200	11	35	-12

Spain	0.876	24	24	0.2583	32	67	-43
Sweden	0.907	12	12	0.3718	2	21	-9
Switzerland	0.93	3	3	0.3432	7	30	-27
Trinidad and Tobago	0.772	39	54	0.2081	39	84	-30
United Kingdom	0.907	13	13	0.2852	27	53	-40
United States	0.915	8	8	0.3112	17	41	-33
Uruguay	0.793	38	48	0.2552	33	70	-22

In Table 4, we report the HDI and E-HDI values for middle-income countries. Rankings in both HDI and E-HDI are interpreted the same way as before. Contrary to the high-income countries, all middle-income countries except Romania perform much better in E-HDI as compared to HDI. The top 19

countries in E-HDI all include middle-income countries in our sample. Middle-income countries have lower GDP per person employed than high-income countries, but they have much better human capital and non-income development indicators. That is why they perform much better than non-OIC high-income countries.

Table (4). HDI and I-HDI Value and Ranking of Middle Income Countries

Country	HDI Value	HDI Rank (HIC)	HDI Rank (All)	E-HDI Value	E-HDI Rank (HIC)	E-HDI Rank (All)	Difference
Angola	0.532	26	92	0.2656	26	64	28
Argentina	0.836	1	35	0.3936	15	14	21
Belarus	0.798	3	44	0.3632	22	24	20
Belize	0.715	22	77	0.4340	7	7	70
Botswana	0.698	24	80	0.5056	1	1	79
Brazil	0.755	12	62	0.4199	9	9	53
Bulgaria	0.782	5	50	0.3927	16	15	35
China	0.727	16	70	0.3997	12	12	58
Colombia	0.72	20	75	0.4566	3	3	72
Costa Rica	0.766	9	57	0.4374	6	6	51
Dominican Republic	0.715	23	78	0.3620	23	26	52
Ecuador	0.732	15	69	0.3876	18	17	52
Fiji	0.727	17	71	0.3527	24	28	43
Hungary	0.828	2	39	0.3896	17	16	23
Jamaica	0.719	21	76	0.4157	10	10	66
Macedonia	0.747	13	64	0.4429	5	5	59
Mauritius	0.777	7	53	0.3772	20	19	34
Mexico	0.756	11	61	0.4334	8	8	53
Mongolia	0.727	18	72	0.3300	25	33	39
Panama	0.78	6	51	0.4510	4	4	47
Peru	0.734	14	66	0.3980	13	13	53
Romania	0.793	4	47	0.3980	14	55	-8
Serbia	0.771	8	55	0.3810	19	18	37
South Africa	0.666	25	85	0.4653	2	2	83
Thailand	0.726	19	73	0.3642	21	23	50
Venezuela	0.762	10	59	0.4005	11	11	48

In Table 5, we report the HDI and E-HDI values for OIC countries. Rankings in both HDI and E-HDI are interpreted the same way as before. Among the 43 OIC countries in our sample, 16 OIC countries improve their ranking in E-HDI as compared to HDI. Interestingly, other than Iraq, all the OIC countries which improve their ranking include income-poor and non-oil rich countries. Due to higher GDP per person employed, oil-rich countries perform better on

HDI, but when other non-income development aspects are accounted for, their performance significantly diminishes.

The 10 OIC countries where the E-HDI rank is poorest in comparison to HDI include Lebanon (-34), UAE (-32), Oman (-28), Kuwait (-26), Qatar (-24), Iran (-23), Bahrain (-19), Turkey (-18), Saudi Arabia (-17) and Azerbaijan (-16).

