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Unified Model of Global Wellbeing as Index of Spirituality and Socio-Economic Development: The Islamic Economic Approach

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Abstract: The paper firstly establishes the ontological methodology according to the qu'anic monotheistic law, Tawhid and its unitary relationship in the world-system of 'everything'. Tawhid as the primal ontological law in the Qur'an is differently poised to Shari'ah as the latter's sectarian nature that evolved over time. Consequently, the concept of spirituality derived from the Tawhidi law is explained in terms of the precept of oneness between the good things of life while avoiding the unwanted ones. The imminent methodological consequences of Tawhid as law on the topic of spirituality and organization are explained by an analytical model that is empirically viable. Furthermore, the other examples are regarding the development of the wellbeing index to express the ontological role of Tawhidi unity of knowledge. The place of Islamic economics is thereby explained with the imminent Tawhidi ontological premise.

Keywords: Tawhid as Monotheistic Oneness, Qur'an, Shari'ah, Ontology and World-System, Wellbeing, Spirituality

Introduction

The understanding of the foundational ontological law in Islam, namely the monotheistic oneness of God (termed Tawhid) as one that meets universal wellbeing in the global sense, rather than being confined to Muslims alone, has been grossly ignored. Academic research concerning the so-called Islamic Law, the Shari'ah and the three elements of its inner configuration (namely, the Qur'an, Prophetic practice called the Sunnah and human juristic interpretation and practice known as fiqh) have been intertwined in an incoherent way. In early days of Islam¹, Shari'ah scholars² identified five main securities to mankind around which the spiritual teaching of Islam leads to prosperity; faith (deen), life, Intellect, lineage or posterity and property

rights, which are considered as a part of the transcendental law of monotheistic oneness and its relationship with the unified world-system (Ω).

Contrary to Tawhid as the qu'anic divine law of oneness, fiqh as juristic interpretation to justice in almost all areas of human endeavour, has historically served the interests of sects, as well as mainly financial and legal groups among Muslims. Thus the exegesis of qu'anic law (also wisely directed by the Sunnah- a carrier of the qu'anic law to the generalized and particular cases of the issues and problems under study) has been marred by wishful human interpretations. Examples of such cases are found in the contrariness of interpretations in the Shari'ah among different Muslim sects, for example in broader sense, Sunni and Shia. To the extent, the principal Sunni sects further consist of the Hanafi, Shafei, Hanbali schools of thought which bring complex horizontal and vertical divisions to the communities in Muslim majority countries.

The consequences that ensue as the universal law of Tawhid have been lost. The principle law of the Qur'an as one that is applicable to Muslims and non-Muslims alike in the ontological sense of systemic oneness and is uniquely relevant to the realms of the animate and the cosmological world-systems through abstraction and application, needs to be understood. This central law of

¹The period starts from the time of the Prophet Muhammad (570-632 C.E.) including the age of the Orthodox Caliphate (632-661 C.E.), the noble companions and the succeeding generations till the Umayyad and Abbasid Eras (661-1258)

²Shari'ah is considered as the sacred way to understand the law of Islamic monotheism in Islam, Tawhid in its applied form. It is derived from the Quran, the Sunnah (the sayings and deeds of the Prophet Muhammad during his life time), Ijma' (consensus), Qiyas (reasoning by analogy) and Maslaha (consideration of the public good or common need). See Qur'an (45:18)

monotheism, referred to as Tawhid in the Qur'an, has been replaced with a distorted picture of what is now defined as the Shari'ah- a product of misinterpretations by opportunist clerical and theological differences. A great divide thus exists between the definitions of Tawhid and Shari'ah, as a result of the vagaries of human desire, geo-political, ethno-religious and commercial interests.

An example in this regard is the legitimation of the Shari'ah commercial instruments as contracts ('aqd'), contrary to the unified understanding of financing instruments under the Tawhidi methodology, one which integrates and simulates possibilities across unifying systems of thought -- transdisciplinarity. Furthermore, Shari'ah has remained in its narrow pale of legal contracts relating to worldly affairs [$\Omega \rightarrow S: (\Omega, S)$], in contrast to a greater domain- which studies worldly matters as well as the abstractions and evidences of universal categories in general (e.g., cosmological entities) (Choudhury, 2015).

