

Methodology of integrated knowledge in Islamic economics and finance: collective *ijtihād*

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Abstract

Purpose – The purpose of this paper is to discuss the methodology of integrated knowledge in Islamic economics and finance and seek to offer collective *ijtihād* as one way to find solutions to the existing problems in the field.

Design/methodology/approach – The study is based on the idea of multidisciplinary or interdisciplinarity, which uses not only traditional sources of Islam and economics, such as *uṣūl al-fiqh*, *fiqh mu'amalat*, econometrics, statistics, microeconomics and macroeconomics but also looks into behavioural and natural sciences for inspiration and solutions. This paper is constructed using the methodology of “the two readings”, as promoted by the International Institute of Islamic Thought, and which combines the revealed and the existential sciences.

Findings – This paper proposes the collaborative multidisciplinary methodology as the main approach to studying the modern problems and challenges, as well as for finding solutions in the fields of Islamic economics and finance.

Practical implications – Studying and researching issues, particularly in the field of Islamic economics and finance, from an interdisciplinary perspective, effectively broadens practical applications and possibilities in Islamic finance.

Originality/value – This paper contributes to social sciences, especially the field of Islamic finance, and calls upon researchers to engage in multidisciplinary studies.

Keywords Islamic finance, Methodology, Sharī'ah, Islamic economics, Multidisciplinary, Integrated knowledge, Islam, *Ijtihād*, Interdisciplinary, Islamic economics and finance, *Maqāṣid al-Sharī'ah*

Paper type Conceptual paper

Introduction

Before the age of narrow specializations that began during the Enlightenment, was reinforced by the Industrial Revolution and reached its pinnacle by the end of the twentieth century, scholars mastered many disciplines. Many scholars of the past excelled in more



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than one field and were thus often called polymaths. Aristotle (d. 322 BCE), for instance, was a poet, musician, philosopher, linguist, biologist, logician and physicist. Archimedes (d. 212 BCE) was a scientist interested in mathematics, physics and astronomy and was also known as an inventor and engineer. Ptolemy (d. 170 CE) was also a polymath, known as a mathematician, astronomer, geographer and astrologer, and he contributed to the theory of music and optics. Al-Biruni (d. 1048 CE) was well versed in physics, astronomy, mathematics and was also a geographer, pharmacologist, historian and linguist. Ibn Al-Haytham (d. 965 CE) was a mathematician, astronomer, philosopher, optician and theologian. Muhammad ibn Zakariya Al-Razi (d. 925 CE), the Persian scientist, left his mark in medicine (especially in paediatrics and ophthalmology) and philosophy. Ibn Sina (d. 1037 CE) left an impressive legacy in medicine, astronomy, philosophy, mathematics, physics, psychology, geography and theology. Ibn Al-Nafis (d. 1288 CE) was a well-known expert in jurisprudence and medicine. Ibn Bajjah (d. 1138 CE) lived in Andalusia and left works on astronomy, physics, music, philosophy, botany and poetry. Musa ibn Maimun (d. 1204 CE), also known as Maimonides, was an eminent Jewish scholar who excelled in jurisprudence, philosophy, astronomy, medicine and theology. Galileo Galilei (d. 1642 CE) was an Italian astronomer, physicist, engineer, philosopher and mathematician.

These scholars of the past who lived in various times and civilizations represent just a small portion of the polymaths who were interested in and worked in different fields of knowledge. It was a norm for scholars to master more than one discipline. Moreover, their contributions were not only at the level of theoretical studies but had a huge impact on real life. Hence, many applied sciences were developed by scholars who were also philosophers, jurists or theologians.

When it comes to Muslim scholars, their work represents a true *ijtihād* (hard work or perseverance) which led to beneficial knowledge. They were led by the worldview based on the idea of *tawhīd* (monotheism), the will to succeed with the help of Allah, and a comprehensive methodology, which guided their scholarship. At present, we live in the age of narrow specializations, including the field of Islamic economics and finance. Often, the economic and financial theories arrived at by experts in the field get translated into government policies that affect the society as a whole. The mono-disciplinary approach tends to misinterpret the reality of this complex life and, thus, offers solutions that lead to crises. Studying economic and financial behaviour from the purely positivist worldview and then applying the corresponding economic policies has resulted in dozens of serious crises throughout the world in the past century, including the global financial crisis of 2008-2009. One level at which problems originate is methodology, whereby all subsequent research, development and policies are defined by the original approach.

This paper discusses methodology, its principles and its application to the field of Islamic economics and finance. It also looks into the matter of integrated knowledge and proposes a multidisciplinary methodology that combines the Sharī'ah (Islamic law) with human and natural sciences and information and communication technology. Hence, this paper aims at offering solutions at the methodological level using the idea of collective *ijtihād*. Therefore, the scope of this paper is only methodology from the viewpoint of integrated knowledge and does not cover such important issues as assumptions in economics and finance or technical issues such as usury/interest, financing, legal contracts, unemployment, inequality or scarcity.

