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PROMOTING AN INCLUSIVE ECONOMY: THE RELEVANCE OF SUSTAINABLE DEVELOPMENT AND ISLAMICITY PROSPERITY INDEX

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ABSTRACT

Inequalities and social exclusion are the consequences of imbalanced economic growth, prompting the World Bank to establish new targets for eradicating extreme poverty and promoting shared prosperity. Surprisingly, the contemporary solution methods are consistent with Shari'ah's objectives. Stressing the importance of balanced growth, this study aims to quantify prosperity sharing in 28 developed and 14 developing nations by reshaping the notion of sustainable development from an Islamic perspective. The study examines four pillars of prosperity namely *Faradh* (social responsibility), *Shura* (social participation), *Al Adl Wal Ihsan* (social equilibrium) and *Ummah* (social cohesion) to capture the essence of prosperity sharing. It begins with a thorough literature review as the basis for designing and developing the dimensions and indicators, followed by an adequacy test of the indicators using Principal Component Analysis (PCA). Then, the study employs panel data regression analysis to identify the determinants that have a significant impact on the shared prosperity indicator (s). The results show that all of the pillars (*Faradh, Shura, Al Adl Wal Ihsan, and Ummah*) have a significant outcome, confirming that the strength of the association between the variables is strong and adequate as proxies for each pillar. Finally, an *Islamicity* Prosperity Index is developed, which is a multidimensional index (*i*PI) to measure prosperity sharing in developed and developing countries.

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I. INTRODUCTION

Several arguments have been made to build a new model for sustainable development because the existing one is causing planetary boundary breaches, increasing inequalities, and social exclusion, and so risking human civilization's very existence. The idea gained traction after the Report of the United Nations' World Commission on Environment and Development (WECD), often known as the Brundtland Report, was published in 1987. The Millennium Declaration, which resulted in the Millennium Development Goals (MDGs) in 2000, was followed by the Sustainable Development Goals (SDGs) in 2015.

The MDGs and SDGs' conceptual shift from economic development to human development makes the aim of shared prosperity[1] even more important. As developing countries expand their economies and raise millions out of poverty, inequality tends to rise. In industrialized economies, where growth no longer favors the bottom half of the income distribution, concerns about shared prosperity are common (World Bank, 2013). Furthermore, there is consensus that economic growth is necessary but insufficient for poverty reduction. Economists have traditionally defined growth as an increase in per capita income or Gross Domestic Product (GDP). However, many would be hesitant to call this development if the income distribution is skewed and the bottom segment of the population is getting poorer while the average income rises (Dollar et al, 2014). Perhaps, GDP is an inconsistent and even misleading indicator of long-term well-being.

In this context, imbalances in the current model provide the basis for the urgency to delve into the Holy Qur'an and Sunnah in seeking solutions for the sustainability issues in promoting an inclusive economy. Development is reported in Qur'an as Allah says: *"It is He Who hath produced you from the earth and settled you therein"* (Surah Hud, verse 61). In the Hadith, Prophet Muhammad (peace be upon him) said: *"if the Final Day comes upon you while you were planting a seed, then continue on planting it"*.[2]

From an Islamic perspective, sustainability encompasses "sustained learning and wisdom, commitment to their societal role of the people, the responsibility of their religious and civic institutions, and the degree to which their faith and spirituality are sustainably practiced in society" (Ismail and Mohd Rasid, 2017). There are some elements that are considered by Shari'ah as a unique perspective of Islam in matters of value society and these elements are necessary for social cohesion. These elements are the main indicators of sustainable development for the betterment of individuals and society. These elements are: "Responsibility (*Faradh*), Empowerment (*Shura*), Equilibrium (*Al'adl wal ihsan*), Endowment (*Al-Waqf*) and Almsgiving (*Zakat*)".

The connection between contemporary sustainable development and the Islamic viewpoint is based on their effects on shared prosperity and poverty

1 Shared prosperity is defined "in terms of the growth rate of income in the bottom 40 percent of households", and the World Bank has made a public commitment to support policies that foster shared prosperity in the developing world.

2 Sustainable development may be defined, from an Islamic perspective, as "a multidimensional process that seeks to strike a balance between economic and social development on one side, and the environment on the other.

alleviation. As a result, reducing inequality and promoting shared prosperity require sustained efforts over generations, which will entail fostering social, economic, and environmental sustainability. Therefore, the goal of this research is to investigate how parts of an economy's sustainable development might from the Islamic perspective help to promote sharing of prosperity by supplementing the economy's inclusion. The ultimate aim of this research is to establish an index that measures the level of prosperity in developing and developed countries. In the construction of the index, it considers the principles of sustainable development from an Islamic standpoint as it has unique characteristics that incorporate factors of economic development, human development, and institutional development.

This paper provides an empirical construct through identifying the relevant factors and index construction for measuring the level of prosperity sharing in developed and developing countries. Moreover, our contribution is unique as the findings are generated by reformulating the sustainable development concept from an Islamic perspective.

The following section will review the related literature. The subsequent sections set out model estimation and methodology. Next section discusses the findings while the last section concludes the paper.

II. LITERATURE REVIEW

Economic growth is considered to be on one of the most powerful instruments to achieve twin objectives; reducing poverty and improving a nation's quality of life. Numerous studies evidenced that a rapid and sustained growth is crucial to ensure progress towards the objectives. Yet, similar rates of growth can have very different effects on poverty, employment prospects of the poor and broader indicators of human development. As a result, the degree of declination of poverty is very much dependent on the degree of inclusiveness of society.

Sustainable development is an "integrative concept which suggests that any assessment of progress towards sustainability must also integrate with a corresponding framework for decision making" (Pintér et al., 2012). According to Hasan (2006) there is yet an agreed definition of sustainable development as it is still an evolving concept attempting to integrate the dynamics of change that cannot ignore local concerns, needs, and interests. However, the paper posits that sustainability revolves among three important issues: maintaining the long-run pace of economic growth, achieving inter-generational equity in the use of the natural resources and restricting the increase in pollution for maintaining the present quality of environment. Therefore, the Sustainable Development consists of three main dimensions; (i) economic development, (ii) social development, and (iii) environmental protection. Al-Jayyousi (2014) posits another two definitions; improving the quality of life while living within the carrying capacity of supporting ecosystems[3].

