Masudul Alam Choudhury

Islamic Economics as Mesoscience

A New Paradigm of Knowledge



Islamic Economics as Mesoscience

Masudul Alam Choudhury

Islamic Economics as Mesoscience

A New Paradigm of Knowledge



Masudul Alam Choudhury Postgraduate Program in Islamic Economics & Finance Trisakti University Jakarta, Indonesia

Department of Social Justice Education, Ontario Institute for Studies in Education University of Toronto Toronto, Canada

ISBN 978-981-15-6053-8 ISBN 978-981-15-6054-5 (eBook) https://doi.org/10.1007/978-981-15-6054-5

© The Editor(s) (if applicable) and The Author(s), under exclusive license to Springer Nature Singapore Pte Ltd. 2020

This work is subject to copyright. All rights are solely and exclusively licensed by the Publisher, whether the whole or part of the material is concerned, specifically the rights of translation, reprinting, reuse of illustrations, recitation, broadcasting, reproduction on microfilms or in any other physical way, and transmission or information storage and retrieval, electronic adaptation, computer software, or by similar or dissimilar methodology now known or hereafter developed.

The use of general descriptive names, registered names, trademarks, service marks, etc. in this publication does not imply, even in the absence of a specific statement, that such names are exempt from the relevant protective laws and regulations and therefore free for general use.

The publisher, the authors and the editors are safe to assume that the advice and information in this book are believed to be true and accurate at the date of publication. Neither the publisher nor the authors or the editors give a warranty, expressed or implied, with respect to the material contained herein or for any errors or omissions that may have been made. The publisher remains neutral with regard to jurisdictional claims in published maps and institutional affiliations.

This Springer imprint is published by the registered company Springer Nature Singapore Pte Ltd. The registered company address is: 152 Beach Road, #21-01/04 Gateway East, Singapore 189721, Singapore

Preface

Science bereft of sound epistemological foundation is muddle-headed. The meta-science of 'everything' deals with the quest for a unique and universal theory that underlies every branch of the socio-scientific world-system in generality and its particulars. The categorization of application of the uniquely generalized theory is only in terms of diversity of issues and problems in different areas of investigation. While mainstream socio-scientific thought is embedded in its humanly differentiated multilateral human concocted domains of understanding, this causes dichotomy between the a priori and a posteriori segments of deductive reasoning separated from inductive reasoning. Therefore, if we consider Kant's ethical adage: "So act as to treat humanity, whether in thy own person or in that of any other, in every case as an end withal, never as means only," there appears a dichotomy between ethics and efficiency, self and other, science and society and the like. Yet ethical holism demands complementarities to exist between these two ends to be scientifically and socially acceptable.

In economic science of growth, efficiency, development, and ethics one finds trade-off between the two goals despite the fact that no reasonable side would like to part with the ethical obligation to establish a caring society. The problem is not of many who think rightfully. The problem lies in the methodology of an optimal, steady-state, and competition framework that must thereby premise its formal and applied concepts on the axiom of the scarcity of resources. This assumption is at once also coterminous with the neoclassical principle of opportunity cost and marginal rate of substitution in optimal resource allocation. It is the core of rational choice theory. It is bereft of a permanent evolutionary learning framework of resource augmentation that defies the axiom of the scarcity of resources as projected in the measures of competition for optimal allocation of scarce resources with steady-state equilibrium. The limitation of mainstream economics transcends this kind of microeconomic perspective to macroeconomics. Thus, the axiom of rational choice entrapped in the assumption of the scarcity of resources, and thereby

¹Kant, I. (1909). Kant's Critique of Practical Reason and Other Works on the Theory of Ethics, in Abbot, T.K. ed. Pg. 47. Longmans, London. 1909), p. 47.

vi Preface

competition and marginalist hypothesis, remains untenable in embodying the ethical and economic perspectives of a cogent theory of ethico-economics wherein ethics and economics exist as analytical and applied realities. This kind of endogenous treatment of ethics and economics is grounded on a new methodological premise. The quest in the methodological direction leads into the foundation of a theory of meso-economics as mesoscience. The much needed integrated study of science and society, ethics and economics have failed to be grounded on any such epistemological premise with an integrated theoretical worldview and its applied method. Thereby, the belief in and the behavioral properties of the coterminous fields of ethics and economics in both the microeconomic and the macroeconomic fields remain empty in all of socio-scientific inquiry.

In the existing socio-scientific inquiry, ethics is seen to be exogenously implanted in economics and science—not endogenously embedded in every discipline. As for example, econometric models currently available, ever since Keynes desired to make economics a handmaiden of ethics along the ideals presented in *Principia Ethica* by G.E. Moore (1903), never could implicate the ethical consequences in economic and social theory and consequential analytical modeling. Keynes' epistemology relating to macroeconomic theory thereby had to yield to rationality behavioral background (O'Donnell, 1989). Economics as a behavioral science altogether succumbed to the optimal calculus of economic rationality and to ethical rationalism. Thereby, science as a whole and economics in it could not acquire any functional ethical representation. Ethics remained exogenous to what the formal models quantified and implied. The general or rather the generalized evolutionary learning ethico-economic system, the formalism with which this work deals with, has no possibility except by exogenous ethical effect in any of the models improvised in the literature.