The paper is organized as follows. Firstly, the matter of methodology, its definition, importance and problems will be discussed. This will be followed by a short excursion into the current methodology of Islamic economics and finance. Thirdly, the paper presents the idea of integrated knowledge as promoted by the International Institute of Islamic Thought

(IIIT). This is followed by the exposition of the proposed multidisciplinary methodology that is based on the idea of collective *ijtihad*.

Methodology: the essence, importance and problems

Linguistically, methodology is defined as “a system of methods, principles, and rules for regulating a given discipline” (dictionary.com), “a system of ways of doing, teaching or studying something” (dictionary.cambridge.org), “a system of methods used in a particular area of study or activity” (en.oxforddictionaries.com) or “a body of methods, rules, and postulates employed by a discipline” (www.merriam-webster.com). In a more technical or scientific sense, methodology refers to abstract thinking that precedes the actual output of the discipline in the form of hypotheses, theories, models and policies. It has to do with the background (philosophical worldview) of the scholar/thinker, which influences their way of thinking about problems that need addressing. [Machlup \(1978, p. 54\)](#) maintains that methodology is:

[...] the study of the principles that guide students of any field of knowledge, and especially of any branch of higher learning (science) in deciding whether to accept or reject certain propositions as a part of the body of ordered knowledge in general or of their own discipline.

and that it “provides arguments and rationalizations [...] for forming concepts, building models, formulating hypotheses, and testing theories” ([Machlup, 1978, p. 55](#)). In the same work, [Machlup \(1978\)](#) summarizes various definitions of methodology and offers “A Map of Territory”, which includes such subjects as formal logic; inductive logic; general methodology; special methodology; epistemology; and ontology (pp. 58-59).

[Blaug \(1992\)](#) states that methodology “denotes an investigation of the concepts, theories, and basic principles of reasoning of a subject [...] to be understood simply as philosophy of science [...]” [Al-Alwani \(2006, p. 65\)](#) asserts that methodology is “the controls or criteria for human thought which are derived from an authoritative framework qualified to identify the means for producing, generating and selecting ideas”. He also states that methodology is something that “lends order to concepts and theories, adapting laws in such a way that they are cohesive and mutually consistent”. [Malkawi \(2014, p. xvi\)](#) concurs with [Al-Alwani \(2006\)](#) by stating that throughout history, human beings have always been aware of orderly and systematic thinking to achieve goals. [Hasan \(2018\)](#) writes that methodology, on the one hand, is a branch of epistemology that is interested in philosophical underpinnings of theory, and on the other, it helps economists design research projects and fixes their goals. [Siddiqi \(2001, p. 5\)](#) suggests that economic methodology discussions revolve around methods of understanding and evaluating economic theories (confirmation, falsification, scientific revolutions, research programs, etc.), methods of investigation (deduction, induction, experiments, etc.), basic assumptions (such as rationality, utility and profit maximization) and scope of the discipline (positive v. normative). The important element that unites the above definitions of the methodology is that it is a kind of human reasoning at a conceptual level guiding the initial process of research or investigation into any social or natural phenomena. Moreover, the dominant view of methodology, especially in the fields of economics and finance, is that it is not concerned with normative notions of morality and worldview. Hence, the approach to studying the discipline of the methodology is strictly technical and positive, and thus the methods, procedures, processes of research and development in formal economics, as well as their outcomes, are limited. In contrast, the term traditionally used by Muslim scholars has a different connotation and thus, the methodological discussion tends to be more inclusive and integrated.

As definitions of methodology in the English language point to a “system” or “way”, likewise, in Arabic, it is represented by the term *minhāj* or *manhajīyyah*, which refers to a clear and easy path. In the Qur’ān, it is mentioned in the same verse as the word *shir’ah*, from which Shari’ah is derived and which also denotes a path (to a watering place).

Unto every one of you have We appointed a law (*shir’ah*) and a way of life (*minhāj*). And if God had so willed, He could surely have made you all in one single community: but [He willed it otherwise] in order to test you by means of what He has vouchsafed unto you. Vie, then, with one another in doing good works! (Qur’an, 5:48)

Commentators have offered numerous explanations of these words, the first word (*shir’ah*) usually refers to divine law, from which jurists derive legal rulings, while the second word (*minhāj*) refers to a clear path to follow, meaning a way of life or, for the Islamic scientific community, a methodology that is based on the divine law. Malkawi (2014, pp. 40-49) offers an excellent review of the aforementioned terms, and, as a conclusion for ‘methodology’, states that the term:

[...] intersect[s] with human ways of thinking, as well as with logic as a branch of philosophy; with the theory of knowledge and epistemology as a branch and science of philosophy; and with methods of searching for knowledge in this or that field (Malkawi, 2014, p. 48).

Hence, with reference to science, methodology refers to the scientific process of research and the tools, methods and procedures used to gather and analyse data.