This paper attempts to tackle this complex subdivisional phenomena among human society and introduces the Tawhidi methodological worldview (monotheism) unified model of ontological law of unity of knowledge invoked by the Qur'an and the Sunnah. These together enhance spirituality and material prosperity³. Thereby, no standardization and harmonization has been determined by a mistaken approach to the identification of what truly is the primal ontological Islamic law. Is it the law of the Shari'ah or the universal law of primal ontological origin of Tawhid in the Qur'an, the First Law? Tawhid i.e. the Qur'an is transmitted by the authentic Sunnah into the knowledge embedded in everything of the universal world-system.⁴ Indeed, here is what Buchman (1998, p. xviii) writes regarding the prevalence of the Tawhidi worldview in the medieval Islamic age being different from those who have failed to understand the *res cogitans* and *res extensa* of the Tawhidi *weltanschauung*: "... It (the book, Ghazali's Niche of Lights) may be helpful to elucidate the general 'Tawhid-centered worldview of twelfth-century Islam. People today-Muslims and non-Muslims alike-usually hold drastically different assumptions on the nature of existence than those held by al-Ghazali and most of his contemporaries".

On the topic of development indexing, the Shari'ah focuses 'Uqud', separable legal contracts. The Islamic attempts to formulate such development indexing have missed the treatment of the systemic relational organism that is essential to be derived from the Tawhidi unity of knowledge. The consilience of being and becoming

³Qur'an (59: 7): "So that it (wealth) may not (make) a circuit between the rich among you",

⁴Qur'an (53: 1-3): "By the star when it descends, your companion [Muhammad] has not strayed, nor has he erred, Nor does he speak from [his own] inclination."

(Wilson, 1998; Prigogine, 1980) is a physical model as prototype of unity of knowledge. The algorithmic but not the substantive meaning of Tawhidi methodology of unity of knowledge is formally represented by the consilience model. Yet more significantly, using these analytical models, the Tawhidi methodological worldview of pervasive unity of knowledge with moral induction gives the scheme and order of all unified developmental entities. These are not comprehended either by the idea of biological consilience or the social Shari'ah approach.

What the Shari'ah approach has tried to formulate are humanly self-assigned coefficient values to variables of the development index. A deconstruction of the aggregate index of wellbeing governed by the purpose and objective of the Shari'ah termed as *maqasid as-Shari'ah*, has been tried but the limits of deconstruction face the problem of differentiated categories in the indexes, indicators and variables and their relations. Thereby, the exogenously assigned numerical values of the coefficients makes the whole indexing exercise to be a personated design in existing practices rather than a natural objective criterion (Davies and Brady, 2015).

Pertinent to such problems is the structure of the development index. Most often linear forms are used but without a basis of such derivations (Mustafa and Taib, 2016; Syed and Hasan, 2015). At the end, the Shari'ah development indices have remained void of formulating the endogenous embedding of moral and ethical values of the Qur'anic genre in the representative variables of the material goods, services and cognition by ways of abstraction and applications.

The structure of the rest of the paper is as follows. In the next section we develop a unified Tawhidi methodological worldview model which turns into substantiation of the wellbeing function as the groundwork for the development of wellbeing universal index. In section 3, Islamic spirituality indexation process is presented to demonstrate its unique and universal application in the area of spiritual wellbeing inline with the Millenium Development Index (MDI). The parametric and nonparametric data meshing process is proposed which establishes causality by forward and backward stochastic linkages established by the ontological law of unity of knowledge using time series, cross-sectional and/or survey data to conduct empirical work. The implication of meso-economics is thus invoked. The final section contains some concluding remarks.

The Unified Tawhidi Wellbeing Model

Tawhidi Based Wellbeing Indicators

This section presents the topological foundation of the unified model which is free from ethno-religiosity,

race, colour, sects and socio-economic division. To begin, we refer to Fig. 1 which provides the difference in methodological sense between the primal ontological law of Tawhidi unity of knowledge and the fiqi (jurisprudential) approach of the Shari'ah. The details of the two methodologies are explained in respect of the generality of the endogenous moral embedding in representative variables for Tawhid. On the other hand, there is the impossibility of this endogenous embedding by Shari'ah as conveyed by its exogenous treatment of moral values.

The Tawhidi methodological worldview (monotheism) as the primal ontological law of unity of knowledge invokes the Qur'an and the Sunnah in their purest form as supercardinal topology of fullness of knowledge in the open and unbounded domain of Ω (Qur'an) at the point 1 in Fig. 1. Elements of Ω as such a complete topology of knowledge is mapped by 'S' (Sunnah as teaching of the Prophet Muhammad) to generate knowledge-flows of the generality and particulars of issues and problems under study in diverse world-systems. Because 'S' is inextricably linked with Ω as a well-defined topological mapping to derive as, $[\Omega \rightarrow_S: (\Omega, S)]$. Point 2 in Fig. 1 shows the derivation of interpretive knowledge. Thereby firstly, $\{\theta^*\}$ is derived from Ω by the primal ontological function of (Ω, S) .⁵