The embedding of endogenous role of ethical parameterization in the generalized abstracto-empirical model in our work is a contribution that extends the rationality constricted models of general equilibrium—steady state of evolutionary economics (Nelson & Winter, 1982)⁴– in the existing literature of optimal resource allocation theory of pure exchange (Naimzada & Pireddu, 2018).⁵ See also Bisin & Verdier (2001)⁶ on cultural perturbations in evolutionary general equilibrium models.

²Moore, G. E. (1903). *Principia Ethica*, Cambridge University Press, Cambridge, England.

³O'Donnell, R. M. (1989). "Some philosophical background", in his *Keynes: Philosophy, Economics & Politics*, pp. 11–28, Macmillan, London, England.

⁴Nelson, R. R. and S. G. Winter (1982). *An Evolutionary Theory of Economic Change*, the Belknap Press of the Harvard University Press, Cambridge, MA, USA.

⁵Naimzada, A. & Pireddu, M. (2018). "Complex dynamics in an evolutionary general equilibrium model". Discrete Dynamics in Nature and Society, 13 pages. DOI: https://doi.org/10.1155/2018/8471624.

⁶Bisin, A. and Verdier, T. (2001). "The economics of cultural transmission and the dynamics of preferences. *Journal of Economic Theory*, 97:2, pp. 298–319.

Preface vii

Now to search for the ultimate formalism of ethical endogeneity in socio-scientific thought and its epistemic rendering a field of the highest inquiry ought to be discovered no matter where it can be found: Pursue truth as if you did not have it. Knowledge and realism in abstraction and phenomenological evidence make such discovery possible. Religion, abstraction, and abstruse applications in the world of science can then be spearheaded by abstract mathematical logic. Economics is a form of philosophy concerning the interrelationship between the exchange reality of human concern triggered by its behavioral attributes (Simon, 1957)⁷ and by the intricate logic of interdisciplinarity this quest embodies. Inclusive in such a knowledge-induced search for the vastly possible is the inevitable role of God as the great abstraction relating to the realism of socio-scientific world-system. On this matter, the great Indian mathematician, Srinivasa Ramanujan (quoted by Kanigel, 2016, pp. 7 of Prologue)⁸ stated: "An equation for me has no meaning," he once said, "unless it expresses a thought of God." On the ultimate reality of inducing God and Truth uniquely and universally in the worldview of distinctive learning, the Our'an (part of 24:35) declares in respect of the monotheistic oneness as the pedestal of knowledge through learning in everything: "Allah is the light of the heavens and the earth". The saying of the Prophet Muhammadon, the matter of the ultimate scope and objectivity of knowledge in Oneness of God and his Law of Unity referred to as Tawhid in reference to both theology (abstraction) and the phenomenology of the world-system is this (Hadith Al-Bukhari, author's bracketed interjection): "My servant approaches Me with nothing more beloved to Me than what I have made obligatory upon him (learning in the knowledge of monotheistic Oneness), and My servant keeps drawing nearer to Me with voluntary works until I love him (unison between God self, and the universe). And when I love him, I am his hearing with which he hears, his sight with which he sees, his hand with which he seizes, and his foot with which he walks (explained phenomenology). If he asks Me, I will surely give him, and if he seeks refuge in Me, I will surely protect him (the ultimate objective of knowledge, self and the world)."

The behavioral dimension of the new emergent theory of ethico-economics expressed by the meso-economic method of a new theory of knowledge-induced integration of preferences of the microeconomic world into disaggregate macroeconomic theory to make them a meso-one becomes equally sensitive to endogenous ethical/moral methodology and its parameterization. This challenge and its quest and discovery are indeed the highest level of an intellectual feat of all times. That is indeed the direction of this work on the ethico-economic, meso-economics of ethical phenomenology in an alternative representation of analytics (econometrics and wellbeing) that we will refer to as the wellbeing objective criterion.

The Islamic methodological worldview of wellbeing arising from the primal ontology of monotheistic oneness is invoked because of its uniqueness and universality attributes in respect of the generality and particulars of 'everything'

⁷Simon, H. (1957). *Models of Man*. John Wiley & Sons, New York, NY.

⁸Kanigel, Robert (2016). *The Man Who Knew Infinity: a Life of the Genius Ramanujan*. Simon and Schuster. pp. 30–33.

viii Preface

(Barrow, 1991). The emergent derivation of the law of Oneness in relation to the details of issues and problems of the world-system in the light of relational unity of knowledge presented in the Qur'an (36:36)¹⁰ combines the deductive abstraction with the phenomenological inductive recursively in continuums of knowledge, space, and time dimensions. The derived methodological worldview formalized and investigated in the mesoscientific objective of the wellbeing criterion thus earns its socio-scientific candidacy.