According to Auda (2010, p. 31, 107), much of the Islamic and Western methodology of science is based on the Greek system of logic, which uses the concept of “decomposition” that seeks to break the studied phenomena into smaller parts and then to define and classify. Auda (2010, p. 32) writes:

Plato’s and Aristotle’s methods of decomposition had a great impact on human thought over the past two millennia, which was manifested in various ways. Examples are Ibn Rushd’s “divisions of categories,” Aquinas’s “resolution,” Descarte’s “reduction to simplest terms,” Locke’s resolution of ideas into simple “sense impressions,” Leibniz’s reduction of propositions into “self-evident truths,” Kant’s subclasses of “synthetic *a priori* truths,” Frege’s “logical analysis,” Russell’s “deductive chains,” and even Wittgenstein’s ‘grammatical investigation.’

Despite the sophistication of analysis based on “decomposition”, it is actually quite simplistic, whereby the holistic nature of phenomena tends to be overlooked. Hence, the methodology used by the positivists, as demonstrated next, produces inaccurate conclusions because such methodology is static and overlooks the “dynamics of change” (Auda, 2010, p. 33). Choudhury (2014, p. 110) concurs with Auda and writes that “[t]he methodology of occidental science, society organization and self, remains partitioned and pluralistic” whereby the holistic nature of worldly existence is overlooked.

Modern social sciences have philosophical underpinnings, which have been influenced by Greek philosophy, which was studied and transmitted by Muslims and matured in Western Europe from the times of the Enlightenment. Historically, the philosophy of science in the West grew from being dominated by Christian ethics to its present form of being devoid of religious inclinations. Dow (2013, p. 3) writes that currently the methodology of mainstream economics (and by extension also of finance and other social sciences) is dominated by logical positivism, which “requires that scientific statements must be testable against facts [...], and the conventional judgement [...] is that only mathematical statements are precise enough for robust testing.” In another place, Dow (1985, p. 10) asserts that methodology must be considered at two levels:

- (1) at the technical level with implications for model building; and

(2) at the level of “[. . .] the underlying, and often implicit, world-view of the theorist”.

Historically, logical positivism (also known as logical empiricism), although influenced by the ideas of Ernst Mach (1838-1916), formally starts with the Vienna Circle. It is known for a number of influential thinkers (Moritz Schlick, Otto Neurath, Philipp Frank, Hans Hahn, Rudolf Carnap and Carl Hempel), most of whom were recognized scientists in various fields. For example, Hans Hahn (d. 1934) was a mathematician, Philipp Frank (d. 1966) and Moritz Schlick (d. 1936) were physicists, and Rudolf Carnap (d. 1970) was a philosopher. The Vienna Circle proposed that for knowledge to be scientific it must be based on verifiable (testable) sensory experience (Caldwell, 1994). There is thus no place for value statements, which simply express emotional attitude. It also denies a priori knowledge, the ability to “report truths about nature” (Blanshard, 2002). Metaphysics was regarded as being close to insanity (Mayhall, 2003).

As the Second World War approached, many Vienna Circle activists fled to the USA and the UK, where they greatly influenced the scientific communities. In the USA, the movement transformed into “philosophy of science”, thanks to Carl Hempel (d. 1997). The academic circles in Europe and North America have evidently adopted positivism as a creed and applied it to all spheres of social sciences, including economics.

Milton Friedman (American economist, received the Nobel memorial prize in economics in 1976, died in 2006) wrote about positive economics:

Positive economics is in principle independent of any particular ethical position or normative judgments. As Keynes says, it deals with “what is,” not with “what ought to be.” Its task is to provide a system of generalizations that can be used to make correct predictions about the consequences of any change in circumstances. Its performance is to be judged by the precision, scope, and conformity with experience of the predictions it yields. In short, positive economics is, or can be, an “objective” science, in precisely the same sense as any of the physical sciences (Friedman, 1966, p. 4).

The methodology of logical positivism, as described by Friedman, has one major flaw, which makes it rigid and unrealistic – the task of prediction. Lack of realism in the mainstream economic and finance methodology causes theories, which are translated into models and policies, to be unfeasible and unworkable. Often, the problem is compounded by pure mathematical modelling, whereby the focus is on the process of theorizing itself, and on the beauty and purity of mathematical expressions rather than practicality. By playing around with limited amounts of data and a limited number of variables used for prediction, economists nevertheless consistently fail to pinpoint crises, which are occurring more and more frequently. It seems that the members of the mainstream economics and finance profession fail to understand that the future is simply unknowable and thus impossible to accurately predict (Lawson, 1997).

Frankfurter (2007) critiques Friedman’s essay titled “The Methodology of Positive Economics” (1966), which Frankfurter writes is not value-neutral but, rather, a “belief system that underlay the research program which colonized economic thinking for the last half century [. . .]. We call this ideology ‘neoclassical economics’” (Frankfurter, 2007). Hence, it is clear that despite seeming neutrality in the methodology of mainstream neoclassical economics and finance, it is ideological to the core and not value-free (Hall and Elliot, 1999). Moreover, the positivist paradigm has dominated much of economic policymaking as well as economic education in the past 100 years. The same positivist paradigm has influenced Muslim economists and finance practitioners educated in the Western system, which led to the imitation of the conventional system.