Ever since the announcement of World Bank's SDG initiatives, a growing number of country-specific studies have highlighted the efforts of the countries in promoting shared prosperity. Carneiro et al. (2015) explore the factors limiting the

3 Referring to the definition of International Union for Conservation of Nature (IUCN), 1980.

shared prosperity in the Dominican Republic. The study reveals that the inability to take up good economic opportunities and convert them into higher income and standard of living needs to change so that the growth can benefit more people. Basu (2013) explains that there is a good reason for low-income nations and developing as well as emerging economies to push the efforts harder for growth. However, for industrialized and rich nations, the aim should be to keep economic growth steady but moderate, unless there is a major technical breakthrough that makes high growth environmentally sustainable.

In contrast, Dollar et al (2014) confirm based on macroeconomics policies there is no robust evidence that certain policies are particularly "pro-poor" or conducive to promoting "shared prosperity" other than through their direct effects on overall economic growth. Notwithstanding, Azevedo et. al (2014) find that Tajikistan did well during 2003-2009 in terms of poverty reduction and the promotion of shared prosperity. Steady consumption growth has contributed positively to the emergence of the middle class. With respect to shared prosperity in Europe and Central Asia, Bussolo and Lopez-Calva (2014) have put forward that the ability of the society to take advantage from economic growth depends on an "asset-based" framework consisting of "human capital and other productive assets and nonmarket income".

The formation of sustainable development indicators has been, for many countries and institutions, a vital prospect to move economic and social issues advancing the policy agenda alongside environmental issues. The sustainable development indicators have also been instrumental in promoting the concept of shared prosperity in a much clearer way that can be achieved through sustainable and inclusive economic activities.

2.1. The Sustainable Development for Islamic Perspective

Islam is a universal religion and addresses the entire mankind not the believers alone. The main objectives of the Islamic law put broadly are "to promote the well-being of *all* mankind which lies in safeguarding their faith (*din*), their human self (*nafs*), their intellect (*aql*), their posterity (*nasl*) and their wealth (*maal*)" (Hasan, 2006).

Sustainable development as defined from an Islamic perspective is "a multi-dimensional process that seeks to strike a balance between economic and social development on one side, and the environment on the other". It urges mankind to use resources in the best possible way, accounting for the environment upon which those resources rely (Nouh, 2011). This concept of sustainable development refers to the balanced and simultaneous realization of consumer welfare, economic efficiency, social justice, and ecological balance in the framework of an evolutionary knowledge-based and socially interactive model.

It is appropriate to focus upon the oft-neglected Islamic perspectives and its wisdom on sustainable development, and allied fields of social justice, man's spirituality and his role as khalifatAllah fi al-Ard with responsibility to restore the eco-balance and ensure the well-being of the living earth and its creatures. Human welfare objectives from Islam's perspective should also be pursued in line with its Unitarian vision of tawhid and for the realization of human dignity (karamah). Al-

Jayyousi (2014) affirms the four approaches of the sustainable development based on the carrying capacity approach (mizan), ratio approach (Ihsan), Socio approach (Arham) and Eco approach (Tasbeeh). He stresses that sustainable development should be seen as a progression rather than as a project or product since the real world is dealing with complex problems that need multiple solutions and perspectives.

Islam reaches out through the Quran and Sunnah on how to achieve sustainable Development. Grine et al., (2013) have highlighted the verses of the Qur'an that deal with the problem of poverty and distress (Surah Al Baqarah (2), verse 271) while connecting moral and legal obligation to the welfare of the needy, destitute, widows, orphans, and wayfarers (Surah At-Taubah (9), verse 60). There are many Quránic verses meant to order Muslim actions with regards to the problems of hunger (Surah Al Insan (76), verse 8), social justice (Surah Al-Nisa' (4), verse 58), equality (Al Hujurat (49), verse 10), (Surah Ali Imran (3) verse 195), and sacrifice (Surah Al-Hasyr (59), verse 9). The Quran continually promotes a strong bond of caring and compassion (Surah Ali Imran (3), verse 134, Surah Al Ahzab (33), verse 34), strengthens the sense of family (Surah Ar Rum (30), verse 21), neighborhood and community (Surah An Nisa' (4), verse 36). Whilst these verses highlight some of the features of Quran's general view of sustainability, they point to the need to revisit the efficacy of the spiritual and emotional commitment of Muslims and their contribution to global human welfare.

In the current and preceding section, it is shown that sustained development can have a positive impact on poverty reduction and contributes to promoting shared prosperity. It is crucial therefore to analyze empirically the impact of sustainable development elements from Islamic perspective towards shared prosperity of the nation by developing an index known as *Islamicity* Prosperity Index. The following section will detail out the methodology of the analysis.

III. METHODOLOGY

3.1. Sample and Data

This study collected data from various resources such as World Bank's World Development Indicators (WDI), World Governance Indicators and Democracy Barometer Database. The sample comprises 28 developed countries and 14 developing countries. To recall, our main purpose is to construct an index that would help us identify the level of prosperity sharing in developed and developing countries. Therefore, a crucial selection of countries' sample and variables are made based on the availability of the data from the well-established data sources. Indeed, the strength and weaknesses of an index are largely derived from the quality of the underlying variables. The study is finally able to have a sample of 28 developed countries and 14 developing countries with complete data.

Once the indicators for the respective pillars identified, there is a need to verify or validate how genuinely the indicators belong to the said pillar or dimension. There are several methods to determine the extraction. Popular extraction methods include principal axis factoring (PAF), and principal components (PC) (Pallant, 2013). We applied Principal Component Analysis (PCA) as a dimensionality reduction method to confirm the construction of the indicators to each dimension.

The PC method, invented in 1901 by Karl Pearson, is a well-known powerful multivariate statistical technique that is used for dimensionality reduction in almost all scientific disciplines, arguably the most popular multivariate statistical technique (Polyak and Khlebnikov, 2017). On top of that, according to Ketskemety (2005), PCA is able to retain the useful data by compacting information stored in the variables into few uncorrelated factors. In fact, the study advocates that PCA works efficiently if there are several stochastically strongly correlated variables containing redundant information.