We thereby write, $(\Omega, S) \rightarrow \{\theta^*\}$. Furthermore, from $\{\theta^*\}$ by discourse concerning the issues and problems under construction the participants of this interactive process arrive at consensus (integration) to determine a given station of unification of knowledge of the interpretive derivation from $(\Omega, S) \rightarrow \{\theta^*\}$. This worldly derivation of unity of knowledge for induction in the unity of the generality and particulars of the world-system under study is denoted by $\{\theta\}$ as knowledge-flows from the primal ontological domain. We thereby write, $(\Omega, S) \rightarrow \{\theta^*\} \rightarrow \{\theta\}$, for \forall tuple $\{\theta^*, \theta\} \in (\Omega, S)$ along with monotonically positive relational transformations of $\{\theta^*, \theta\}$. The derivation of such diversity of $\{\theta^*, \theta\}$ from the primal ontology of super cardinal topology Ω by way of the topological mapping 'S' (Maddox, 1970; Rucker, 1982), is the epistemology that is induced as moral organism in the variables and their relations representing the generality and specifics of the issues and problems under study.

Thereby, the representative variables, $\{X(\theta)\}$ are simultaneously and continuously determined along with the continuity of $\{\theta\}$ as derived knowledge-flows of the

nature of Tawhidi unity of knowledge. Thereby, knowledge-flows ' θ ' induces all functional transformations in their various monotonic relations. Thus the moral embedding of the world-system is denoted by $\{X(\theta)\}$. The world-system that is spanned by the embedding of knowledge-flows arising from the ontology of unity of knowledge and its epistemological processes out of discourse and interpretation is denoted by $\{\theta, X(\theta)\}$ and its family of knowledge-induced embedding as moral transformations of the generality and particulars of the world-system. The coterminous determination of knowledge from the primal ontology of Tawhidi unity of knowledge and its epistemological derivation of knowledge-flows and knowledge-induced world-system completes the construction of the totality of the moral and ethicized world-system and its particulars. Note that this event occurs at the point 3 of Fig. 1.

The evaluation of the morally constructed world-system in terms of the epistemological consequences of Tawhidi ontology of unity of knowledge is carried out by the objective criterion of the generalized world-system and its particulars. This objective criterion is the wellbeing function denoted by $W(\theta, X(\theta))$. It is referred to in Islamic terminology as *maslaha*. Along with the possibility of multiple transformations of $\{\theta, X(\theta)\}$ there also follow the family of monotonic positive transformations denoted by $\{W(\theta, X(\theta))\}$.

At the point 3 of Fig. 1, $\{W(\theta, X(\theta))\}$ is evaluated in response to the features of the Tawhidi ontological and epistemological properties. That is $\{(\theta, X(\theta))\}$ are characterised by three discursive processes; interaction (I), integration (I) and evolutionary (E) - (IIE)-learning of the knowledge derivation and knowledge-flows in unity of knowledge. Such processes occur between agents, agencies and organisms. All these are explained in terms of the knowledge-induced symbiotic variables. The consequential organic unity of knowledge between such variables in abstraction and empirical applications is explained in a system of inter-causal relations. The Qur'an refers to such evolutionary learning dynamics as re-origination (*khalq in-jadid*)⁶ through the participative and complementary organically unified processes of 'pairing' (*Azwajaha Kullaha*).⁷

⁶Qur'an (30:11): "It is God Who begins (the process of) creation; then repeats it; then shall you be brought back to Him."

⁷Qur'an (36:36): "Glory to God, Who created in pairs all things that the earth produces, as well as their own (human) kind and (other) things of which they have no knowledge."

Qur'an (51:49): "And of every thing We have created pairs: That ye may receive instructions."

⁵Qur'an (4:59): "O you who have believed, obey Allah and obey the messenger and those in authority among you. and if you disagree over anything, refer it to Allah and the messenger, if you should believe in Allah and the last day. that is the best [way] and best in result."