Lastly, the implication of the flawed methodology is that modern economics and finance create beliefs that interest is a necessary cost of loanable funds, scarcity is inevitable, markets are efficient, commercial banks are financial intermediaries, individual interest equals societal interest and other “self-evident truths” (for a detailed review of these issues, please see: www.binaryeconomics.net/wordpress/fundamentals/fifty-nine-false-assumptions-of-mainstream-neo-classical-economics/, n.d.; Ashford and Shakespeare, 1999; Shakespeare, 2007). Also, the issue of money is at the heart of modern economics and finance, but its reality is not properly presented (Meera, 2004; Shakespeare, 2005). There are numerous other issues in economics and finance that are the result of the wrong methodology with misleading or even wrong assumptions. However, this paper’s scope does not allow us to go deeper into those issues. It is important to note that the methodology of modern Islamic economics and finance suffers from the same flaws as conventional economics and finance and that is the focus of the next section.

Current methodology of Islamic economics and finance

Methodology, according to Hasan (2006, p. 9), is philosophical in nature and is outside the subject. Addas (2008, p. 4) opines that methodology deals with:

[...] purpose of [...] inquiry, the sources of knowledge relevant to it, the subject matter and the scope of its inquiry, the limits to the application of knowledge, and the decisions about appropriate structure for erecting [...] theories [...].

He also suggests that “methodology helps *explain* the nature of the theories behind [...] human action; it also aims at *prescribing* acceptable methods and techniques of [...] inquiry in order to enlarge the stock of knowledge”.

The methodology of Islamic economics grew as a response to methodological flaws of neoclassical economics as outlined above. The main thesis of Islamic economists about methodology is that the discipline itself is not strictly positive as a pure science ought to be. Also, they argue against the main assumptions of neoclassical economics such as rationality, utility, profit maximization and self-interest (Siddiqi, 2001). With regard to the methods of investigation, there is debate about deduction, induction or experimentation/demonstration. Historically, Muslim scientists used all these methods (Nasr, 1980). Hence, these methods should be applicable to the study of Islamic economics. However, much caution must be exercised with regard to the inductive method as over-reliance on it may produce erroneous results because of limited data (Hume, 1910; Taleb, 2007). Hasan (2018) also cautions against the methodology prevalent in conventional economics discourse because of “injudicious use of mathematics and econometric modelling for a variety of reasons [...] especially to shun temptation for predatory publishing”. His article (Hasan, 2018) seems to suggest, however, that we should not be overly concerned with methodology but recognize it as “a continuous interpretation of sources of knowledge in view of social dynamism [...]” and reality on the ground.

When it comes to a methodology of deriving rulings that affect the Islamic economic system, Kahf (2020) is of the opinion that it should be done using an approach that is similar to *qawā'id fiqhiyyah* (legal maxims) through the study of *fiqh* (jurisprudence, understanding) and Islamic history. This denotes an approach that is based on legal maxims and their applications. The history of economic thought and application of its principles is important to differentiate between what is general and what is specific to a particular time and place. Saleem (2010) writes that methodologies of *fiqh* and economics are different because the former deals with individuals while the latter deals with collectives. Also, the former is normative in nature, while the latter is descriptive. Thus, the approaches to studying *fiqh*

and economics are different. *Fiqh* is concerned with arriving at legal rulings by studying the sources of Islamic law and through other supportive methods of legal reasoning, such as analogy, juristic preference and public benefit. Economics, on the other hand, is concerned with describing the economic behaviour of groups of people and how to deal with scarcity and other economic problems while using the modern tools of analysis such as statistics and econometrics (Saleem, 2010). Hence, Saleem (2010) clearly differentiates *fiqh* and Islamic economics as two distinct disciplines with different methods of research and analysis. However, in the forthcoming section of this paper, we argue for the integration of knowledge, which should lead to a better understanding of various phenomena of human life, including that of economics.

When it comes to Islamic finance, especially at the product development stage, one should look into the methodology of applying Shari'ah requirements. There are two approaches to product development in Islamic finance. The first is a Shari'ah-based approach, which means that Shari'ah rules and requirements are applied from the very start of the product development process and are always present throughout the process until the product roll-out stage. The second is the Shari'ah compliance approach, which is what most Islamic financial institutions currently practice. Choudhury (2014, p. 12) argues that Shari'ah compliance as a type of "Muslim intellection in the emergent discipline of Islamic finance [...] has resulted merely in imitating modelling of mainstream arguments." This approach basically entails finding an existing conventional finance product, unbundling it to its elements, getting rid of forbidden elements and re-packaging it under a traditional Islamic contract. Among the problems identified by Sheikhhah (2015) with regard to the second approach is that by mimicking conventional financial products sometimes "the developers fail to recognize the risk exposure of the product". Also, many product developers are not familiar with the Shari'ah requirements and rules. Choudhury (2018) strongly argues that current Islamic economics (and by extension finance) does not have its own theory, relying instead on a borrowed mainstream worldview, whereby Islamic ethics and morals are not woven into the methods and models of Islamic economics. He also argues that "Islamic finance is not epistemologically different or revolutionary in nature" (Choudhury, 2018).