The Islamic primal ontological methodology of monotheistic oneness (Tawhid as the Law) in its belief and functional attributes offers this unique and universal worldview to 'everything.' Yet it is not the contribution on which the Muslims and their disciplines have rested. Consequently, like the methodological failure of Kantian a priori and a posteriori dichotomy in knowing the unified reality of truth by unity of knowledge and the final episteme, and which renders the field of development studies to attain the ethical integration in a unified endogenous relational oneness, so also the so-called 'Islamic' disciplines like economics, finance, science, and society have failed utterly by their ontological and epistemological emptiness. The most profound ontological primacy of monotheistic oneness (Tawhid as the Our'anic Law) has been replaced by the dysfunctional nature of shari'ah as humanly concocted and uttered objective and purpose by the Muslim sects. Indeed, the equivalence of shari'ah to Tawhid is only in terms of the latter. Thereby, shari'ah is simply the 'way' from and towards knowing Tawhid in the enlightening profundity of unity of knowledge as the law relating to world-system. But if this is the logical and clear evidential conclusion from the Qur'an, then not shari'ah but Tawhid alone as the belief, Law, application, and sustainability in the most methodological way becomes the sole objective of the true Islamic methodological worldview across holism and possibilities.

Shari'ah if anything, though doubtfully, is therefore a partial examination of the world-system of juristic innovations by various Muslim sects apart from the accepted common rules laid down in the Qur'an (36:36). This law is of monotheistic unity of knowledge as relational phenomena in and across 'everything.' The so-called 'Islamic' economics and the intellectual legacy have failed utterly in the quest for the true Qur'anic methodological worldview. This sliding and decadence in Muslim scholarship have lasted for a long time now and continues on by its human-concocted design of shar'iah following sects and remaining a failed isolation of a separated world-system. Contrarily, Tawhid as Qur'anic law is of 'everything' (Choudhury, 2020). The Qur'an declares in this regard; see Qur'an (24:35). The so-called 'Islamic' methodology claiming shari'ah and in no substantiation by its Qur'anic relationship with Tawhid as the law of monotheistic

⁹Barrow, J.D. (1991). *Theories of Everything, the Quest for Ultimate Explanation*, Oxford University Press, Oxford, England.

¹⁰Qur'an (36:36): "Exalted is He who created all pairs - from what the earth grows and from themselves and from that which they do not know".

¹¹Choudhury, M. A. (2020). *Meta-Science of Tawhid, A Theory of Oneness*. New Palgrave, New York, NY.

Preface

unity of knowledge by organic and symbiotic interrelations between entities (positive and negative) is no different from the Kantian dysfunction of organic unity between a priori and a posteriori (i.e. deductive and inductive, noumenon and phenomenon, pure reasoning and practical reasoning, etc.). This epistemic failure is maintained in recursive continuity of being and becoming.

All such methodological implications of ethical endogeneity and its imminence in the real problem solving of phenomenological effects are embedded in the objective criterion of wellbeing (maslaha in Arabic terminology). The wellbeing function expresses the mesoscientific analytics of micro-foundation of ethical unity of endogenous by inter-variable causality in a large system of interactive, integrative, and learning relations. The methodological worldview of monotheistic unity of knowledge that enables ethical endogeneity, and thereby inter-variable causal recursive nature of complementary relations (positive or negative) in the wellbeing function, and makes the resulting methodical application good for 'everything' are altogether unknown in so-called 'Islamic' economics, finance, social, and scientific thought. The resulting state of stagnation of 'Islamic' thought persisted for ages now. Even the use of the term maqasid as-shari'ah (purpose and objective of shari'ah) is benign of any substantive treatment of Tawhid as the Law and its imminent methodology of the unity of knowledge in all details of the world-system.

The conceptual and applied properties of the underlying dynamics of the Tawhidi methodological worldview and its wellbeing criterion with its system of inter-variable causal relations are presented throughout this work. It is presented here to initiate the underlying methodology extending from Primal Ontology to Epistemology to Phenomenology in continuums of sustainability by evolutionary learning. The Tawhidi methodology built upon the theory of causality by the unity of knowledge as endogenous induction of endogenous inter-variable relations is a distinctive contribution of this work. It rescues the Islamic methodological worldview from the intricacies that the subject of causality was rendered by the Islamic theologians. Yet no creative avail of abstracto-empirical nature could be realized (Ozalp, 2016, pp 245–260). 12

In conclusion to this preface of our work, we claim to have laid down the groundwork of a new meso-economics and mesoscientific episteme of inter-causality between the full domain of endogenous variables according to the monotheistic methodological worldview of unity of knowledge. This work extends the circular causality theme to meso-economics with a distinctive analytical outlook. It presents a critique and a substantive outlook of a truly Islamic ontological foundation of its meso-economic framework. The resulting abstracto-empirical methodology contrasts with the so-called mainstream economic formalism of society. existing 'Islamic' economics. finance. science. and abstracto-empirical formalism, this work has replaced the theological arguments centering on an unresolved meaning of causality.