Next, this study applies static panel models to ascertain whether the impact of pillars of prosperity differs between the developed and developing countries. According to Baltagi and Liu (2008), the use of panel data alleviates the collinearity issue in a time-series data through the additional cross section dimensions by adding more informative data and more variability, which yields more reliable parameter estimates. Moreover, panel data modelling allows controlling for heterogeneity across cross sections and times, which reduces the problem of omitted variable bias. In this study, we implement both fixed-effects and random-effects panel estimators and conduct Hausman test to select which estimator is appropriate.[4] [5]

3.2. The Estimation Model of the Study

The model to measure the shared prosperity$_t$

$$\text{Shared Prosperity}_t = \alpha + \beta(\text{IPt}) + \mu t \quad (1)$$

where, Shared Prosperity$_t$ is proxied by Shared Prosperity Indicator developed by Rosenblatt and McGavock (2013) as the dependent variable. The shared prosperity indicator has its intellectual origins in the concept of quintile income. Defined as the per capita income of the poorest quintile (20 percent) of the population, quintile income was proposed as a simple welfare measure that is both easy to calculate and easy to understand. It draws on Rawlsian notions of promoting the welfare of the least fortunate members of society, and also has the pragmatic feature of comparability with traditional macroeconomic welfare measures such as per capita income. Therefore,

$$SP\ (x) = \frac{s(x)}{0{,}4} * y\ (x) \quad (2)$$

4 In the fixed effect approach, some unobservable variables are correlated with the explanatory variables, while the random effect estimator is consistent and efficient. On the other hand, if the independent variables are correlated with the unobserved effects, the fixed effect estimator will be consistent, whereas the random effect estimator is inconsistent.

5 We use robust standard errors to rectify the presence of homoscedasticity of error terms and auto-correlated disturbances issues. To determine which estimators to use, we run the Hausman test (Hausman, 1978). If the null hypothesis is rejected (the p value is less than 5%), then fixed effect is the best fit estimator and we conclude that independent variables are correlated with μ and vice versa for random effect.

Where;
$SP(x)$ = shared prosperity indicator
$s(x)$ = share of total income accruing to the bottom 40% of the population
$y(x)$ = the per capita income of the total population of a country with income profile x

This expression shows that the shared prosperity indicator is similar to the Sen index of real income which is the product of inequality measure (the income shares of the poorest 40 percent) and the per capita income of the total population. In discrete time, the percentage change in the shared prosperity indicator is simply the sum of two growth rates: the growth rate of the share of income accruing to the poorest 40 percent and the growth rate of the per capita income of the total population.

The independent variable (IPt) is the indicators of Sustainable Development from Islamic perspectives as per Table 1.

Table 1.
The Indicators and Dimension

Dimension/Indicators	Sources
Faradh	
Government Effectiveness	World Governance Index
Regulatory Quality	World Governance Index
Control of Corruption	World Governance Index
Transparency	Democracy Barometer Data
Voice & Accountability	World Governance Index
Rule of Law	World Governance Index
Shura	
Equality of Participation	Democracy Barometer Data
Effective Participation	Democracy Barometer Data
Representation	Democracy Barometer Data
Al Adl Wal Ihsan	
Right to Physical Integrity	Democracy Barometer Data
Right to Free Conduct of Life	Democracy Barometer Data
Freedom of Associate	Democracy Barometer Data
Freedom of Opinion	Democracy Barometer Data
Ummah	
Access to Economy Activity	World Development Indicator
Education	World Development Indicator
Environment	World Development Indicator

3.3. Index Construction Method

This study, with some modifications as formulated by the OECD (2008), constructs a multidimensional index labelled as *Islamicity* Prosperity Index (*i*PI). The aim is to gauge into the level of prosperity sharing in developed and developing countries with the adaption of sustainable development concept from an Islamic perspective. Sarma (2015) in developing her financial inclusion index states that the index measurement should involve a straight-forward calculation that is

uncomplicated to estimate, comparable across the country overtime, and inclusive of the dimensions capable of covering all the aspects of the index, which apply to this case as well.

In developing our *iPI*, we closely follow the steps for constructing a composite indicator of OECD (2008). Figure 1 presents the steps taken in building our *Islamicity* Prosperity Index (*iPI*).

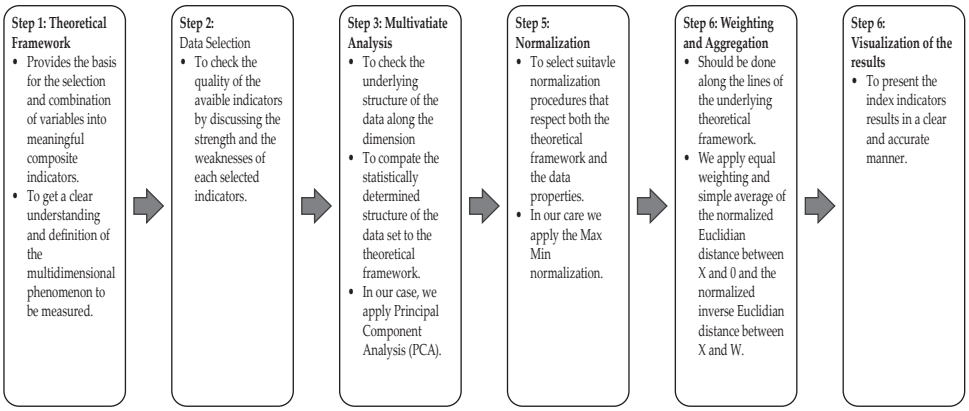

Figure 1.
Steps for Constructing *Islamicity* Prosperity Pillars (*iPI*)

The next step in developing the index is to proceed with the normalization and aggregation procedures, followed by aggregations to compute a country's achievement in each pillar. Here, this study follows closely the work of Sarma (2015). Namely, it adopts a minimum and maximum approach. Minimum and maximum values are set in order to transform the indicators expressed in different units into indices between 0 to 1. The pillar index $p_{i,}$ is computed as:

$$Pillar\ Index\ (p_i) = \frac{Actual\ Value - Minimum\ Value}{Maximum\ Value - Minimum\ value} \tag{3}$$