Table (5). HDI and I-HDI Value and Ranking of Muslim Countries

Country	HDI Value	HDI Rank (HIC)	HDI Rank (All)	E-HDI Value	E-HDI Rank (HIC)	E-HDI Rank (All)	Difference
Albania	0.733	14	67	0.2769	4	56	11
Algeria	0.736	13	65	0.2308	17	80	-15
Azerbaijan	0.751	12	63	0.2316	16	79	-16
Bahrain	0.824	4	40	0.2719	6	59	-19
Bangladesh	0.57	26	90	0.1954	22	87	3
Benin	0.48	33	98	0.0619	34	99	-1
Bosnia	0.733	15	68	0.2468	12	72	-4
Cameroon	0.512	29	94	0.1020	30	95	-1
Chad	0.392	42	107	0.0230	40	105	2
Egypt	0.69	18	81	0.1900	23	88	-7
Gabon	0.684	19	82	0.2882	1	50	32
Gambia	0.441	36	101	0.0734	32	97	4
Guinea	0.411	41	106	0.0393	37	102	4
Guinea-Bissau	0.42	37	102	-0.047	43	108	-6
Indonesia	0.684	20	83	0.1958	21	86	-3
Iran	0.766	10	58	0.2306	18	81	-23
Iraq	0.654	22	86	0.2752	5	58	28
Kazakhstan	0.788	7	49	0.2707	7	60	-11
Kuwait	0.816	5	43	0.2555	11	69	-26
Lebanon	0.769	9	56	0.1772	25	90	-34
Malaysia	0.779	8	52	0.2642	9	66	-14
Maldives	0.706	17	79	0.2278	19	83	-4
Mali	0.419	38	103	0.0385	38	103	0
Mauritania	0.506	30	95	0.0820	31	96	-1
Morocco	0.628	23	87	0.2054	20	85	2
Mozambique	0.416	39	104	-0.042	42	107	-3
Niger	0.348	43	108	0.0577	35	100	8
Nigeria	0.514	28	93	-0.013	41	106	-13
Oman	0.793	6	46	0.2348	13	74	-28
Pakistan	0.538	27	91	0.1588	26	91	0
Qatar	0.85	1	30	0.2812	3	54	-24
Saudi Arabia	0.837	2	34	0.2879	2	51	-17
Senegal	0.466	35	100	0.1105	28	93	7
Sierra Leone	0.413	40	105	0.0459	36	101	4
Sudan	0.479	34	99	0.0640	33	98	1
Syria	0.594	25	89	0.2698	8	61	28

Tajikistan	0.624	24	88	0.1896	24	89	-1
Tunisia	0.721	16	74	0.2333	14	76	-2
Turkey	0.761	11	60	0.2318	15	78	-18
UAE	0.835	3	36	0.2568	10	68	-32
Uganda	0.483	32	97	0.1073	29	94	3
Uzbekistan	0.675	21	84	0.1398	27	92	-8
Yemen	0.498	31	96	0.0261	39	104	-8

Next, we compare the average values of the indicators we have used in E-HDI and compare

them across three categories of countries we have used in our study.

Table (6). Comparison of Country Groups – Indicators Wise

Indicator	High Income	Middle Income	OIC
Literacy Rate (% of Adult Population)	98.46	93.22	73.46
Net Enrolment Ratio in Primary (%)	96.92	92.34	85.55
Government Expenditure on Education (% of GDP)	5.19	4.67	3.69
Life Expectancy (Years)	79.06	71.69	66.53
Hospital Beds (Per 1,000 People)	5.18	3.37	1.98
Health Expenditure (% of GDP)	8.75	6.20	5.18
Improved Sanitation Facilities (% People with Access)	97.14	81.85	64.53
Improved Water Source (% People with Access)	99.28	91.89	82.04
GDP Per Person Employed (Constant 2011 PPP\$)	76,506	29,631	40,341
GINI Index	33.19	43.80	37.87
Poverty Ratio at PPP \$1.90 a day (% of population)	0.56	5.95	24.58
Male Labor Force Participation Rate (% of Adult Males)	68.88	74.12	76.71
Unemployment (% of Labor Force)	7.74	9.96	9.39
CO ₂ Emissions (Metric Tons Per Capita)	9.42	3.89	5.51
Gross Fixed Capital Formation (% of GDP)	21.95	24.50	22.87
Strength of Legal Rights Index (0=Weak; 12=Strong)	5.91	5.02	3.55

OIC countries in our sample have much greater average GDP per person employed as compared to middle-income countries group, which includes only the non-OIC countries. However, their performance on all education and health indicators lags behind the non-OIC middle-income countries. Despite having higher average GDP per person employed than non-OIC middle-income countries, OIC countries have much higher average poverty rate which also now reflects in much higher income inequality than non-OIC middle-income countries.

On the brighter side, OIC countries in our sample have lower income inequality and high GDP per person employed than middle-income countries and it reflects a much more egalitarian income

distribution in comparison to the non-OIC middle-income countries group. OIC countries in our sample have higher male labor force participation rate than both high-income and middle-income countries and lower unemployment than non-OIC middle-income countries group. OIC countries emit less carbon on per capita basis than non-OIC high-income countries. In addition to that, OIC countries have higher gross fixed capital formation than non-OIC high-income countries. Higher gross fixed capital formation in OIC countries in comparison to non-OIC high-income countries is partly a reflection of the Great Financial Crisis (GFC) which affected the high-income countries more profoundly.