¹²Ozalp, M. (2016). God and Tawhid in Classical Islamic Theology and Said Nursi's Risale-i Nur. Ph.D. Thesis, Department of Studies in Religion, School of Letters, Art and Media Faculty of Arts and Social Sciences, University of Sydney, Australia.

x Preface

The present work has also established the foundation of the truly Islamic methodological worldview of the Tawhidi groundwork of Islamic economics, finance, science, and society. The present work thereby claims that over the years since the inception of the catchword of 'Islamic' economics was due to the advent of some Indian scholarly thought in this regard and the embellishment of this 'Islamic' terminology by the oil-revenues of the Middle East. The convenience of the terminology was maintained by the political advantage of rich shareholders and institutions in the Muslim world. The climate of benignity in scholarship and global contribution, except for the massing of shareholders' wealth by so-called 'Islamic' product designs and a questionably framed meaning attached to shari'ah contra the Tawhidi methodological worldview has persisted and deepened today.

The New Critical Orientation of the Work

None of such states of intellectual weakness is acceptable in the great realm of Islamic worldview taken in the Tawhidi meaning as universal law centered on the ontological precept of the unity of knowledge and the generality and particulars of the world-system. It is just that, the gurus of the so-called 'Islamic' economics and finance have failed to open their heart, mind, and phenomenological outlook to the Qur'an and sunnah to understand the fundamental truth of Tawhid as the Law of 'everything.' All that has been pursued in vain comprise the footsteps of the rationalist paradigms. The Qur'an declares (6:125, explication by author in bracket): "Those whom Allah (in His plan of Tawhid as Law) wills to guide,- He opens their breast to Islam; those whom He wills to leave straying,- He makes their breast closed and constricted (non-Tawhid), as if they had to climb up to the skies: thus does Allah (heap) the penalty on those who refuse to believe (Truth of Tawhid as the Law of monotheistic Oneness)." Such belief is heightened and deepened by the understanding of the inter-causal organic relations between the cardinal elements of haqq al-yaqin (Tawhid), Ilm al-yaqin (Qur'an and sunnah as medium), and ayn al-yaqin (cognition of the world-system in terms of Tawhid = phenomenology). The intertwining of these experiences in the knowledge, space, and time dimensions intra-system and inter-systems embraces the substantive meaning of evolutionary sustainability.

Contribution

The contributed chapters of this work will include the themes surrounding a methodological approach to Islamic economics and its criticism. The studies from all different points of analytical view are welcomed. Despite these alternative viewpoints, the meso-economic construction of ethics and economics as an

Preface xi

endogenous phenomenon with analytical and applied perspectives is presented. In welcoming such wide perspectives on the abstract nature, methodological nature, and critique of what ought to be a true worldview of Islamic economics and finance in a broad socio-scientific perspective, it is hoped that fair treatment is given to various viewpoints on the methodology of Islamic economics and finance in a rigorous outlook upholding the Qur'an and sunnah as the primal ontological origin. The broad mesoscientific worldview is upheld.

While exploring the possibility of Islamic economics and finance in the world of learning with the analytical methodological presentation the chapters of this work undertake applied and critical studies centered on the continuing theme of meso-economics of the wellbeing objective criterion and the alternative. The meso-economic application of parameterised ethico-economic embedding in the full-scale of inter-variable endogenous causality is a prime contribution of this work in its distinctive originality and contribution in socio-scientific field. This particular field of the Tawhidi worldview transcends both the non-Tawhidi intellection of mainstream economics and finance and the so-called 'Islamic' juristic interpretation of human-concocted narrowness of shari'ah in all its forms. Yet this is an issue for various authors in their contributions to explore with the full latitude of openness and fairness of scholarly views.

This call for contributions also extends to areas of mainstream economics with a focus on analytical (econometric) methodology and applications that have the potential of investigating various critiques of rationality and aggregation axioms in the midst of treating the endogenous theory of ethico-economics. All aspects of methodological and applied questions are thereby welcomed including theories of microeconomic, macroeconomic, meso-economic organizational and institutional decision-making, and more. ¹³

To end up this preface, Table 1 is intended to explain the generalized methodological worldview of the abstraction, application, and sustainable continuity of the primal ontology of Tawhidi organic oneness and its representation in the mesoscientific construct of the world-system.

¹³Simon, H. (1987). "Decision making and organizational design", in Pugh, D. S. (ed.), *Organizational Theory*, pp. 202–23, Penguin Books, Hammondsworth, Middlesex, England; Simon, H. (1957), *Models of Man*, New York, NY: John Wiley & Sons.; Feiwel, G. R. (ed.) (1989). Arrow and the Foundation of the Theory of Economic Policy. Macmillan, London, England; O'Donnell, R. M. (1989). *Keynes: Philosophy, Economics and Politics*, Macmillan Press Ltd., London, England; Parsons, T. (1964). *The Structure of Social Actions*, The Free Press of Glencoe, New York, NY.; Kahneman, D. (2013). *Thinking, Fast and Slow*. Farrar, Straus and Giroux. New York, NY.; Kahneman, D. & Tversky, A. (eds.) (2017). *Choices, Values, and Frames*. Cambridge University Press, Cambridge, England.