This study uses simple average of the normalized Euclidian distance between X and 0 and the normalized inverse Euclidian distance between X and W. As this study runs the panel regression analysis in identifying the impact of each indicator towards shared prosperity indicator, the *pi* is given equal weight for all of the pillars w_i = 1, then the ideal point is W = (1, 1, ….1) and the formula is as in (4) below. The higher value the value of p_i the higher the country's achievement in pillar *i.*

$$p_i = \tfrac{1}{2}\left[\ \frac{\sqrt{d1^2 + d2^2 + \cdots . dn^2}}{\sqrt{n}} + \left(\frac{\sqrt{(1-d1)^2 + (1-d2)^2 + \cdots . (1-dn)^2}}{\sqrt{n}}\right)\right] \tag{4}$$

The final step is aggregating the pillar indices to produce the *Islamicity* Prosperity Index (*i*PI). The *i*PI is the simple average of four pillars indices. The formula is as follows:

$$i\text{PI} = \frac{1}{4}\left(Faradh\ i + Shura\ i + AAWI\ i + Ummah\ i\right) \quad (5)$$

Eventually, a country that promotes more prosperity sharing should be closer to the ideal point 1 than a country that is less prosperity sharing.

IV. EMPIRICAL RESULTS

4.1. PCA Results

This study primarily aims to identify the indicators for the four dimensions of the sustainable development from Islamic perspectives on the basis of principal components analysis. This is done on the basis of identification of variables based on the secondary data provided by three main databases (World Development Indicators, World Governance Indicators and Democracy Barometer Data). The summary of PCA findings are as follows:

Table 2.
Kaiser Meyer Olkin (KMO) & Bartlett's Test

Dimension	Indicator	KMO & Bartlett's Test	Component Matrix Correlation (Component 1)
Faradh	Government Effectiveness	0.879 (0.000)	0.968
	Regulatory Quality		0.893
	Control of Corruption		0.953
	Transparency		0.762
	Voice & Accountability		0.956
	Rule of Law		0.977
Shura	Equality of Participation	0.594 (0.000)	0.680
	Effective Participation		0.749
	Representation		0.839
Al Adl Wal Ihsan	Right to Physical Integrity	0.691 (0.000)	0.660
	Right to Free Conduct of Life		0.745
	Freedom of Associate		0.886
	Freedom of Opinion		0.834
Ummah	GINI	0.506 (0.000)	0.403
	Employment Rate		0.863
	Unemployment Rate		0.902
	School Enrollment, Secondary	0.500 (0.028)	0.753
	School Enrollment, Primary		0.753
	CO2 Emission	0.500 (0.016)	0.767
	Basic Drinking Water		0.767

The PCA steps closely track the study of Yang et al (2015) and Wen et al (2019). This study applies the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy (Kaiser, 1970; Kaiser and Rice, 1974) to test the shortest length of sliding window that a PCA could be efficiently applied to. The KMO statistics compare the value of correlations between stocks to those of the partial correlations. If the investigated indicators share more common variation, the KMO is equal to or higher than 0.50. However, a KMO near 0 indicates the PCA will not extract much useful information. The analysis finds that the sample is suitable for PCA as the results show higher than 0.50.

Next, the study employs the Bartlett's test of sphericity (BTS) to test the hypothesis correlation matrix = identity matrix. A rejection of this hypothesis indicates that the correlation between the variables is significantly different from an identity matrix, and therefore, the analysis is appropriate for the dataset.

Subsequently, this study follows the most popular procedure, namely the Kaiser criterion, in order to conclude the appropriate number of principal components to represent the data variance and the feature correlation in the principal component analysis. The rule of the Kaiser criterion recommends the selection of components with eigenvalues equal to or greater than 1. Likewise, the component correlation matrix of the dataset is inspected to ensure that the component matrix of the principal component is more than 0.3.

4.2. Estimation Results

This study applies static panel regressions to study the link between the shared prosperity and the indicators of each dimension of Sustainable Development from Islamic perspective. As shown in Table 3 to 8, the regression test utilize random effects ($p>5\%$) for developed and developing countries for most dimension except fixed effects ($p<5\%$) for developed countries intended for shura. Table 9 summarize the significant indicators for each dimension.

The estimation findings confirmed that on top of the three traditional sustainable development dimensions namely; economic development, social inclusion and environmental sustainability, those three require in all cases the underpinning of another dimension; good governance. Interestingly, the elements of governance from Islamic perspective, underlined by Sayed (2004) and Ali (2015), is found to be a fraction of our proposed components of sustainable development from Islamic perspectives as incorporated in this *Faradh* Pillar. It is evident that the model would be complete by considering the role of governance in creating and sustaining prosperity. Sachs (2015) strongly emphasizes on the role of government in economic development. He adds that an effective government provides a major boost for sustainable development. The result also shows that the rule of law gives the highest positive significant impact in both developed and developing countries, trailed by voice and accountability and followed by government effectiveness and regulatory quality. The rule of law is said to be fundamental to international peace and security and political stability; to achieve economic and social progress and development; and to protect people's rights and fundamental freedoms. No doubt the rule of law is statistically significant to be the indicator in promoting shared prosperity in developed and developing countries. It is also found that

control of corruption indicator is significantly negative, suggesting that the lower the corruption the better the prosperity sharing in both categories of country (vice versa). This is supported by Kunieda et al (2014), Dzhumashev (2014) and Beekman, Bulte, & Nillesen (2014) where the negative impact of the corruption which may directly disrupts the prosperity sharing. Based on the estimation findings, all the six indicators are to be incorporated under *Faradh* pillar.

Table 4 reveals some differences in the *Shura* indicators for developed and developing countries. It is discovered that for each country-category, only two indicators are statistically significant to be included under the *Shura* Pillar. In promoting the level of prosperity, equality of participation and representation directly impact the level of Shura in developed countries. Whereas in developing countries, equality of participation plays a greater role together with the effective participation. The statistical significance of equality of participation as an indicator of Shura in both country categories shows how important it is in promoting shared prosperity. This is supported by Alonso and Lombardo (2018) studying how the socio-political structure in which participation is embedded affects how far participation outcomes respect equality. Effective participation is also statistically more important compared to the representation in developing countries. The significance of Representation in developed countries may indicate the practical application of *Shura* in contemporary era.