This problem is also recognized by Mirakhor and Smolo (2011, pp. 48-53) who assert that the nature of Islamic finance products, which are mainly low-risk, short-term and liquid, is because of the misunderstanding of the Qur'anic epistemology with regard to *mu'āmalāt* (transactions). According to the authors, the Holy Qur'an, with reference to business transactions, as evident in verse 275 Surah Al-Baqara, ordains two things: the first is the use of exchange contracts, and the second is the prohibition of *ribā* (usury). Mirakhor and Smolo (2011) assert that the current Islamic financial system is more focused on eliminating *ribā* without really using the full spectrum of the Islamic exchange contracts, which encourage risk-spreading and risk-sharing. Ahmed (2014, pp. 18-19) also concurs with the previous authors, stating:

The main focus of Islamic financial industry has been to provide Shari'ah-compliant structures of conventional financial products [...]. The technology and institutional arrangements allow the use [of] financial/legal engineering to develop Islamic products that replicate conventional financial products at low costs [...]. From an economic perspective, the objective of Islamic banks is to structure products that have similar risk-return features of conventional products. From a legal perspective, this is done by using several legitimate Islamic contracts to produce outcomes that replicate conventional products. Doing so, however, can sometimes result in products that are Shari'ah compliant in form but not in substance.

Ahmed (2014) is of the opinion that Islamic financial institutions, depending on the country they operate, are restricted in terms of breadth and scope of financial products that they can offer. Such restrictions originate either from external or internal sources. The former includes laws and regulations of a particular country, and the latter includes economic motives that may outweigh the Sharī'ah considerations.

What is more important, however, is to recognize the complexity of economics and finance within the larger social fabric; to move away from conventional thinking and methodology and use instead a systems approach to analyse social phenomena, including those of economics and finance. This would require a deeper understanding of *maqāsid al-Sharī'ah* (intents and purposes of the Sharī'ah) and of a systems approach based on the integration of knowledge.

Integration of knowledge: combining the revealed and the existential sciences

According to Al-Alwani (2005, p. 30), Allah commands humanity to undertake “two different kinds of readings and to understand its situation in the universe by understanding how the two readings complement one another”. The two readings that Al-Alwani refers to are of the Book of Allah for religious guidance and the book of existence, which is the created universe. Only this kind of understanding, which takes into consideration the two sources of knowledge, can be considered as comprehensive, and it is what is needed to build and maintain a balanced and civilized society (Al-Alwani, 2005).

Despite the need for various sciences to complement each other, the process of division in modern sciences has proceeded so far that each branch of knowledge has many sub-branches. For example, a quick glance at Wikipedia's natural sciences and related pages reveal that they are subdivided into astronomy, biology, chemistry, geology and physics; biology then is further subdivided into more than 50 narrow disciplines; chemistry is divided into five main branches and each has its own divisions as well; astronomy is subdivided into more than 30 small specializations. Obviously, these subdivisions are needed to understand the subjects further and deeper. However, as Snow (1961, p. 4) remarked, “Literary intellectuals at one pole – at the other scientists, and as the most representative, the physical scientists. Between the two is a gulf of mutual incomprehension – sometimes [. . .] hostility and dislike [. . .]” In this lecture, Snow described the two scientific communities (humanities and natural science) as having “two cultures”, whereby the two are quite distinct and rarely communicate with each other. He accuses the Industrial Revolution and the education system, which developed to cater the needs of industry, to be responsible for such deep divisions. In addition, Snow (1961, pp. 30-42) further states that there is even a deeper division between the scientific community (natural and human sciences) and the productive industry. Although today capitalism has managed to bring much of the natural science community into some aspect of the commercial process – to which the sheer variety of products in the market testifies – knowledge continues to be subdivided. The dangers of such deep specializations are evident in the destructive powers of science that the twentieth century had witnessed. Malkawi (2014, p. 6) reminds his readers that despite its success in providing for material needs, modernity has brought unprecedented problems and threatens the future of humanity and the earth itself.

Gradually, however, educators and the scientists themselves are beginning to understand the need for integration of knowledge. Al-Alwani (2005, p. 32) calls the integration of knowledge, especially the revealed and the existential, a necessity that will bring balance to the understanding of reality. Although he mostly refers to the Sharī'ah sciences and social sciences when writing about integration and Islamization of knowledge, the natural sciences should also be included in this process for these sciences possess great

powers to either harm humanity or bring benefit. Hence, it is necessary for Muslim scientific communities, in both theory and applications, to strive for a broader understanding of various sciences and the revealed knowledge to propel humanity towards the future of openness to new ideas guided by the light of the Qur'ān and Sunnah.

Auda (2010) also advocates the need to adopt a multidisciplinary approach to methodology. He writes (p. 249):

[...] “disciplinisation” should not be an obstacle in the way of using relevant concepts from “different” fields in research endeavours. Nor should it be a way of monopolising sources of reference in any discipline in order to restrain creativity and control new ideas. In terms of developing the discipline of the theory/fundamentals of Islamic law, it is necessary to be open to relevant ideas from other disciplines.