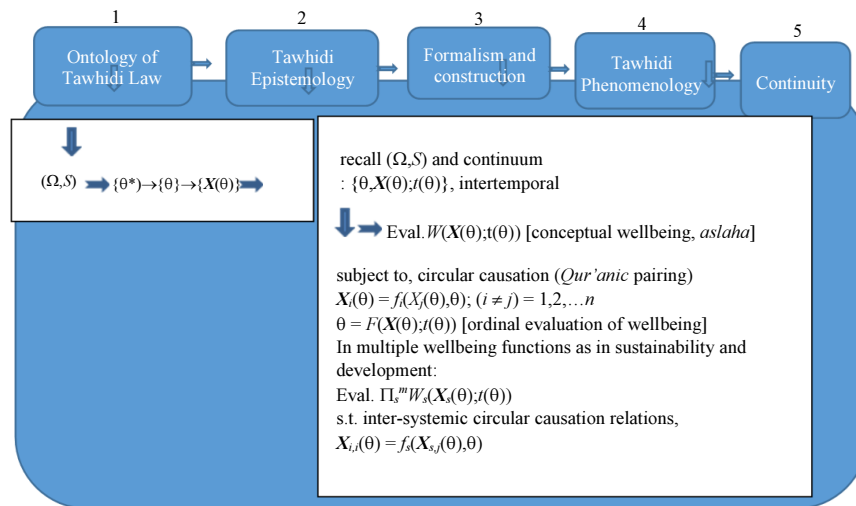


Fig. 1: Tawhidi methodological worldview contrasted with Shari’ah in practice. ^[1]By far the larger part of of those supposedly Shari’ah laws is an outcome of the deductions and the subjective reasoning of the great fuqaha of our past-deductions and conclusions, to be sure, conscientiously based on the context of the Two Sources, but none the less subjective in the sense that they were determined by each faqih’s individual approach to and individual interpretation of problems not laid down unequivocally in terms of the law in either of those Two Sources, the Qur’an and Sunnah. ^[2]... No subjective deduction, interpretation or conclusion touching upon any problems of law arrived at by means of the ijihad (individual reasoning) of any, even the greatest, Muslim scholar can even be binding on the community.”

The point 3 of Fig. 1 thus summarizes the functional forms of the design of objectivity of the ontologically unified knowledge-embedded world-system in terms of the circular causation relations as formalized. Since unity of knowledge as complementary participation exists everywhere and in everything (Barrow, 1991), there is likewise the well-defined relationship of knowledge as monotonic positive derivation of wellbeing measured in terms of ‘θ’, while its conceptual but non-measurable intertemporal form is given by $W(X(\theta);t(\theta))$.

Moreover, point 4 of Fig. 1 is the evolutionary learning stage that completes in any IIE-learning process the abstraction followed by functional ontology of formalism and its evidential evaluation. Phenomenology as the evaluation of organically unified systems brings together the three important evaluative points. These are namely, conceptualization of wellbeing, followed by its systemic evaluation, followed by sustained continuity of the same types of IIE-learning processes across events and history of system ensemble (Hubner *et al.*, 1985) in knowledge, space and time dimensions.

The study of socio-scientific *consciousness* is therefore the completion of abstraction followed by evidential evaluation. The term evaluation here means firstly, the straightforward estimation of the wellbeing function subject to circular causation of the inter-variable relations. Secondly, this estimation is followed by simulation of the coefficients of the estimated equations including the estimation and simulation of the quantitative form of the wellbeing function, as shown in Fig. 1.

Simulation is a process estimation with changes in the coefficients, to increase the possibility of ethically reconstructed inter-variable causal relations, rising from weaker and negative coefficients into stronger and positive ones. This transformation of the relations would imply enhanced levels of participative complementarities between the variables representing the moral action of life (life-fulfilment needs).

The wellbeing function is now defined as the phenomenological complete indicator of levels of unity of knowledge between the knowledge-induced variables that characterize the wellbeing function, its simulation possibility and analytical interpretation of the estimation and simulation results. This holistic meaning of phenomenology in the Tawhidi methodological worldview of unity of knowledge is sustained across IIE-learning processes over knowledge, space, time dimensions.

The evaluated coefficients represent the automatically generated so-called Shari’ah indicators corresponding to the selected variables of the wellbeing function. They exist in inter-causality and convey both actual states of the wellbeing indicators and the potentially simulated ones as predictors that are generated by means of a combination of primal ontological researching, discourse by way of Islamic consultative (IIE-learning processes) and statistical algorithmic evaluation.

The deeper meaning of phenomenology in above explanation further explains how the Tawhidi consciousness enters the conceptual, applied and continued sustainable perspectives of mind and matter. Kaku (2015) writes regarding this broader precept of consciousness in the following words that unravel the

neural cybernetic nature of phenomenology as the embedding of consciousness in artefacts: "Consciousness is the process of creating a model of the world using multiple feedback loops in various parameters (e.g. in temperatures, space, time and in relation to others), in order to accomplish a goal (e.g., find mates, food, shelter)." Kaku calls the above definition of phenomenological consciousness as the 'space-time theory of consciousness. In our work consciousness (phenomenology) is referred to in terms of the spanning over knowledge, space and time dimensions (Choudhury, 2017).