Table 1 Synopsis of Tawhidi methodological outlook in reference to the primal ontology of unity of knowledge

Primal Ontology	Derived epistemology	Phenomenology	Recall of primal ontology	Continuum:sustainability in knowledge, space, and time dimensions
1	2	3	4	5
Monotheistic law Of origin of unity Qur'an and sunnah: Tawhid as Primal Ontological Law	Deriving unity of knowledge as episteme concerning the knowledge induced world-System, {X(θ)}	Application by evaluation of wellbeing function subject to circular causation relations between the entire vector of endogenous variables	Evolutionary learning by recalling the Tawhidi Law	Continuity
$[\Omega{\to}S{:}~(\Omega{,}S)]$	$ \rightarrow f1 \ \{\theta\} \rightarrow f2 \ \{\theta, X(\theta), t \\ (\theta)\} $	\rightarrow Eval. W(θ ,X(θ),t(θ))	→PROCESS 2	→PROCESS N
PROCESS 1	-	As conceptual Wellbeing function, subject to circular causation relations between the entire vector of endogenous variables {θ,X} (θ)}:Xi(θ) = hi(θ,Xj(θ),t(θ))j ≠j=1,2,n θ = W(X(θ),t(θ)) as quantitative form of wellbeing function derived by the Implicit Function Theorem of continuously differentiable W()statistical simulation and policy analysis follows by observing degrees of complementarities signified by the positive (or corrective negative) signs of the coefficients and the inter-correlations between the endogenous variables.	Of Evolutionary Learning followed by simulated reconstruction in knowledge, space, and time dimensions.	
Abstraction: Methodology	↑	Meso-Economics	Meso-Econometrics of Microeconomic Aggregation OF Choices by Preferences $\{\wp(\theta)\}$ AS, $\{\theta.X(\theta),t(\theta); \wp(\theta)\}$ $\wp(\theta)=\bigcup_{n}$ interaction \cap integration $\{\wp(i,j)=1,2,\dots,n\}$	Simulation IN Knowledge Space and Time Dimensions

Choudhury, M. A. (2018). "Endogenous ethics in evolutionary learning model contra utilitarianism: endogenous ethics." Chapter 4 in Ethics and Decision-Making for Sustainable Business Practices, ed. Ionica Oncioiu, IGI-Inc. New York, NY.

Preface xiii

The Critical Nature of this Work in the Field of Islamic Intellection

Indeed, the intellectual inquiry in this work in the field of critical examination of the presently existing understanding of Islamic economics, finance, science, and society is of seriously contrasting nature. That is not only due to the construction of qur'anic scientific thinking by critical inquiry of what has prevailed in the absence of the deeper understanding and its formalism in scientific thinking, ta'wil. The problem of the departure of the existing Muslim scientific program also owes to the inextricable embedding of so-called Islamic intellection into mainstream fields. Yet mainstream socio-scientific thinking stands for a great ontological and epistemological re-thinking that would allow the emergent deeply analytical study and its empirical viability of moral/ethical embedding in the socio-scientific inter-causal, evolutionary universe of endogenous systems and neurocybernetic. ¹⁴

The unnecessarily overwhelming presence of shari'ah beyond its due commonality with the Qur'an has caused the abandonment of the deeper and socio-scientific analytical study of the Qur'an and its support by the sunnah in respect of the generality and particulars of the world-system that Tawhid as law explains. The present work studies many such critical issues and problems that contrast the conceptualization and application by Tawhid as law from the legalistic silence of shari'ah in all such deeply contextual studies of the world-system. While the critical intellectual studies of Tawhid and the world-system will continue to rise above the intellectually dormant field of shari'ah, yet the latter traditionalism will continue by sectarian long stay (madhab), the denial of the qur'anic practice of ta'wil in socio-scientific inquiry, and the undue impress of Wahabism and Salafism in this regard on the abandonment of qur'anic socio-scientific investigation (ta'wil). There is also the demeaning metaphysical illogicalness of Gnosticism in truly qur'anic socio-scientific thought and sheer narrative studies of Muslim thought through the ages (Nasr, 2003). This state of oblivious Muslim intellection respecting study of Tawhid and the world-system must change as this book advocates by its erudition. Thus, the content presented here is for the world scientific community beyond being limited to Muslim readership.

Jakarta, Indonesia/Toronto, Canada

Masudul Alam Choudhury

¹⁴Edel, A. (1970). "Science and the structure of ethics", Neurath, O. Carnap. R. & Morris, C. (eds.) Foundations of the Unity of Science, Vol.II, Nos. 1-9, pp. 273–378, The University of Chicago Press, Chicago, ILL.

¹⁵Nasr, S. H. (2003). *Science and Civilization in Islam*, Islamic Texts Society, Cambridge, UK. Also published by Harvard University Press, Cambridge, MA, USA, 1987).

Mesoscience

Inquiring the Micro-Ethical Endogenous Foundation of Aggregate Economic World-System

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' 16

"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."

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. 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. ¹⁸

The econometrics of mesoscience of Islamic economics does not question the appropriateness of mathematical usage in microeconomics and macroeconomics. Rather, the mesoscience question of intellectual discourse revolves around the

¹⁶Choudhury, M. A. (2012). "The 'Tawhidi' Precept in Science", in MuzaffarIqbal (ed.) *Studies in the Islam and Science Nexus Volume I*, Ashgate, London, Eng.