Table 5 suggests that all *AAWI* indicators (Right to Physical Integrity, Right to Free Conduct of Life, Freedom to Associate and Freedom of Opinion) contribute significantly in explaining the prosperity sharing in developing countries but only two of these are statistically significant to be incorporated under the *AAWI* Pillar for developed countries. It is witnessed that there is a growing concern regarding the right to physical integrity in developing countries compared to developed countries (Gamso, 2019). It is expected that right to free conduct of life is statistically significant to be included as indicator of *AAWI* for both countries' category as everyone's right to life shall be protected by law. This right is among the most important since without the right to life it is impossible to enjoy the other rights. Freedom of association encompasses both an individual's right to join or leave groups voluntarily, the right of the group to take collective action to pursue the interests of its members, and the right of an association to accept or decline membership based on certain criteria. The indicator shows how its relevance in explaining the level of social equilibrium in developed and developing countries directly impact the level of prosperity of the countries. Freedom of opinion or expression is a fundamental human right that must be upheld in democratic societies. Freedom of expression also underpins most other rights and allows them to flourish. The right to speak your mind freely on important issues in society, access information and hold the powers that be to account, plays a vital role in the healthy development process of the society especially in developing countries.

Table 6 notes that the indicators of the sub-pillar of *Ummah* for developed and developing countries are different. GINI as the proxy of income inequality defined as the difference in how income is distributed among individuals and/or populations is statistically significant in promoting level of prosperity in developed countries. This is backed by Roser (2013) observations where even in those countries that are today the richest in the world the majority of people has

lived in extreme poverty until recently. The inequality that we see in the world today is the consequence of unequal progress. The availability of employment is crucial in promoting prosperity. This is evidenced by the result of this regression showing the statistically significant of employment rate to be included as indicator that able to promote prosperity. In developing countries, a reducing ratio of unemployment rate may statistically increase the level of prosperity. It is evident that the developing countries prosper more by improving their education quality especially at the secondary level suggesting that 1% increase enrolment of secondary school leads to a 0.328% increase in prosperity sharing. Education at secondary level promotes the young nation learning somewhat more advanced material, and they are preparing themselves to go out into the real world. It is reported that the quality of teaching is poor in many developing countries. To increase the prospects of achieving the global goal of education for all, effective, good quality education policies, strategies and programs must be in place in developing countries (Damon et al, 2016). The finding that education is not a significant indicator in promoting prosperity in developed countries may be explained by the fact that their education policy that is more stable and promising.

Table 3.
Faradh

Dependent Variables: Shared Prosperity Indicator				
	Developed Countries		**Developing Countries**	
	Fixed Effect	**Random Effect**	**Fixed Effect**	**Random Effect**
GE	-0.4333***(-2.67)	0.424***(2.63)	0.432*** (6.31)	0.429***(6.31)
RQ	-0.300***(-2.66)	0.304***(2.71)	0.380***(4.91)	0.380***(4.94)
COC	-0.284**(-2.19)	-0.288**(-2.23)	0.465**(2.90)	-0.093*(-1.74)
TRP	0.116***(3.24)	0.116***(3.23)	0.091*(1.96)	0.091** (1.99)
V&A	0.452***(2.81)	0.460***(2.87)	0.510***(3.45)	0.517***(3.53)
ROL	0.453***(3.40)	0.460***(3.46)	0.930*(1.96)	0.978**(2.09)
Constant	6.351***(8.20)	6.258***(7.57)	1.88(0.85)	1.635(0.71)
No of Observation	280	280	140	140
No of groups	28	28	14	14
Post Estimation				
F Test (Wald Test)	0.0000		0.0000	
LM Test		0.0000		0.0000
Hausman Test		0.7163		0.6720

t statistics in parentheses, * p <0.10, ** p <0.05, ***p <0.01

Note: GE = Government Effectiveness; RQ = Regulatory Quality; COC= Control of Corruption; TRP = Transparency; V&A = Voice and Accountability; ROL = Rule of Law

Source: Prepared by authors

Table 4.
Shura

Dependent Variables: Shared Prosperity Indicator				
	Developed Countries		**Developing Countries**	
	Fixed Effect	**Random Effect**	**Fixed Effect**	**Random Effect**
EOP	0.172***(2.45)	0.172***(2.43)	0.369***(2.85)	0.367***(2.83)
EP	0.086 (1.15)	0.0915 (1.22)	0.261 (1.66)	0.2658(1.68)
RPS	-0.280**(-2.40)	-0.260**(-2.21)	0.169 (1.47)	0.177 (1.53)
Constant	8.968***	8.87***(15.82)	4.912***(6.71)	4.70***(5.06)
No of Observation	280	280	140	140
No of groups	28	28	14	14
Post Estimation				
F Test (Wald Test)	0.0196		0.0006	
LM Test				0.0003
Hausman Test	0.0481			0.1989

t statistics in parentheses, * p <0.10, ** p <0.05, ***p <0.01

Note: EOP = Equality of Participation; EP = Effective Participation; RPS = Representation

Source: Prepared by authors

Table 5.
Al A'dl Wal Ihsan

Dependent Variable: Shared Prosperity Indicator				
	Developed Countries		**Developing Countries**	
	Fixed Effect	**Random Effect**	**Fixed Effect**	**Random Effect**
RPI	0.0255 (0.31)	0.026 (0.87)	0.292***(4.16)	0.292***(4.19)
RFCL	0.158**(2.73)	0.145***(0.002)	0.142**(2.55)	0.192**(2.56)
FTA	0.298***(5.14)	0.158***(3.77)	0.195**(2.45)	0.192**(2.42)
FOP	-0.264 (-1.61)	-0.114 (-0.88)	0.162***(5.39)	0.163***(5.45)
Constant	7.07***(8.98)	7.996***(13.19)	6.826***(18.52)	6.811***(8.44)
No of Observation	280	280	140	140
No of groups	28	28	14	14
Post Estimation				
F Test (Wald Test)	0.0000		0.0039	
LM Test		0.0001		0.0032
Hausman Test		0.2925		0.4314

t statistics in parentheses, * p <0.10, ** p <0.05, ***p <0.01

Note: RPI = Right to Physical Integrity; RFCL = Right to Free Conduct of Life; FTA = Freedom to Associate; FOP = Freedom of Opinion