Shari'ah Based Indices

Within the Tawhidi methodology explained by Fig. 1 the Shari'ah dynamics is explained by the process starting from Point 2 onwards. Yet a dissociative break occurs at several places repeated along the Tawhidi String Relations (Fig. 1). The problem of fiqh and Shari'ah starting from point 2 was stated in the above-mentioned words of Muhammad Asad. This problem has deepened and continued in present-days' commercial practices according to different Islamic theological schools and sects implicating what is self-conducively termed as 'Shari'ah compliance'.

The problem of 'aqd as opposed to the Tawhidi foundation of monotheistic unity of knowledge appears at each of the points. Point 1 is never addressed primarily. Yet this is the primal command of the Qur'an.⁸ Hence the Shari'ah approach remains without an ontological and epistemological foundation perceptibly (Nusseibeh, 2017). The foundational methodology of the Tawhidi worldview in the Qur'an and Sunnah is ignored by the differences of human interpretations concerning Shari'ah. Consequently, the organic relations of unity of knowledge leading to circular causation and the complementary perspective of the objective criterion of wellbeing is abandoned. The ethics of such relations as organic inter-causality does not appear in any of the organic substantiation of the Shari'ah. Thereby, the Shari'ah indicators remain separable and non-integrated. Shari'ah as humanly developed does not bear point 4 and thus remains unable to embed morality and ethics arising from the Tawhidi methodological worldview into Interacting, Integrating and Evolutionary (IIE) learning variables. The concept of phenomenology as consciousness, as explained at point 4 in Fig. 1, remains absent in the human mechanism of the Shari'ah. All the above problems of the human interpretation in the Shari'ah cause the Shari'ah indicators to be wishful ones with no methodological and sustainable implications of point 5 regarding continuity. Thereby, the intertemporal nature of development and wellbeing indicators fail to exist in the human mechanism of the Shari'ah (Bank Negara, (2016), internet link visited Aug. 2016).

⁸Qur'an (2:117): "To Him is due the primal origin of the heavens and the earth: When He decreeth a matter, He saith to it: "Be," and it is."

As the Shari'ah indicators fail to implicate the moral and ethical embedding as in $\{X(\theta)\}$, the endogenous nature of inter-variable causality remains absent, contrary to the pervasively endogenous nature of complementarities between moral/ethical and cognitive variables *res extensa*. The permanent existence of exogenously treated morality and ethics in the 'aqd'-legal based perspective of Shari'ah, as engineered by human understanding, fails to bestow uniqueness and universality to the Shari'ah indicators of spirituality. The failure to signify and well-define the knowledge-induced variables $\{X(\theta)\}$, render spirituality indicators (as defined by embedded qur'anic values by endogenous and conscious treatment) absent in the human concocted Shari'ah rules.

Islamic Spirituality Index: Universality and uniqueness

Islamic spirituality to be globally universal and unique in abstraction and application must be inextricably endowed by the following properties:

1. The body $X(.)$ and the soul (' θ ') to make the endogenous knowledge embedding in $\{X(\theta)\}$ and its various positive monotonic transformations must well-define the abstraction and the empirical and analytical applications possible. The spirituality in cognitive details is thus ingrained in generality and details in the issues and problems of the investigated world-system problem. In Islam the universal and unique foundation of spirituality is the monotheistic ontological law of unity of knowledge. An example of such a world-system and its global indicator for evaluation by the wellbeing function is the development index of sustainability
2. Thereby, along with (1) the universal objective criterion of wellbeing must be specified in the framework of inter-causal organic unity of knowledge as the foundational meaning of balance and life-fulfilling multidimensional values
3. The universality of such development and wellbeing indicators is explained by the Interactive, Integrated and Evolutionary (IIE) learning inter-variable organic unity of being and becoming by the ever-expanding sequences of consciousness through the wellbeing evaluation (i.e. estimation followed by simulation) in terms of the variables. There is no need in such a globally universal concept of development and wellbeing indicator of spirituality caused by the pervasive presence of $\{X(\theta)\}$ to limit variables to countable selective attributes such as, justice, consciousness, goodness, balance, neighbourly values (RCGG, 1995). There are far more value-induced variables to comprehend in abstraction and application with the simulational expansion of evolutionary learning across inter-causal processes

4. Uniqueness of the development and wellbeing criterion of spirituality is established firmly on the primal ontological law of Tawhid and its moral construction of the specific issues and problems of the world-system under study
5. The spirituality index of development in wellbeing is devoid of exogenous separability between the socio-economic variables $\{X\}$ and instead by its essential embedding by $\{\theta\}$.⁹ Figure 1 shows that multi-systemic indexes are integrated together in the wellbeing function
6. Thus at the end, the evaluated wellbeing function in abstraction and applications forms the universal and unique objective criterion of spirituality in Islam. From this general objective criterion specific indexes can be derived out of the circular causation relations