5. Conclusion

This study strived to assist in building a comprehensive index that covers important elements for ensuring sustainable development and which are also reflective of *maqāṣid* al-Sharī'ah in some respects. Our findings represent striking differences between HDI and Extended HDI (E-HDI) rankings. All high-income countries in our sample which include only non-OIC high-income countries go down in E-HDI ranking as compared to their respective rank in HDI. It shows that the broad-based indicators that we have included to account for non-income development aspects consistent with *maqāṣid* al-Sharī'ah make a significant impact on the rankings of high-income countries. In contrast to that, all middle-income

countries except Romania perform much better in E-HDI as compared to HDI. Among the 43 OIC countries in our sample, 16 OIC countries improve their ranking in E-HDI as compared to HDI. Interestingly, other than Iraq, all the OIC countries which improve their ranking include poorer and non-oil rich countries. Due to higher GDP per person employed, oil-rich countries perform better on HDI, but when other non-income development aspects are incorporated in the index, their performance significantly diminishes. Overall, the results indicate that Muslim countries are themselves far behind in meeting the ideals of *maqāṣid* al-Sharī'ah and ensuring sustainable development.

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تطوير مؤشر للتنمية الاقتصادية والاجتماعية متوافق مع مقاصد الشريعة

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باحث دكتوراه في الاقتصاد، الجامعة الوطنية، ماليزيا

المستخلص. مؤشر التنمية البشرية (HDI) هو المؤشر الأكثر استخداماً لتقييم مستوى التنمية الاقتصادية. ومع ذلك، فإنه لا يأخذ في الحسبان بشكل واضح التدهور البيئي، والبنية التحتية الاجتماعية، وتوزيع الدخل والفقر. تسعى هذه الدراسة للمساعدة في بناء مؤشر شامل يغطي هذه العناصر التي تعتبر مهمة لضمان التنمية المستدامة والتي تعكس مقاصد الشريعة أيضاً. وتظهر نتائج البحث الاختلافات البارزة بين مؤشر التنمية البشرية العادية (HDI) ومؤشر التنمية البشرية الممتدة (E-HDI) حيث قمنا بدراسة حالة ١٠٨ دولة مقسمة إلى دول مرتفعة الدخل (٣٩ دولة) ودول متوسطة الدخل (٢٦ دولة) ودول منظمة المؤتمر الإسلامي (٤٣ دولة). فمن بين دول منظمة المؤتمر الإسلامي، تحسن ترتيب ١٦ دولة في مؤشر التنمية البشرية الممتدة (E-HDI) مقارنة بمؤشر التنمية البشرية العادية (HDI). والجدير بالذكر أن هذه الدول الـ ١٦، عدا العراق، هي من الدول الأكثر فقراً نسبياً وليست غنية بالنفط. وعلى العكس من ذلك فإن جميع الدول ذوات الدخل المرتفع (٣٩ دولة من خارج دول منظمة المؤتمر الإسلامي)، جاءت في ترتيب متأخر في مؤشر التنمية البشرية الممتدة (E-HDI) مقارنة بمؤشر التنمية البشرية العادية (HDI). وعلى النقيض من ذلك فإن جميع الدول المتوسطة الدخل (٢٦ دولة من خارج دول منظمة المؤتمر الإسلامي) تحسن ترتيبها في مؤشر التنمية البشرية الممتدة (E-HDI) مقارنة بمؤشر التنمية البشرية العادية (HDI) باستثناء رومانيا فقط. كما أن أول ١٩ دولة في مؤشر التنمية البشرية الممتدة (E-HDI) في عينة الدراسة كلها متوسطة الدخل ومن خارج دول منظمة المؤتمر الإسلامي. وهذا يدل على أن المؤشرات ذات القاعدة العريضة التي أدرجناها لتقدير الجوانب التنموية من غير الدخل وتتوافق مع مقاصد الشريعة لها تأثير كبير على الترتيب.

الكلمات المفتاحية: التنمية الاقتصادية، التنمية البشرية، التنمية المستدامة، مقاصد الشريعة.