Source: Prepared by authors

Table 6.
***Ummah* (Access to Economic Activity)**

Dependent Variables: Shared Prosperity Indicator				
	Developed Countries		**Developing Countries**	
	Fixed Effect	**Random Effect**	**Fixed Effect**	**Random Effect**
GINI	-0.643***(-8.47)	-0.649***(-8.47)	-0.09(-1.09)	-0.099 (0.2730)
EMP	1.049***(5.65)	1.062***(5.67)	0.436**(2.24)	0.433**(2.24)
UNEMP	0.0181 (0.76)	0.019 (0.79)	1.001***(2.83)	1.012***(291)
Constant	6.832***(8.21)	6.803***(7.74)		2.561 (1.31)
No of Observation	280	280	140	140
No of groups	28	28	14	14
Post Estimation				
F Test (Wald Test)	0.0000		0.0053	
LM Test		0.0000		0.0031
Hausman Test	0.0354			0.8772

t statistics in parentheses, * p <0.10, ** p <0.05, ***p <0.01

Note: GINI = Gini Coefficient; EMP = Employment; UNEMP = Unemployment

Source: Prepared by authors

Table 7.
***Ummah* (Education)**

Dependent Variables: Shared Prosperity Indicator				
	Developed Countries		**Developing Countries**	
	Fixed Effect	**Random Effect**	**Fixed Effect**	**Random Effect**
SCHPRI	0.009 (0.47)	0.009 (0.47)	-0.154 (-0.33)	-0.119 (-0.26)
SCHSE	-0.077 (-0.13)	-0.0075 (-0.13)	-0.328***(-6.55)	-0.328***(-6.52)
Constant	8.848***(2072.65)	8.848***(28.88)	8.619***(86.780	8.626***(13.44)
No of Observation	300	300	147	147
No of groups	30	30	15	15
Post Estimation				
F Test (Wald Test)	0.8953		0.0053	
LM Test		0.8960		0.0000
Hausman Test		0.7918		0.1889

t statistics in parentheses, * p <0.10, ** p <0.05, ***p <0.01

Note: SCHPRI = Primary School Enrolment; SCHSE = Secondary School Enrolment

Source: Prepared by authors

Table 8.
***Ummah* (Environment)**

Dependent Variables: Shared Prosperity Indicator				
	Developed Countries		Developing Countries	
	Fixed Effect	Random Effect	Fixed Effect	Random Effect
WATER	3.617***(4.11)	3.43***(4.13)	4.361***(10.51)	4.363***(10.59)
CO2	-0.182***(-4.93)	-0.183***(-4.96)	-0.398***(-5.38)	-.395***(-5.43)
Constant	-13.244***(-3.28)	-13.364***(-3.29)	-12.359***(-6.63)	-12.366***(-6.26)
No of Observation	300	300	150	150
No of groups	30	30	15	15
Post Estimation				
F Test (Wald Test)	0.0000		0.0000	
LM Test		0.0000		0.0000
Hausman Test		0.2282		0.9544

t statistics in parentheses, * p <0.10, ** p <0.05, ***p <0.01

Note: WATER = Basic Drinking Water Service; CO2 = CO2 Emission

Source: Prepared by authors

Table 9.
Significance of the Indicators

Dimension/ Indicators	Developed Countries	Developing Countries
Faradh	Government Effectiveness Regulatory Quality Control of Corruption Transparency Voice & Accountability Rule of Law	Government Effectiveness Regulatory Quality Control of Corruption Transparency Voice & Accountability Rule of Law
Shura	Equality of Participant Representation	Equality of Participant Effective Participant
Al Adl Wal Ihsan	Right to Free Conduct of Life Freedom to Associate	Right to Physical Integrity Right to Free Conduct of Life Freedom of Associate Freedom of Opinion
Ummah	Access to Economic Activity Environment	Access to Economic Activity Environment Education

4.3. *Islamicity* Prosperity Index (*i*PI)

Finally, it is come to the ultimate purpose of this study by discussing the level of prosperity of both country categories, i.e. developed and developing. This is addressed through the construction of *Islamicity* Prosperity Index (*i*PI). The *i*PI enables this study to quantify and demonstrate the level of prosperity sharing in developed and developing countries.

The discussion for this section starts with the findings of the descriptive analysis for the computed *Islamicity* Prosperity Index (*i*PI). Tables 10 and 11 show the results of the descriptive statistics for developed and developing countries, respectively. Over the years, there is a moderate level of prosperity sharing in developed and developing countries as the average index of *i*PI in most countries is less than 0.60. This is supported by World Bank Publication (2018) which reports that a slow economic progress is hindering shared prosperity in some regions, particularly Eastern Europe and Central Asia. Both have experienced negative or low levels of shared prosperity. In any case, prosperity created cannot be equated with prosperity shared in both developed and developing categories. The opportunity for flourishing is not open to all. The declining trend of the coefficient of variation of developed countries starting from year 2009 to 2012 indicates the convergence of the sharing prosperity, but subsequently there is evidence of growing divergence in more recent years. It is indeed a revelation that the number of developed countries that can be categorized as high *i*PI countries is declining.

Interestingly, there is an increasing trend of shared prosperity in developing countries. The declining trend of the coefficient of variation in developing countries provides evidence of increasing shared prosperity over the years, supported by the increasing number of developing countries categorized as high *i*PI countries in more recent years. Remarkably, there is no developing country categorized under low *i*PI countries since 2013 until 2016. As for developed countries, there is none under low iPI countries from 2010 until 2014. We have categorized the level of *i*PI based on the values – those countries having *i*PI values between 0.6 and 1 are categorized as high *i*PI countries, those having *i*PI values between 0.3 and 0.5 as medium *i*PI countries and those having *i*PI values less than 0.3 are called low *i*PI countries.