Spiritual Wellbeing Indices and Milienium Development Index

Here we present the structure of the sprituality indices of the development and organizational behaviour in endogenously which is in the form of unified world-system of wellbeing, maslaha. As we know that, the dvelopment indexes are defined by UNDP as a Human Development Index in terms of separable indicators. This is done by separating the Human Development Index (HDI) by countries (h_c). Poverty indexes 1 and 2 by countries (PI_c), Gender Empowerment Index (GEM_c), Happiness Index by countries (H_c), Corruption Index by countries (CI_c). Let's add to these, the Millenium Development Index by countries (MD_c). The vector of development indexes is thereby expressed as:

$$D_c = \{h_c, PI_c, GEM_c, H_c, CI_c, MD_c\} \quad (1)$$

Let the organizational decision-making index by preferences for each of the development indicator (D_c) for each country can be defined by $\{\rho_{dc}\}$ (Simon, 1987 for details).

The above two sets of indices are included in the wellbeing function by its detailed properties of Interaction, Integration and Evolutionary learning (IIE-learning properties). As shown in Fig. 1, two systemic wellbeing functions, (i) one for development and the second (ii) for the organizational decision-making. Both can be generated by a similar IIE-learning properties. Let these wellbeing functions be:

$$\begin{aligned} &W_{dc}(D_c(\theta_{dc})), \text{for development,} \\ &W_{org}(\{\rho_{dc}^{org}\}), \text{for organizational decision - making.} \end{aligned} \quad (1)$$

⁹The unity of body and soul in defining a theory of numbers is formalized by Dewitt (1992), Supermanifolds, Cambridge, England: Cambridge University Press.

The compound wellbeing function can be obtained by:

$$W_{dc}(D_c(\theta_{dc})) \cdot W_{org}(\{\rho_{dc}(\theta_{dc}^{org})\}) = W(D_c(\theta_{dc}), \{\rho_{dc}(\theta_{dc}^{org})\}). \quad (2)$$

The development variables and organizational variables as given in (1) and (2) above are further disaggregated by the inner socio-economic variables. These variables are stochastically linked and inter-causal in nature. Hence the circular causation relations in the evaluation of the inter-systemic variables exist to explain the inter-variable causality of the endogenous nature of organic relations relating to unity of knowledge of complementarities and participation between the representative variables.

The inter-meshing of the data in the right hand side of (2) vector, $(D_c(\theta_{dc}), \{\rho_{dc}(\theta_{dc}^{org})\})$, can be done between the variables and cross-sectional-time-series data for $D_c(\theta_{dc})$, plus the non-parametric data for $\{\rho_{dc}(\theta_{dc}^{org})\}$. See below in Fig. 2 for data inter-meshing method and its meso-economic modeling. The variables in these vectors are related by circular causation relations as shown in Fig. 2 across countries 'c'. The unifying knowledge-inducing variable is the measurable form of the wellbeing function. In the total number of circular causation relations the quantitative form of the wellbeing function takes the functional form across the two domains of D_c and θ_{dc}^{org} , $\theta = Avg(\theta_{dc}, \theta_{dc}^{org})$. The compound wellbeing function is now given by:

$$\theta = F(D_c(\theta_{dc}), \rho_{dc}(\theta_{dc}^{org}))[\theta]. \quad (3)$$

Furthermore, a wider aggregation of the spiritually induced index for the global order can be formalized for the interdependent countries in terms of their variables and ordinalized degrees of complementarities of unity of knowledge between the country-specific variables globally. We denote the resulting wellbeing function in terms of the development and organizational preference variables forming indices of the interdependence between development sustainability and organizational preferences in decision-making.

Conceptual and Quantitative forms of Spiritual Index as Wellbeing Function Evaluated Subject to Circular Causation in Development and Preferences

Evaluation of $W(\theta) = W(D, \rho)[\theta]$, gives the compounded aggregation over 'c' and their interdependent socio-economic and preference variables all induced by 'θ', as shown above. Because of the IIE-learning process nature of preference formation we can write the aggregate dynamic social preference function as, $\rho(\theta) = \cup^I, \text{interaction} \cap^I, \text{integration} \{\rho_{dc}(\theta_{dc}^{org})\}_{1,1}$; with evolutionary learning shown by, $d\{\rho(\theta)\}/d\theta > 0$ in respect of the interdependence between socio-economic variables, wherein, $\rho(\theta) = f(D(\theta))$.