¹⁷Springer Nature, Engineering (2019). "What is meso-science or mesosciance?" Switzerland

¹⁸Huang, W. Li, J. & Edwards, P. (2018). "Mesoscience: exploring the common principle at mesoscales", Natural Science Review, 5:3, pp. 321–326.

xvi Mesoscience

ontological methodology in the construction and evaluation of the emergent economic models and their implications. Islamic economics as meso-economics has its own distinct methodology and methods of abstracto-empirical formalism premised in the monotheistic law of unity of knowledge arising out of the Qur'an. It is called Tawhid. This primal ontology of Islamic economics and mesoscience is treated throughout this text as the universal law in abstracto-empirical formalism.

Contents

\mathbf{E}	pistemic and Economics
	ackground
R	econstruction of Economic Theory with Epistemic Grounding
	bjective
	ostulates of the New Heterodox Theory of Ethico-Economics
	remised in Unity of Knowledge
	he Generalized Model of Circular Causation According
	the Episteme of Unity of Knowledge
E	Ionetary Perspectives in Islamic Economics as Mesoscience xplaining Circular Causal Relations Between Micro-Money,
	inance, and Real Economy (MFQ)
V	ersion of the Islamic Economy
	he Formal Model of Micro-Money by Combining Expressions
	lethodological Governance of Islamic Banks in the Meso-Micro-
	Ioney and Real Economy Relations
	onclusion
R	eferences
0	ntoloical Foundation of the Theory of Economtrics in Unity
of	f Knowledge by Inter-Causality
	ter-Causality (Circular Causation) in the Wellbeing Function
	RUTH and FALSE
	onsciousness and Ethical Endogeneity
	ititating Some Critical Concepts in the Building of the Econometrics
	Circular Causation
	he Principle of Circular Causation in High Thinking
	he Positive Wellbeing Criterion and Negative Wellbeing
	unction
	ircular Causation or Inter-Causality from the Ontological Core
01	$f(\Omega, S)$

xviii Contents

	The Universality of (Ω, S) in Pervasive Consciousness	
	of Unity of Knowledge	27
	Consciousness Modeled in Econometrics of Inter-Causality	28
	The Nature of Morality/ethics in Econometrics of Mainstream	
	and Circular Causation Fields	28
	Econometric Concerns Underlying Circular Causation Theory	
	Versus Mainstream Economic Theory	30
	Generalized Economic Evolutionary Equilibrium Caused	
	by Circular Causation	33
	Preferences in Micro-Foundation of Macroeconomics	35
	Conclusion	36
	References	37
		31
3	Profit-Sharing Versus Interest Rate in Islamic Economics	
	as Mesoscience	39
	Introduction	41
	Contrasting Mainstream Islamic Economics with the Tawhidi	
	Methodological Worldview	42
	Formalism	43
	The Case of Debt, Riba, and Profit-Sharing in the Formal Model	46
	Some Conceptual Issues Relating to Circular Causation Relations	
	Between the Variables $\{R/I, R, F, R/D, \theta\}[\theta]$	46
	Econometric Application	50
	Appendix: Empirical Estimates	53
	References	74
4	Content Annuagh to Analytics of Islamic Doubs	
4	Content Approach to Analytics of Islamic Banks by Meso-economics of Inter-causality	75
		75
	Objective	
	of Islamic Banks	76
	Multivariate Wellbeing Model of Trade and Interest Rates	78
	The Theoretical Implication of Tawhid as Monotheistic Oneness	
	in the Econometrics of Circular Causation and Wellbeing	81
	Consequences of Misspecification of Objective Criterion in Islamic	
	Institutional Policies for the Ummah (Muslim Comity of Nations) Empirical Inference of IDB's Macroeconomic Failure of Islamic	82
	Paradigm Shift of SDG	83
	Conclusion	91
	The Wellbeing Function is Estimated Subject to the Circular	
	Causation Equations in their Log-Linear Forms	91
	References	93

Contents xix

	ective Functions of Islamic Bank Bangladesh: A Critique lamic Economics
	ctive and Introduction
	itical Review of IBBL in the Light of the Theory
	icro-foundation of Macroeconomics and Its Econometric
	ures as the Truly Islamic Methodologically Embedded
	odical Approach
	BL Mission and Vision
Abse	nce of Modeling the Micro-foundation of Macroeconomics
and 7	Thereby the Wellbeing Goal in IBBL
A Pro	escribed Model of Endogenous Inter-causal Dependence
for A	Asset Valuation
The 1	Market Perspective of IBBL 'Business Model'
Critic	cal Examination of IBBL Data
Circu	ular Causation in IBBL Financing of Agricultural Sector,
2016	–2017 (Millions of Taka)
Conc	clusion
Refe	rences
The	Meso-Economics of the Wellbeing Criterion
	duction
	d Understanding of the Wellbeing Concept in the Muslim
	d _.
	ctive
	ature Review
	Critical Review of Sen's CF-Theory of Wellbeing
	lems of Islamic Wellbeing Formalism
	e-Time Concept of Evolutionary Wellbeing in the Literature
	tept of the Wellbeing Function in Space-time Structure
	conomic Reasoning
	Concept of Evolutionary Wellbeing in {Knowledge, Space,
	P) Dimensions
	rtya Sen's Wellbeing Form in CF-Theory in Terms of Pervasive
	plementarities
	New Methodological Worldview of Wellbeing and Development
	re with the Episteme of Unity of Knowledge
	rasting Tawhidi Epistemic Methodological Worldview
	eoclassical 'Islamic' Economics
	irical Example of Quantitative Estimation of the Wellbeing
	rion
θ-esti	imation
	gend
	puting Socio-Economic and Islamic Financing Related θ -values Time
J , UI	