The call for the integration of knowledge comes from the idea of the unity of knowledge. All knowledge comes from and is caused by the One God. Therefore, there is no distinction in Islam between religion and science, because all true knowledge points to the same source – the All-Knowing God (*Al-'Alīm*). Consequently, acquisition of knowledge is considered an obligation on society. According to a *ḥadīth* reported by Ibn Mājah (2020), Prophet Muḥammad (SAW) is reported to have said “Seeking knowledge is obligatory for every Muslim” (vol. 1, p. 84, no. 224). The *ḥadīth* does not differentiate between various kinds of knowledge. However, the scholars classified a certain minimal level of religious knowledge as a personal obligation while the pursuit of knowledge in science and technology was classified as a societal obligation (Bakar, 2010). This means that Muslims, in general, must pursue knowledge, which is beneficial on individual and social levels. However, such knowledge acquisition must be based on a sound methodological foundation, where *tawḥīd* and unity of knowledge play the central role (Choudhury, 2014, 2018).

Taking into consideration the above discussion, the paper presents a methodology that is based on the idea of collective *ijtihād*. Al-Alwani is sceptical that individual *ijtihād* is possible today because no one can ever master all the sciences. Instead, he proposes policies and solutions to be offered by groups of scientists representing various fields.

Proposed methodology of integrated knowledge in Islamic economics and finance

Methodology establishes rules of subsequent research and development on academic and practical levels. It lays out the logic behind the processes and approaches to theory building and policy prescriptions. Subsequently, with further research, the methodology and theories may be either confirmed or refuted.

There is a methodological dualism whereby theory and practice differ dramatically. Hence, the mindset of Islamic economics and finance practitioners is the major challenge to operationalizing even the existing Sharī'ah-based approach. This mindset, which is the reason for “methodological dualism”, creates a disconnect from the real economy, inconsistency in issuing fatwas (legal opinions) and lack of understanding about how other disciplines and the environment affect the Islamic economics and finance industry. Therefore, the current Islamic economics and finance methodology lacks flexibility.

Based on the discussion above, it is safe to conclude that the modern methodology of Islamic economics and finance lacks rigour and depth and is prone to crises. This paper, therefore, proposes a collaborative methodology that calls for wider collaboration between Sharī'ah scholars, scholars in human sciences, the information and communication technologies and natural sciences, which would constitute the collective *ijtihād*. However, before any further discussion on the proposed methodology, it is important to demonstrate

that the idea of collective *ijtihād* is not new. Hasan (2020) suggests that this form of *ijtihād* has been in existence for a very long time, and many scholars have promoted this idea. For example, he mentions consultation (*shūrā*) of the Prophet’s companions (peace be upon them) in deducing rulings while the Prophet (SAW) was among them (p. 29). After the Prophet’s (SAW) death, such *ijtihād* continued during the leadership of the rightly guided caliphs and slowly diminished in importance, giving rise to what is known as *taqlīd* (imitation), which “seriously disrupted the natural growth of *fiqh* and arrested the efflorescence of *ijtihād*” (Kamali, 2006, p. 33). Hasan (2020, pp. 30-31) argues that collective *ijtihād* grew again during the Tanzimat period of the Ottoman Empire and resulted in the production of the highly praised “Islamic civil code” (The *Majallah*), written by a seven-member committee chaired by Cevdet Pasha. The Muslim reformer Muhammad Rashid Rida (d. 1935) also advanced the idea of collective *ijtihād* (Hasan, 2020, p. 32). Kamali (2006, p. 163) writes that the theory of *ijtihād* needs revision and reformation; it should recognize the validity of collective *ijtihād* and that “experts in other fields such as science, economics and medicine” should also be allowed to contribute “if they are equipped with adequate knowledge of the source evidence of Shari’ah”. Auda (2010, pp. 193-195) concurs with the authors above and opines, when writing about consensus, that it is “a mechanism of consultation or, to use systems terminology, multiple-participant decision making” and that it could be used to make “collective fatwa”. Hence, collective *ijtihād* is a necessary tool for better decision-making, especially in areas of *mu’āmalāt* (transactions). The following is the proposed methodology that could be used to better understand economic and financial issues of societies and come up with human and environmentally friendly solutions (Figure 1).

The above-proposed methodology consists of three sections. The first section represents the ultimate objective of Shari’ah in human transactions – well-being and happiness. According to Ibn Ashur (2006, p. 221):

[...] the main objective of Shari’ah is to establish a strong community with stable social system and promote the orderly functioning of its affairs by achieving its welfare and preventing evil.