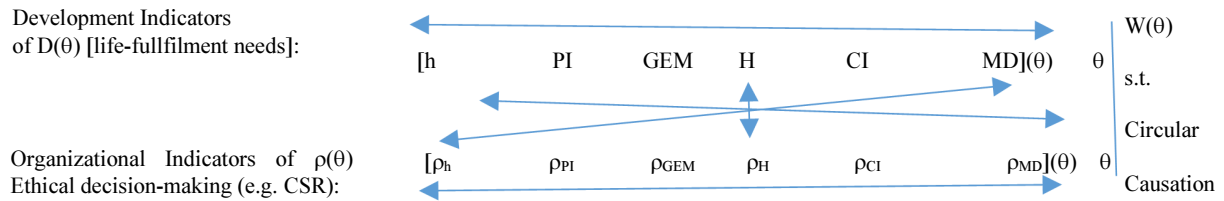


Fig. 2: Spiritual θ -embedded development indices and organizational inter-causal indices derived from the objective criterion of evaluating wellbeing criterion

The circular causation relations are, $D_i = f_i(D_j, \rho)$; $\rho_i = g_i(D, \rho_j)$, $i \neq j = 1, 2, \dots$ and finally, there is the quantitative form of the wellbeing function, $\theta = F(D, \rho)[\theta]$, as a monotonic positive derived functional of $W(\theta) = W(D, \rho)[\theta]$.

Moreover, Fig. 2 also explains the country-specific and global (suffixes are suppressed) nexus of systemic interrelations between the development and organizational variables in the wellbeing criterion. Such complementary interrelations in the framework of organic unity of knowledge is attained in and by the wellbeing function in terms of the relational variables of the Tawhidi index of wellbeing as this was defined earlier (refer Fig. 1) as the true and principal Islamic index of spirituality in terms of $\theta \in (\Omega, S)$.

Addendum: Data inter-meshing in meso-economic perspective of Islamic economics.¹⁰

Here we explain how data inter-meshing is done between time series and cross-sectional/survey data at a given point of time (see Bhatti, 2013¹¹) is a mathematical undertaking under simplifying assumptions. It is assumed firstly that, survey responses to questionnaires on Islamic ethical attributes remain unchanged over the given period of time corresponding to the statistical time-series data. Secondly, the average value of the attribute-ranks calculated on the basis of non-parametric responses (say θ') denotes the quantitative measure of wellbeing on the basis of the non-parametric evaluation of financial data via survey

results. Thirdly, the quantitative measure of wellbeing on the basis of time-series data denotes the average of the data-ranks estimated on the basis of the time-series data. This is denoted by ' θ '. Fourth, with the ' θ ' index as quantitatively estimated wellbeing function there are the individual time-series values generated ' θ_i '-values. Fifth, the number of attributes are devised to be the same as the number of parametric values. This is acceptable, as the attributes are surveyed corresponding to the specific parametric values and averaged within each such group. Sixth, $Avg(\theta)$ and $Avg(\theta')$ correspond to the row-specific (θ_i, θ_A) -values/responses.

Data inter-meshing is an aspect of meso-economic model wherein a mix of micro and macro data and methods are complexly interrelated with their unique form of analysis. Such models and analysis neither belong to microeconomics nor macroeconomics wholly. Yet they are profoundly rooted in methodology and apply to real world problems. A pertinent example of such problems is the one we are studying in this paper. That is the decision-making structure of learning organizations. The decision-making situation in such a case is multidimensional and invoke multivariates that arise from the mix of microeconomic and macroeconomic database and informed knowledge.

We define meso-economics in the broad conception of microscience as follows: "Meso-science implies there are some underlying principles that can unify different disciplines and all disciplines may be involved in contributing available disciplinarily specific knowledge at corresponding levels to revealing common principles for meso-scales at all levels. A small change in the angle to view old problems could lead to a big progress in solving them."¹²

"Mesoscale (herewith) refers to a range of scale in between the micro- (element) scale and the macro- (system) scale and, within this range of scale, a characteristic structure exists, namely meso-structure, featuring dynamic heterogeneity in space and time, which is critical to the performance of the system.

¹⁰Islamic Economics is ontological premised on the precept of oneness between the good things of life while avoiding the unwanted ones as described by the Tawhidi law functioning on choices and functionality of such knowledge-induced choices in 'everything'. Islamic Economics is different from mainstream economics in respect of this principal ontological law. The consequences of such a difference between Islamic economics centered in the Tawhidi law as the primal ontology and mainstream economics triggers off vastly different implications in all of economic reasoning and its analytical study. Thereby we refer to one such mammoth difference by the characterization of Islamic economics as meso-economics. For fresh reinvestigation on the ontological beginnings of economics as science see Lawson (1997). *Economics and Reality*, Routledge, London, England.

¹¹Called complex 'multi-cluster effects' for empirical application in the area of data mining and knowledge discovery.

