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Evolution of Islamic Economic Views

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Abstract

Islamic economics or economics from an Islamic perspective is actually not a new discourse in Muslim scientific tradition. Its roots have been evolved since the earlier period of Islamic civilization emerged. The discussion on economic issues from an Islamic perspective had started earlier and flourished when Muslim scholars dominated the world scientific tradition. The paper attempts to survey the origin of Islamic economic thought and portray its evolution towards becoming a discipline in contemporary times with its own body of knowledge, subject matter, methodology and theories. The future direction of the discipline is also highlighted with some evaluations of the current state of affairs.

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1. Introduction

The origins of free markets can be traced back to the Islamic Golden Age and Muslim Agricultural Revolution,² where the first market economy took root between the 8th–12th centuries, which some refer to as "Islamic capitalism".³ A vigorous monetary economy was created on the basis of the expanding levels of circulation of a stable high-value currency (the dinar) and the integration of monetary areas that were previously independent.

Innovative new business techniques and forms of business organization were introduced by economists, merchants and traders during this time. Such innovations included the earliest trading companies, big businesses, contracts, bills of exchange, long-distance international trade, the first forms of partnership (*mufawadah*) such as limited partnerships (*mudarabah*), and the earliest forms of credit (qard), debt, profit, loss, capital (*al-mal*), capital accumulation (*nama al-mal*),⁴ circulating capital, capital expenditure, revenue, cheques, promissory notes,⁵ trust (see, waqf) startup companies,⁶ saving accounts, transactional accounts, pawning (ar-rahn), loaning, exchange rates, bankers, money changes, ledgers, deposits, assignments, the double-entry bookkeeping,⁷ and lawsuits.⁸ Organizational enterprises similar to corporation's independent from the state also existed in the medieval Islamic world, while the agency institution was also introduced.⁹ Many of these early concepts were adopted and further advanced in medieval Europe from the 13th century onwards.¹⁰

The systems of contract relied upon by merchants was very effective. Merchants would buy and sell on commission, with money loaned to them by wealthy investors, or a joint investment of several merchants. Recently, a collection of documents was found in an Egyptian synagogue shedding a very detailed and human light on the life of medieval Middle Eastern merchants. Business partnerships would be made for many commercial ventures, and bonds of kinship enabled trade networks to form over huge distances. Networks developed during this time enabled a world in which money could be promised by a bank in Baghdad and cashed in Spain, creating the cheque system of today. Each time items passed through the cities along this extraordinary network, the city imposed a tax, resulting in high prices once reaching the final destination. These innovations made by Muslims laid the foundations for the modern economic system.

Although, this historical development seems to prove that the Islamic economic system had already in practice. However, for the last 32 years, the Islamic economics has been in the process of development toward becoming a distinct discipline. Its scientific elements, body of

² The Cambridge economic history of Europe, p. 437. Cambridge University Press, ISBN 0521087090

³ Subhi Y. Labib (1969), "Capitalism in Medieval Islam", *The Journal of Economic History* 29 (1), pp. 79–96 [81, 83, 85, 90, 93, 96].

⁴ Jairus Banaji (2007), "Islam, the Mediterranean and the rise of capitalism", *Historical Materialism* 15 (1), pp. 47–74. Brill Publishers.

⁵ Robert Sabatino Lopez, Irving Woodworth Raymond, Olivia Remie Constable (2001), *Medieval Trade in the Mediterranean World: Illustrative Documents*, Columbia University Press, ISBN 0231123574.

⁶ Timur Kuran (2005), "The Absence of the Corporation in Islamic Law: Origins and Persistence", *American Journal of Comparative Law* 53, pp. 785–834 [798–9].

⁷ Subhi Y. Labib (1969), "Capitalism in Medieval Islam", *The Journal of Economic History* 29 (1), pp. 79–96 [92–3].

⁸ Ray Spier (2002), "The history of the peer-review process", *Trends in Biotechnology* 20 (8), p. 357–358 [357].