xx Contents

	Conclusion	134 135 137
7	Imaging the Imaginary Events in Evolutionary Learning	
	Trajectories of Wellbeing	139
	Objective	139
	Analytical Properties Along the Trajectory of History HH	141
	Generalized Wellbeing Function	143
	An Example of Continuous θ -induced Simulation	144
	Evolutionary Learning Property of Wellbeing Function	
	in Its Exponential Compounded Wrapping	146
	Spatial Domain Analysis	149
	Partial Elasticity Coefficients	152
	Input-Output Matrix Format of Generated Data	152
	Visualisation of Matrix Data Conversion into 2-D and 3-D	154
	Conclusion	155
	References	157
8	Meso-economic Framework of Decision-Making	159
	Objective	159
	Introduction: Some Definitions	160
	Evolutionary Learning	160
	IIE-Perspective in Evolutionary Learning	163
	Wellbeing Criterion	163
	The Analytical Nature of Endogenous Opposed to Exogenous	
	Effects in a Firm's Production Function	165
	Formalism of the Evolutionary Learning Wellbeing Function	1.65
	in Unity of Knowledge	165
	A Generalized Form of the Structure and Functions of Evolutionary Learning Organization, Institution, and Social Order	167
	An Example of Evolutionary Learning by Unity of Knowledge:	107
		160
	The Islamic Social Wellbeing Criterion of the Corporation	169
	The Islamic Social Wellbeing Criterion of the Corporation How the Evolutionary Learning Parameters of Knowledge-Flows	
	The Islamic Social Wellbeing Criterion of the Corporation How the Evolutionary Learning Parameters of Knowledge-Flows $\{\theta\}$ are Generated and Assigned?	170
	The Islamic Social Wellbeing Criterion of the Corporation How the Evolutionary Learning Parameters of Knowledge-Flows $\{\theta\}$ are Generated and Assigned?	
	The Islamic Social Wellbeing Criterion of the Corporation How the Evolutionary Learning Parameters of Knowledge-Flows {θ} are Generated and Assigned?	170
	The Islamic Social Wellbeing Criterion of the Corporation How the Evolutionary Learning Parameters of Knowledge-Flows $\{\theta\}$ are Generated and Assigned?	170 171
	The Islamic Social Wellbeing Criterion of the Corporation How the Evolutionary Learning Parameters of Knowledge-Flows {θ} are Generated and Assigned?	170 171 172 174

Contents xxi

9	Endogenous Monetary Transmission by Meso-Economic	1.77
	Model	177 177
	in Meso-Economic Study	179
	Requirement Monetary System	182
	Monetary System	182 184
	Twarruq as an Example of Micro-Money in Islamic Financial	
	Mobilization	186 187
	Indonesia	188 188
	Vector Autoregressive (VAR)	189
	Discussion of the Monetary Transmission Model of $[M,Sp,Q'](\theta)$ Empirical Analysis of the Monetary Transmission Model Without	189
	'θ'-Parameter	190
	with θ -parameterization	193
	Wellbeing Function	195 196
	Statistical Analysis: Results	190
	Conclusion	198
	References	198
10	Money, Debt, Interest, and Real Economy	201
	Introduction	201
	The Analytical Approach of Investigation	202 204
	Tawhidi Ontology of Unity of Knowledge and the Formulation	204
	of the Generalized System of Meso-Relations Involving Money, Real Economy, Debt, and Interest	207
	Monetary Policy Emanating from (M, Sp) Complementary	
	Relationship via the Circular Causation Relations	
	Monetary Transmission in the 100% RRMS	212
	Rate (i) and Debt (D) Interrelationships	215

xxii	Contents

	Stability of Exchange Rate of Currency in Circulation in 100%	
	RRMS	218
	Conclusion	
	References	221
11	Conclusion	223
Ind	ex	227