The discussion remains for the overall level of prosperity sharing in developed and developing countries. Figure 2 and 3 show the movement of the average prosperity score for developed and developing countries from 2007 to 2016, respectively. Based on Figure 1, developing countries have made great progress in delivering more prosperity to their populations, contributing to the ascending trend. Nevertheless, Figure 2 shows the improving trend in developed countries reached a plateau during 2008-2010, followed by a reversal, declining in the later years, which may be ascribed to the damage inflicted by the global financial crisis, where the focus was more towards on the material recovery rather than prosperity sharing.

The scores of the *Islamicity* Prosperity Index (*i*PI) suggest that the prosperity sharing is working better in developing countries than in developed countries. This is very much in line with the World Bank Poverty and Shared Prosperity Report (2018) showing that the annualized per-capita income growth rates (2010-2015) of the bottom 40 in developed countries are growing more slowly than the average, in contrast to a faster- than-average growth of the incomes of the bottom 40 in developing countries. The increasing prosperity sharing trend in developing countries provides evidence of the commitment and efforts at the country level in supporting the challenge, to increase the economic inclusiveness, based on the announcements made by the World Bank in 2013, in the pursuit of two new development goals: to end extreme poverty and promote shared prosperity.

The multidimensional view reveals a world in which prosperity sharing is a much broader, underlining the importance of inclusive growth and increased investment in human capital. Positively, the *i*PI index, built on the four dimensions of sustainable development concept from Islamic perspective provides adequate picture of core prosperity sharing in comparison with other measures of prosperity and wellbeing.

Table 10.
Descriptive Statistics of *Islamicity* Prosperity Index (*i*PI) (2007-2016): Developed Countries

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Min	0.30	0.24	0.26	0.41	0.40	0.39	0.37	0.30	0.29	0.21
Max	0.84	0.84	0.83	0.83	0.75	0.67	0.83	0.80	0.78	0.95
Mean	0.57	0.60	0.60	0.60	0.55	0.52	0.51	0.50	0.50	0.51
Standard Dev	0.16	0.14	0.13	0.12	0.10	0.08	0.10	0.11	0.14	0.20
CV	0.29	0.24	0.21	0.19	0.17	0.15	0.19	0.23	0.28	0.40
High iPI countries	12	16	15	15	11	7	4	7	6	8
Medium iPI countries	16	11	12	13	17	21	24	21	21	17
Low iPI countries	0	1	1	0	0	0	0	0	1	3

Table 11.
Descriptive Statistics of *Islamicity* Prosperity Index (*i*PI) (2007-2016): Developing Countries

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Min	0.16	0.17	0.28	0.26	0.24	0.29	0.37	0.39	0.32	0.30
Max	0.70	0.71	0.63	0.65	0.75	0.75	0.73	0.73	0.78	0.78
Mean	0.37	0.42	0.48	0.48	0.54	0.55	0.54	0.59	0.58	0.63
Standard Dev	0.13	0.15	0.09	0.12	0.15	0.12	0.11	0.10	0.12	0.15
CV	0.35	0.35	0.19	0.25	0.27	0.22	0.21	0.18	0.21	0.24
High iPI countries	1	1	2	4	5	6	5	8	7	8
Medium iPI countries	10	10	11	9	8	7	9	6	7	6
Low iPI countries	3	3	1	1	1	1	0	0	0	0

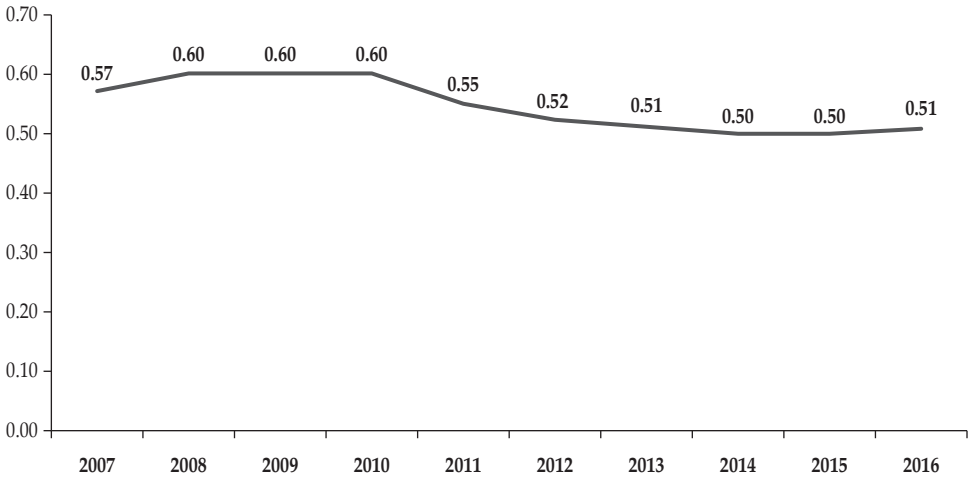

Figure 2.
The *i*PI: Developed Countries

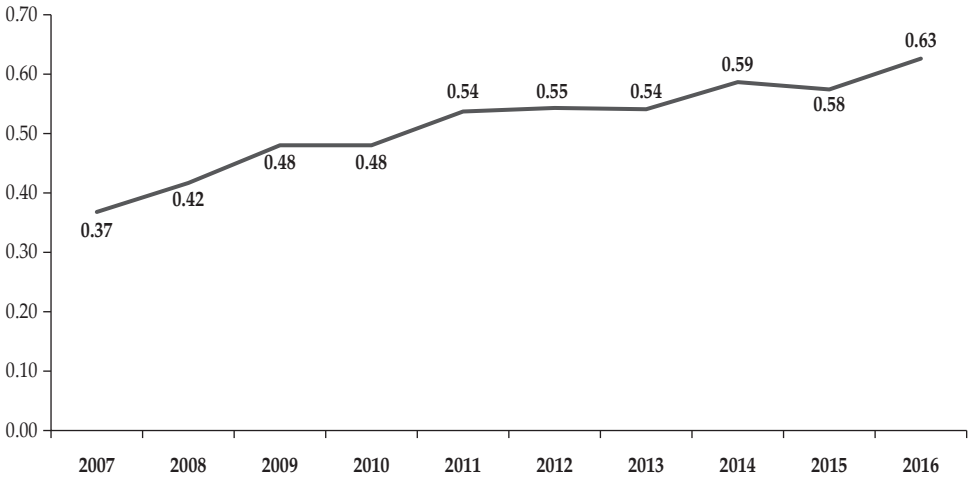

Figure 3.
The *i*PI: Developing Countries

4.4. The Countries' Ranking

The following section demonstrates the index scores and the top rank countries based on the constructed *Islamicity* Prosperity Index (iPI) and each of its pillars for the period 2007-2016. Table 12 presents the *Islamicity* Prosperity Index (*i*PI) 1st ranking (top score) and the score for developed and developing countries, respectively.