⁹ Said Amir Arjomand (1999), "The Law, Agency, and Policy in Medieval Islamic Society: Development of the Institutions of Learning from the Tenth to the Fifteenth Century", *Comparative Studies in Society and History* 41, pp. 263–93. Cambridge University Press and Samir Amin (1978), "The Arab Nation: Some Conclusions and Problems", *MERIP Reports* 68, pp. 3–14 [8, 13].

¹⁰ See, footnote (4).

knowledge, methodology, are still in process of development and will continuously evolve to a more mature and sophisticated level in the future, provided all dimensions, including its philosophical foundations are given sufficient attention.

As a systematic system of thought with an organized body of knowledge, ‘contemporary’ Islamic economics is a twentieth century phenomenon. However, its process of development has been evolved back to the time when Islamic science flourished in the golden age of Islamic civilization especially in seventh to fourteenth century.

This paper is going to investigate the historical development of Islamic economics started from the early making of Islamic economics in the classical period until it becomes a distinct discipline in contemporary time. The evolution of Islamic economics has been happened in three phases; Islamic economics in the classical discourse, Islamic economics in the transitional period and Islamic economics in contemporary time. This paper will proceed according to those phases with an insight of the future development of Islamic economics in the last section.

2. The Evolution of Islamic Economics Thought

So far as Islamic economics are concerned, the works that have been produced are many. Based on his survey in 1980, Siddiqi¹¹ enumerated about 700 books and articles published on the subject in the second half of the 20th century, covering three languages – Arabic, English, and Urdu. Appearing in the same book, Zaim¹² also enumerated the Turkish literature. It is, however, unfortunate that there has been no considerable survey of the Malay works (both in Bahasa Indonesia and in Bahasa Malaysia), another principal language in Islam, which in fact also supplies numerous references in Islamic economics. Recent development of Islamic economics indicates a rapid growth of its literature, simultaneously with growing concerns about the subject by Muslim economists. This invariably leads to the growth of the fields to be attended preceded the formation of various *branches* in Islamic economics.

Therefore, in this section, we will survey the evolution of Islamic economics thought from the classical periods up to now.

2.1 Classical Islamic Economic Thought

The Islamic economic thought has been deliberated since the beginning in the Qur’an, in the Sunnah or tradition of the Prophet SAW, as well as by his companions, though no effort has been made systematically. The effort encompassed business cycle (Surah Yusuf, verse 47-48)¹³, market mechanism, public finance, labor, money and credit, distribution, production, and consumption as well, in the form of *zakat*, *riba* prohibition,¹⁴ laws of inheritance,¹⁵

¹¹ M. N. Siddiqi, “Muslim Contemporary Thinking: A Survey of Contemporary Literature,” in K. Ahmad (ed.), *Studies in Islamic Economics*, International Centre for Research in Islamic Economics, King Abdul Aziz University, Jeddah, Saudi Arabia, 1980, pp. 191-316.

¹² Sabahuddin Zaim, “Contemporary Turkish Literature on Islamic Economics,” in K. Ahmad (ed.), *ibid.* pp. 317-352.

¹³ “[Yusuf] said : “For seven consecutive years, you shall sow as usual and that (the harvest) which you reap you shall leave it in the ears, (all) except a little of that which you may eat (Surah Yusuf, verse 47) and “Then will come after that, seven year hard (years), which will devour what you have laid by in advance for them, (all) except a little of that which you have guarded (stored) (Surah Yusuf, verse 48).

¹⁴ Surah al-Baqarah verse 275-280, where Allah says; ‘Those who take usury will not stand on the Day of Judgment except as he who has been driven mad by the touch of the Demon.Oh you who believe give

mudharabah,¹⁶ *musharakah*, and other contracts of *mu'amalat*. *Zakat* exercises were strictly held at the time of the Caliph Abu Bakr, to ensure that fulfilment of this obligation is satisfied. The Caliph Umar ibn al-Khattab introduced the system of *kharaj* to be levied to the non-believers, as differed from *jizya*, when he first conquered the Persian lands.