¹²SNE (2019). "What is meso-science or mesoscience?" Switzerland.

Parameters at the mesoscale are needed to bridge the mechanism at the element scale to the behavior of the system. The objective of mesoscience is to develop a principle as general as possible to make such a bridge for different levels of disciplines.....¹³

Islamic economics can be characterized as meso-economics. In this regard Choudhury writes:¹⁴ “Islamic Economics is neither a microeconomic nor a macroeconomic study framed in these mainstream dichotomies.” The moral and ethical foundation of Islamic economics emerges from the possibility of symbiotic inter-causality at the mesoscales of methodology, behaviour, applications and continuity. Integrated together by methodological abstraction and applications, the resulting mesoscale phenomenological study presents a distinctive methodological worldview of organic unity of knowledge. In the Qur’anic terminology this monotheistic worldview is referred to as Tawhid, the universal Law of ‘everything’.

The nature of Islamic economics as mesoscience requires data inter-meshing. This has the following characteristics: The following strip of the detailed table of inter-meshed data is shown below:

Parametric time-series data $\{\theta, x(\theta)\}$	Non-parametric attributes data
$(\theta^*, A(\theta^*))$ Time $x_1 \theta_1 x_2 \theta_2 \dots x_n \text{ Avg } (\theta_t) = \theta t = 1, 2, \dots, T$ survey	$A_1 \theta'_1 \dots A_n \theta'_n \text{ Avg } (\theta') = \theta'$ at a point of time of questionnaire θ_n

We ask the statistical question: How dispersed are average values of (θ, θ') ? Value-in order to tally the authenticity of the wellbeing results estimated from the parametric and non-parametric sides. The smallest value of the dispersion indicator nearest to zero gives the best result:

- Dispersion Indicator = $|\theta - \theta'|$
- θ' remains constant for the non-parametric formula

If we take all the terms in natural logarithms, then in the coefficient form of the quantitative estimated wellbeing function expressed in natural logarithmic θ , and θ' values, the following expression holds:

$$\text{Dispersion Indicator} = \sum_{i=1}^T \alpha_i \cdot \ln x_i - \ln \theta' \quad (4)$$

The Equation (4) above, under expressions (3), (2) and (1) can be used to conduct empirical studies to

¹³[Huang and Edwards (2018). “Mesoscience: exploring the common principle at mesoscales”, *Natural Science Review*, 5:3, pp. 321-326.

¹⁴[Choudhury (2012). “The ‘Tawhidi’ Precept in Science”, in Muzaffar Iqbal (ed.) *Studies in the Islam and Science Nexus Volume I*, Ashgate, London, Eng.

compute unified global wellbeing indices. The global development agenda decided in the Millennium Development Goals (MDG) and sustainable goals declarations were adapted by the social scientists in the first half of twentieth century which have been proven deficient and the development index are being modified continuously so that a more comprehensive model can be adopted. This paper is a timely attempt to demonstrate the usefulness of our model in computing human well being indices with embedded spiritual values.

Concluding Remarks

In this study a unified organizational model is proposed rather than ephemeral innovation to the existing practices (Davies and Brady, 2015). This paper argues that a large proportion of *Tawhidi ‘spirituality led prosperity’* match with the mesoscience framework and goals of analytical Islamic economics as meso-economics. To explain this aspect of Tawhidi ontological worldview it was necessary to extract the emergent mathematical and analytical composition of the paper in its explanation on spirituality. Hence the Tawhidi ontological worldview of unity of knowledge as paired unity of being and becoming can be utilized to achieve global development targets of wellbeing. Examples thereby are the derived wellbeing goals of alleviating poverty and quantifying the spirituality context of wellbeing index. The Tawhid centered wellbeing criterion also identifies the existing sources of development data that could be utilized to construct the index in accordance with the objectives of unity of knowledge as the primal ontological law. Thereby, the *Tawhid* based Islamic development indices and its formalized millennium goals of embedded moral and maierial sensitivity can be constructed on a global scale. The index of unity of knowledge thus constructed is quite different from those on HDI in the literature. The intent in this paper underlying the spirituality index is to establish an example on the ontological basis of unity of knowledge.

A further contribution of this paper is to introduce the method of mesoscience in the study and model formulation of Islamic economics as meso-economics. Such a methodological originality is made possible by inculcating the Tawidi methodology of unity of knowledge as relational pairing by inter-variables circular causation complementarities vis the wellbeing criterion. The underlying complexity in building the model formulation and database development of meso-economic variables ought to engage the research interests of researchers in Islamic economics.

Ethics

This article is original and contains unpublished

material. The corresponding author confirms that all of the other authors have read and approved the manuscript and no ethical issues involved.

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