Table 12.
First Ranking and Score of *Islamicity* Prosperity Index (*i*PI): Developed and Developing Countries

	***Islamicity* Prosperity Index (*i*PI)**			
	Developed Countries		**Developing Countries**	
Year	**Country**	**Score**	**Country**	**Score**
2007	Slovak Republic	0.84	Moldova	0.70
2008	United Kingdom	0.84	Moldova	0.71
2009	Hungary	0.83	Dominican Republic	0.63
2010	France	0.83	Paraguay	0.65
2011	Slovenia	0.75	Turkey	0.75
2012	Luxembourg	0.67	Peru	0.75
2013	Luxembourg	0.83	Turkey	0.73
2014	Luxembourg	0.80	Turkey	0.73
2015	Sweden	0.78	Ecuador	0.78
2016	Estonia	0.95	Serbia	0.78

It is expected that the developed countries' performance for individual country *i*PI exceeds that of developing countries. In general, many developed countries like Finland, Luxembourg, Sweden, United Kingdom, France, Germany, Iceland, Ireland, Norway, Estonia, Greece and Denmark, similar to other wellbeing indices such as HDI and *Islamicity* Index, have scored high among the top ranking. In visualizing the overall level of prosperity sharing, Luxembourg notably dominates other developed countries as being ranked highest for three consecutive years starting from 2012 until 2014.

For developing countries, Turkey is ranked highest triple times along the period of studies; in year 2011, 2013 and 2014. Turkey's economy experienced rapid growth in the early 2000s with GDP per capita rising significantly until 2008, which may explain its high overall prosperity score.

Top ranking scores show that developed countries' performance is higher compared to developing countries, which is an expected disclosure. Developed countries have relatively experienced high level of economic growth, security, industrialization, standard of living, and the amount of technological infrastructure add advantage to the prosperous of the countries. Nevertheless, these material measurements do not stay put.

The non-economic factors, such as a country's levels of responsibility, freedom, participation and other cohesion factors such as education, and environment are also needed for prosperity to be meaningful. Based on the individual pillars score, it is found that some countries are more focused on the governance elements depicted by our *Faradh* and *Shura* pillars while some others are utilizing the social cohesion elements and promoting social equilibrium in fostering shared prosperity[6].

6 Refer to the appendix for score of ranking for each country in respect of each pillar; *Faradh, Shura, AAWI* and *Ummah*.

Table 13.
The Top 5 Country for *Islamicity* Prosperity Index (*i*PI):
Developed and Developing Countries (2007-2016)

DEVELOPED COUNTRIES										
Year/ Ranking	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**
1	Slovak Republic	United Kingdom	Hungary	France	Slovenia	Luxembourg	Luxembourg	Luxembourg	Sweden	Estonia
2	Finland	Slovak Republic	Austria	Denmark	France	France	Sweden	Sweden	Luxembourg	Poland
3	Portugal	Denmark	Greece	Iceland	Luxembourg	Poland	Spain	Poland	Poland	Lithuania
4	Spain	Hungary	France	Austria	Denmark	Austria	Poland	Lithuania	Estonia	Germany
5	Greece	Greece	Iceland	United States	Czech Republic	Spain	Belgium	Norway	Norway	Latvia
DEVELOPING COUNTRIES										
	2007	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**
1	Moldova	Moldova	Dominican Republic	Paraguay	Turkey	Peru	Turkey	Turkey	Ecuador	Serbia
2	Bulgaria	Moldova	Serbia	Serbia	El Salvador	El Salvador	Moldova	Peru	Serbia	Peru
3	Turkey	Panama	Moldova	Panama	Paraguay	Moldova	Peru	Montenegro	Peru	Romania
4	Ukraine	Romania	Panama	Dominican Republic	Panama	Turkey	El Salvador	Costa Rica	Costa Rica	El Salvador
5	Panama	Montenegro	Montenegro	Peru	Montenegro	Costa Rica	Paraguay	Serbia	Romania	Costa Rica

V. CONCLUSION

In the aftermath of the 2008 global financial crisis, developing economies account for a larger share of world GDP than developed economies. However, it is still unclear if the countries have found panacea to increase prosperity and prosperity sharing. Shared prosperity is measured by the average annual growth in income or consumption of the poorest bottom 40 within a country in comparison with the national average. The agenda of shared prosperity is aimed at developing a fair, equitable and inclusive distribution of economic development, to ensure that no section of society is left behind. Announced by the World Bank in 2013, this agenda is superimposed on the existing commitment to implement the agenda for Sustainable Development (SDG 2030) in achieving the number one goal, namely, zero poverty. Realizing the importance of this agenda, we examine the four pillars of prosperity namely *Faradh* (social responsibility), *Shura* (social participation), *Al Adl Wal Ihsan* (social equilibrium) and *Ummah* (social cohesion) that we believe capture the essence or the core of prosperity sharing and use international data sources in computing a new multidimensional index dubbed as the *Islamic* Prosperity Index or *i*PI.

This paper proposes to conduct research in the concept and approach from Islamic perspectives of sustainable development in mitigating poverty and promoting shared prosperity. It is very much relevant for policymakers, as policy targets for sustainable development are increasingly being formulated at national and international levels. Policy makers and economists must understand this holistic approach to enable them to understand the determinants and formulate right economic policy and programs. The analysis is only useful once its inferences are adopted by the governments and placed at the heart of credible growth strategies. We believe that there is a great deal of room for improvement by the governments to promote an inclusive economic growth.

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