The second generation of Islamic civilisation gave birth of the four great scholars (imams). Siddiqi¹⁷ discusses the contributions of Imam Malik ibn Anas and Imam Abu Hanifah, and their disciples such as 'Abd al-Rahman al-Auza'i, Abu Yusuf, and Muhammad ibn al-Hasan al-Shaybani. Imam Abu Hanifah developed a mode of transaction namely *bay' al-salam* (advance payment for a sale of commodity to be delivered in the future), *murabaha* or sale with an agreed percentage markup on purchase price. While Abu Yusuf, presented the *Kitab al-Kharaj* to the Sultan Harun al-Rashid, consisting of his address on taxation as the sultan required, al-Shaybani wrote two treatises on various issues like, *ijarah*, *tijarah*, *sina'ah*, *zira'ah*, etc. in *Kitab al-Iktisab fi al-Rizq al-Mustatob* (Book of Earning and Clean Living), and *Kitab al-Asl* discussing the issues on *salam*, *shirkah*, *mudharabah*.

Imam Abu Hanifah is known as a scholar whose legal opinions (*istihsan*) were considered applicable in the modern times. While as a *faqih* (scientist of the *fiqh*) living in Kufah, the center of commercial activities in the Middle East at that time, his entrepreneurial capacity facilitated him in eloquently deriving the Divine precepts into realities. On the other hand, Imam Malik lived in Madinah, the city of the Prophet SAW. Though a specific view of economic thought is insignificant, his method of reasoning (*maslaha* or *istislah*, meaning utility) has drawn a notable attention by modern economists. The analysis of utility as suggested under this method has been compared to that of western philosophers like Bentham and Mill.

Two other great Imams, Imam Muhammad ibn Idris al-Shafi'e and Imam Ahmad ibn Hanbal were also the contemporaries of Imam Hanafi and Malik. One should not forget the great contribution of al-Shafi'e in developing Islamic methodology of science namely *usul al-fiqh* in his treatise *al-Risalah*. Meanwhile, Imam Hanbali is said to largely rely his opinions on the Sunnah rather than on any kind of reasoning (*ijtihad*). Nevertheless, he also discussed the *maslahah*, which led to his assertion on price theory in maintaining market competition in an Islamic framework.¹⁸

These four Imams had laid down the foundation of methodology of Islamic economic thought, via their discussion of the *usul al-fiqh*, *fiqh* and the legal maxims (*qawa'id al-fiqhiyyah*) they had developed. The bases and sources of all these are found in the Divine revelation, the Qur'an and the Sunnah as well. The following generations have further developed the heritages these four Imam had bequeathed. So many *fuqaha* were born afterwards, whose names are not possible for inclusion in this limited discussion. Even so, a few of them deserve mentioning for their remarkable influence, such as, among others, Abu Yusuf (731-798), Ishaq bin Ali al-Rahwi (854-931), al-Farabi (873-950), Qabus (d. 1012), Ibn Miskawiyh (b. 1030), al-Mawardi (1075-1158), al-Ghazali (1058-1111), Ibn Khaldun (1332-1406), Ibn Taymiyyah (1263-1328) and his disciple Ibn al-Qayyim, al-Shatibi, al-

up what remains of Riba if you are believers. But if you do not then listen to the declaration of War from Allah & his messenger (SAW). If you repent, your's is your principal and nothing more.....'.

¹⁵ Refer to Surah An-Nisa', verse 11: "Allah commands you as regards your children's inheritance: to the male a portion equal to that of two females, ...".

¹⁶ Mudarabah has also been supported by the following al-Hadith: "Ibn Abbas used to pay money for mudarabah and to stipulate to the mudarib that he should not travel by sea, pass by valleys or trade in livestock, and that the mudarib would be liable for any losses if he did so. These conditions were brought before the Prophet (SAW) and he approved them." Reported by al-Bayhaqi no. 6/111.