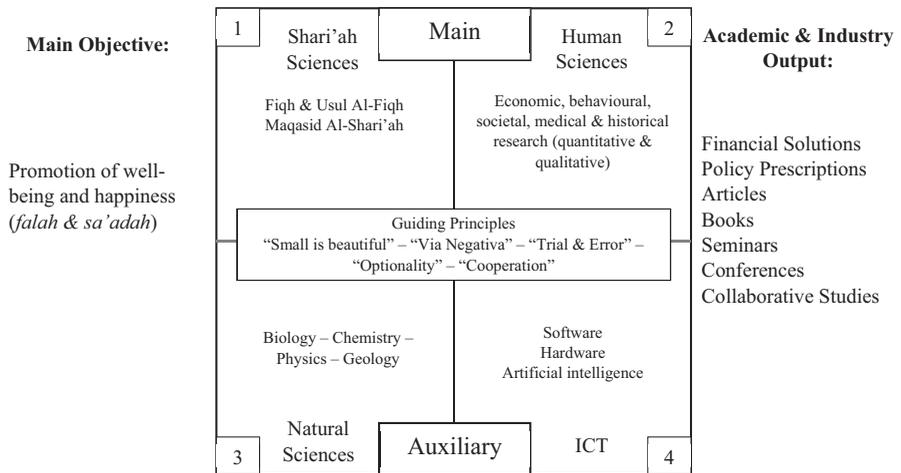


Figure 1.
The proposed methodology

Source: Rafikov (2019, p. 256)

We argue, therefore, that well-being and happiness constitute the main objective of Sharī'ah because they are the end result of a strong community that looks after the welfare of its members and prevents evil. Their inclusion in the creative process will ensure that the final output is friendly to human beings, rather than organization-centric. [Abdullah and Wan Mansor \(2016, p. 326\)](#) argue in favour of happiness/well-being being counted as one of the higher objectives (*maqāsid al-ʿāliyyah*) of Sharī'ah because it is “deeply embedded in the primary sources – the Qur'an and hadith”. [Addas \(2008, p. 123\)](#) also concludes that “the principal end of Islamic economics is to develop a society that has an economic order capable of achieving *falāḥ*”. Hence, *falāḥ* (salvation, success) and *sa'ādah* (happiness, well-being), apart from the worldview of the researcher, should always have a bearing on methodology.

The second section (the centre with four quadrants) is the actual research and development (R&D) involving collaboration of the various sciences, with Sharī'ah being the foundational science. The collaborative methodology calls for either the cooperation of researchers/practitioners from various fields or a single researcher studying one particular issue from different perspectives, particularly from the perspectives of the Sharī'ah and behavioural sciences (psychology, sociology, political science and history). This approach, although difficult for the modern mono-disciplinary culture of scholarship, is not impossible, and there is plenty of evidence that the academic world moves towards multi-, inter- and trans-disciplinary studies. In addition, collaboration and cooperation with the aim to find acceptable solutions is in line with the Qur'anic order to “cooperate in righteousness and piety” (Qur'an, 5:2). Therefore, we argue that the promotion of well-being and happiness at social and individual levels is the main objective of the Islamic way of life.

It should be noted, however, that these sciences all have their own methods of research, so it is necessary to recognize the complexity of this approach. Even so, by following the idea of “integrated knowledge”, their base would be the same – *tawḥīd* and the sciences of the Sharī'ah (*fiqh* and *uṣūl al-fiqh*). In other words, researchers having similar worldviews and accepting the idea of *tawḥīd*, but using different methodologies in their respective sciences, can uncover new solutions to existing or arising economic/financial problems in a given society. Therefore, this paper does not introduce a new methodology but promotes cooperation among different sciences with their respective methodologies to research and develop solutions to current economic and financial problems on the basis of mutual respect and understanding.

Social sciences, among which are economics, psychology, sociology, history and even medical sciences, are needed to provide a comprehensive outlook into the human dimension of a problem. Specifically, behavioural and social studies provide insights into behaviour at personal and societal levels. History studies patterns and extracts lessons from the change, growth and fall of civilizations, empires, countries, cities, ideologies, companies and individuals. History could also provide insights into the details of events, institutions, persons, innovations and so on. Its usefulness is in the fact that history tends to repeat itself. Sometimes, medical sciences may be referred to assess the health effects of a particular solution on a segment of the population.

Natural sciences may be necessary to provide additional support during the R&D process. Environmental concerns, such as climate change, pollution and human migration, should also be taken into consideration when designing policies that affect the natural habitat. Information and communication technologies also play a supporting role, which is very important nowadays: the provision of software and hardware to get things done. Modern analysis of complex data necessitates special programs and personnel trained to work with large amounts of information. Hence, natural sciences may play either the main

or auxiliary role in the final output – the third layer. The final output is what the stakeholders will produce in the form of policies, financial products, academic writings, research papers or educational programs.

The end result of this proposed methodology is for the use of government agencies involved in economic policymaking or institutions providing financial services, enabling them to assess their current or planned activities with regard to long-term environmental effects. To do this, they would have to have some input from independent scientists involved in environmental studies. Unfortunately, modern entities, especially those involved in economic/financial activities, tend to focus on short-term goals, and so environmental or health concerns are often left out. Likewise, academicians, students and other researchers can benefit from this methodology by studying important issues from multiple perspectives and using an interdisciplinary approach. This does not deny any of the existing methodologies as long as they conform to the main objective of the Sharī'ah mentioned above and the guiding principles explained next.