List of Figures

Fig. 1.1	Exchange evaluation of events in knowledge, space, time	
	dimensions across history HH	7
Fig. 1.2	The generalized monotheistic ontological model construction	
	in unity of knowledge particularized to inter-causality between	
	micro-money, finance, and real economy (MFQ)	11
Fig. 2.1	Ontological sensitivity of (Ω, S) via $\{\theta\}$ in abstracto-empirical	
	model construction	26
Fig. 3.1	Interactive-integrative endogenous variables in circular	
	causation	47
Fig. 3.2	Interactive, integrative, and evolutionary nature of $S(\theta)$	48
Fig. 3.3	Construction of the complex nature of interactive, integrative,	
	evolutionary (IIE) History of learning events sustained in	
	knowledge, space, and time dimensions as by inter-causal	
	vector of endogenous variables, $\{\wp, r/i, R, F, R/D, \theta\}[\theta]_t$	49
Fig. 3.4	Evolutionary convergences along the Event-History	
	$\{HH_p(S(\theta))\}$	49
Fig. 3.5	Transcendence of intra-systemic results across sustainability	
	of knowledge, space, and time dimensions	5 0
Fig. 5.1	IBBL does not have any particular precepts in its Mission	
	and Vision that can be identified as especially Islamic	
	in origin	98
Fig. 5.2	Comparative views of Corporate Governance: Islam	
	and the other perspective	101
Fig. 5.3	A snapshot of blueprint for IBBL (Islamic Banks and IDB)	
	'Business Model'	112
Fig. 6.1	TSR: The universal and unique grand design of Tawhidi	
	Epistemic Relations in Wellbeing	127
Fig. A6.1	Extending Penrose's triangle (octagon) by the formal	
	methodology of unity of knowledge of compounded	
	evaluation of the wellbeing objective criteria	136

xxiv List of Figures

Fig. 7.1	Imaging the imaginary into the only nature of the world	
	as the phenomenology of real-world	140
Fig. 7.2	Compounded historiographies of evolutionary learning	
	paths	145
Fig. 7.3	Intra- and inter-systemic compounded wrappings	
	of evolutionary learning in historiography	145
Fig. 7.4	Visualisation of sensitivity of elasticity coefficient	
	on sectoral GDP Data in 2-D Surface	153
Fig. 7.5	Sectoral contribution in 2-D surface	155
Fig. 7.6	State of sectoral linkages in 3-D visual display—between	
	manufacturing and other sectors	156
Fig. 9.1	Monetary transmission in 100% reserve requirement	
	monetary system of (M-F-RE)[θ endogenous complementary	
	relations	183
Fig. 10.1	Compound functional interrelations between money, real	
	economy, debt, and interest rate according to Tawhidi	
	worldview of unity of knowledge	205
Fig. 10.2	The evolutionary learning History of events by Tawhidi	
	unity of knowledge	205
Fig. 10.3	Monetary transmission in 100% reserve requirement monetary	
	system of (M-F-RE)[θ] endogenous complementary	
	relations	214
Fig. 10.4	Complex cybernetic disaggregation of wellbeing indexes	219
Fig. 11.1	The extensive embedding by intra- and inter-causality	
	of the generalized world-system	225
Fig. 11.2	The property of intra- and inter- embedded system	
	as non-Cartesian geometrical fractal	226

List of Tables

Table 2.1	Outline of the ontologically induced econometric model	
	in circulation causation and permanent endogeneity	
	of knowledge-induced variables of Truth and False	
	in their respective evaluation criteria	22
Table 2.2	Formalizing the underlying model of Table 2.1	23
Table 4.1	Approvals by entities and modes of financing (\$ million)	88
Table 4.2	Computing variable specific parameterised weights	89
Table 5.1	Sector-wise general investment, 2016–2017 (percentages	
	of total investment)	107
Table 5.2	Mode-wise investment 2016–2017 (percentages of total	
	investment)	108
Table 5.3	Percentage distribution of components of Agricultural	
	Investment, 2016–2017	108
Table 5.4	Cross-sectional conversion of surveyed data	
	as in Table 5.3	108
Table 6.1	Statistical data and averaged θ -values, examining	
	the performance of Islamic banks in Indonesia by their rural	
	and urban sector operations on wellbeing, 2005–2014	133

Chapter 1 Epistemic and Economics



Abstract The theme of ethico-economics is introduced in terms of the interactive, integrative, and evolutionary learning properties of the epistemology of unity of knowledge. The attenuating methodology yields a unique and universal model of circular causation between the selected complementary variables. The circular causation model conveys the empirical possibility of ethico-economic problem-solving in the context of the epistemology of unity of knowledge. The empirical perspectives of epistemic and economics and the conforming formalism of unity of knowledge open up a vast coverage of policy-theoretic and strategic studies that contest with and provide distinctively different results and their explanations in the framework of heterodox economic theorizing involving ethico-economics.

JEL classification B41 · B52

Background

The classical works in economic thought had undertaken substantive inquiry in the field of epistemic and economic theory. It was the preoccupation of the Austrian School of Economics under the influence of Ludwig von Mises. Yet before this time, both Adam Smith² and John Maynard Keynes³ were great epistemologists in their ideas to instil ethics in economic theory. Gunnar Myrdal⁴ was a sociological thinker in theorizing economic development by the concept of the wider field of valuation. In recent times G.L.S. Shackle⁵ has questioned the validity of neoclassical economic theory in respect of economic reality. The contemporary works of

¹von Mises (1976).

²Smith (1984).

³O'Donnell (1989).

⁴Myrdal (1958).

⁵Shackle (1972).