¹⁷ See M.N. Siddiqi, "Islamic Economic Foundation, Evolution and Needed Direction," and "Recent Works on History of Economic Thought in Islam," in Sadeq and Ghazali, *ibid*, pp. 14-58.

¹⁸ See Siddiqi, *ibid*, pp. 39-40.

Maqrizi, and Shah Waliullah al-Dihlavi. All these scholars together help enlighten us on the contributions made by these Muslim scholars to a number of economic concepts like the market mechanism, demand, supply, prices and profits, money, counterfeiting and currency debasement, labor supply and population, and the role of the state and justice, peace and stability in economic development.

Perhaps the most well known Islamic scholar who wrote about economics was Ibn Khaldun (1332-1406),¹⁹ who is considered a father of modern economics.²⁰ Ibn Khaldun wrote on economic and political theory in the introduction, or *Muqaddimah (Prolegomena)*, of his *History of the World (Kitab al-Ibar)*. In the book, he discussed what he called *asabiyya* (social cohesion), which he sourced as the cause of some civilizations becoming great and others not. Ibn Khaldun felt that many social forces are cyclic, although there can be sudden sharp turns that break the pattern. His idea about the benefits of the division of labor also relate to *asabiyya*, the greater the social cohesion, the more complex the successful division may be, the greater the economic growth. He noted that growth and development positively stimulates both supply and demand, and that the forces of supply and demand are what determines the prices of goods. He also noted macroeconomic forces of population growth, human capital development, and technological developments effects on development. In fact, Ibn Khaldun thought that population growth was directly a function of wealth.

In addition, the contribution of Ibnu Khaldun is very significant in producing theoretical framework that looks into the role of human labor in the theory of economic growth. He clearly mentions that: “Man obtains (production) through no efforts of his own as, for instance, through rain that makes fields thrive, and similar things. However, these things are only contributory. His own efforts must be combined with them”. Boulakia (1971) add an argument that argue that: “if man wants to live and subsist, a man is obliged to eat. And he must produce his food. Only his labor will allow him to eat: “Everything comes from God. But human labor is necessary for ...[man’s livelihood]”. Therefore, man has to produce (or work) in order to fulfill himself, and production results from this labor.

The produced goods are quoted at a price that consists of three elements: salary, profit and taxes. Each element constitutes the remuneration of an agent in the economy: salary is the remuneration of the labor; profit is the remuneration of the owner; and tax is the remuneration of the government or government revenue. On this basis, Ibn Khaldun divides the economy into three sectors: production, exchange and public sectors.

Beside government revenue, Ibn Khaldun also clearly mentions about the important of government expenditure. He suggests that the composition of government expenditure should be divided into several components such as infrastructure, and law and order. These are necessary for generating economic activities. Therefore, by spending more, it will generate higher economic growth.

2.2 Post-Colonial Era

In the 13th and 14th century, several theologians led by notably the Dominican St Thomas Aquinas, set down the dogma of the Catholic Church in light of the resurrection of the Greek

¹⁹ Schumpeter (1954) p 136 mentions his his sociology, others, including Hosseini (2003) emphasize him as well

²⁰ I. M. Oweiss (1988), "Ibn Khaldun, the Father of Economics", *Arab Civilization: Challenges and Responses*, New York University Press, ISBN 0887066984 and Jean David C. Boulakia (1971), "Ibn Khaldun: A Fourteenth-Century Economist", *The Journal of Political Economy* 79 (5): 1105-1118.

philosophy in the hands of 12th Century Islamic Scholars. These views have been propagated and adopted through colonization in several Muslim majority countries.

After the fall of Islamic Spain, transformation of economics to the West has superseded the religious passions of the past Islamic history, so as to have changed, Lux²¹ observes, the ultimate cosmologies of human being from emphases of ethical values and norms to those of economic in a materialistic sense. This process was initially undertaken in a form of secularisation, and then followed by the advancement of science and technology.²² Christianity that has almost nothing to do with scientific notions provides the negative answers to the questions, in the form of inquisitions. Therefore, subjugation of any religion of the world, especially Islam, in favour of materialism has been vindicated by a number of momentous events, both *scientifically* and *politically* such as, to mention the greatest events, *enlightenment*, and *scientific revolution*, and on the other hand also *colonialism* and *imperialism*.