Furthermore, the collaborative methodology that this paper calls for should have some guiding principles that help design solutions that are human-friendly rather than organization-centric. We, therefore, propose the adoption of what [Taleb \(2014\)](#) calls “antifragility”. [Taleb \(2014\)](#), pp. 3-4) writes:

Some things benefit from shocks; they thrive and grow when exposed to volatility, randomness, disorder, and stressors and love adventure, risk and uncertainty [...]. Antifragility is beyond resilience and robustness. The resilient resists shocks and stays the same; the antifragile gets better. This property is behind everything that has changed with time: evolution, culture, ideas, revolutions, political systems, technological innovation, cultural and economic success, corporate survival, good recipes [...], the rise of cities, cultures, legal systems, equatorial forests, bacterial resistance [...] even our own existence as a species on this planet.

This effectively means that solutions to human problems, including economic and financial, should have anti-fragile qualities of complex systems that have survived. Hence, a certain amount of stressors is not only welcome in our daily lives but is absolutely necessary; for example, stressors that do not destroy but help develop, such as exercise or fasting. The anti-fragile guiding principles that we propose for the collaborative methodology include the ideas of simplicity, subtraction, optionality and trial and error. By focusing on simplicity, we recognize the limitations of human capacity to build complex systems. To minimize the possibility of “black swan” rare events, simpler solutions tend to be robust. For example, nuclear power stations have the capability to produce enough electricity for large areas. However, the history of meltdowns in Chernobyl and Fukushima, as well as nuclear waste, shows the danger of such complex power plants. Instead, sustainable electricity production by a large number of households and buildings may be the future of electricity. Likewise, financial derivatives are very complex, and they are known to contribute to economic fragility.

Subtraction or via *negativa* means that to find a solution, often it is not necessary to create more and more layers of additional solutions to simple problems. For example, modern medicine is based on fighting symptoms through chemical substances. Usually, medical drugs have side effects, often severe. However, humankind survived for millennia by using simple methods, such as herbs, dietary restrictions, ample exercise and rest. Economic and financial problems can also be tackled through this mechanism whereby simpler solutions may be more effective than complex ones.

Optionality and trial and error mean that a great number of social problems and challenges may have to be met with many options as well as constant tinkering to find the best solution. This principle recognizes diversity and change, and that a solution that worked at one time and place may not be applicable in another situation. Hence, the variety

of options to the existing problems has a higher chance of producing “anti-fragile” solutions. For example, financing of a small business or a small farm does not have to be based on the debt alone. Equity and grants from many sources could produce better results and may actually help grow entrepreneurship and innovation.

The guiding principles introduced in this paper seek to counter the era of gigantism that was the feature of the twentieth century. Megaprojects are often necessary for economies, spurring economic activities in and around the projects. However, they can be damaging to the environment because of deforestation, pollution, displacement of local populations (humans, animals, birds and insects), etc.

Nevertheless, the proposed methodology calls for the collective *ijtihād* of scholars and practitioners from various fields/sciences. It is also possible to draw a parallel with Fritz Machlup’s “Map of Territory” mentioned earlier and see that methodology and its understanding must encompass various philosophical and metaphysical approaches. Only this approach will ensure a less uncertain future for the coming generations as solutions would have to be built around the ideas of *tawhīd*, well-being and multidisciplinary methodology. The policies and solutions would thus be human- and environment friendly and not organization-centric.

Conclusion

The paper addressed the issue of methodology from the Islamic perspective. Both theoretical and applied sciences stem from some fundamental approach that defines their development. One may attribute the tremendous growth of science in the past two centuries to its increasingly empirical nature and point to positive methodology as being responsible for such growth. However, we also see the negative results of scientific development in terms of the massive loss of lives in the twentieth century, continuing environmental degradation and pollution, growing economic inequality around the world and many social and economic issues globally. As mentioned in the paper, there is a methodology problem, especially in economics and finance, whereby logical positivism – also known as empiricism and even social Darwinism – has effectively created the modern consumer society and all its social ills.

Islamic methodology, on the other hand, is based on the Qur’ānic value system and the *tawhīdī* epistemology, which emphasize Divine Law as their main component. Integration of knowledge, also known as Islamization of knowledge, as promoted by the IIT, is a methodology that combines the revealed and the existential sciences. The main purpose of the integration of knowledge is to effect change in how humans interact in search of truth because truth can only be attained with divine guidance and an interdisciplinary approach to theoretical and applied sciences. In economics and finance, the methodology of integrated knowledge aims to produce policy prescriptions and financial solutions that are human-friendly and not organization-centric. Hence, the paper, following the ideas of Al-Alwani (2005), calls for collective *ijtihād* which should be performed by various centres of learning and research, as well as government and private agencies that have the ability to influence policy. Lastly, the paper calls for further research in the area of methodology from the multi- or inter-disciplinary perspective.

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