When "economics" is said to be born in the second half of the eighteenth century, the subject has been entirely secularised. Endeavours to induce it with any ethical values have been attempted, as many works on their relationship have been produced. Nonetheless, since capitalism whose backbone is perfect competition is devoid of ethical values, and firmly restrictive of their intervention, these efforts have never succeeded.

Meanwhile, development of Islamic teaching in economics has indicated its backwards in terms of scientific and materialistic senses. An extra-ordinary cautious action was undertaken by the Muslim scholars to declare the *close* of the door of the *ijtihad* against irresponsible intellectual exercises in the name of the *ijtihad*. Since then, there was nearly no considerable work in Islamic literature in any scientific field including economics, which obtained a wide recognition. Colonialism has worsened the Muslims conditions, leading to the symptoms of *inferiority complex*, until the new era when Muslim countries obtained their political independence from the colonial powers of the West, however.

After the Muslim-majority countries became independent, the Islamic movement came into being as an offshoot of the discussion of the management of these new national economies with a view to promoting the national interest. While nationalism tended to focus attention on rapid economic development, religion, the other motivating force in the struggle for freedom, made many turn to Islam for guidance.

During the modern post-colonial era, as Western ideas, including Western economics, began to flourish, especially in the 1960s and 70s, several Shi'ah Islamic thinkers worked to develop a unique Islamic economic philosophy with "its own answers to contemporary economic problems." Several works were particularly influential: (i) *Eslam va Malekiyyat* (Islam and Property) by Mahmud Taleqani (1951); (ii) *Iqtishaduna* (Our Economics) by Muhammad Baqir al-Sadr (1961); (iii) *Eqtesad-e Towhidi* (The Economics of Divine Harmony) by Abolhassan Banisadr (1978) and (iv) *Some Interpretations of Property Rights, Capital and Labor from Islamic Perspective* by Habibullah Peyman (1979).

Al-Sadr in particular has been described as having "almost single-handedly developed the notion of Islamic economics" In their writings Sadr and the other authors "sought to depict Islam as a religion committed to social justice, the equitable distribution of wealth, and the cause of the deprived classes," with doctrines "acceptable to Islamic jurists", while refuting existing non-Islamic theories of capitalism and Marxism. This version of Islamic economics, which influenced the Iranian Revolution, called for public ownership of land and of large "industrial enterprises," while private economic activity continued "within reasonable

²¹ See Kenneth Lux, *ibid*, p. 2.

²² See for instance Zubair Hasan, *ibid*, 1995, p. 95.

limits." These ideas helped shape the large public sector and public subsidy policies of the Iranian Islamic revolution.

In the 1980s and 1990s, as the Islamic revolution failed to reach the per capita income level achieved by the regime it overthrew, and Communist states and socialist parties in the non-Muslim world turned away from socialism, Muslim interest shifted away from government ownership and regulation. In Iran, it is reported that "*eqtesad-e Eslami*" (meaning both Islamic economics and economy) is indubitably absent in all official documents and the media. It disappeared from Iranian political discourse about 18 years ago (i.e. 1990)."

But in other parts of the Muslim world the term lived on, shifting form to the less ambitious goal of interest-free banking. Some Muslim bankers and religious leaders suggested ways to integrate Islamic law on usage of money with modern concepts of ethical investing. In banking this was done through the use of sales transactions (focusing on the fixed rate return modes) to achieve similar results to interest. This has been heavily criticized by many modern writers as a means of covering conventional banking with an Islamic facade.

2.3 The Islamic Economics in the Contemporary Time

Wilson (2004) in his survey of the development of Islamic economics observes that the emergence of Islamic economics in the twentieth century as a distinct branch of economics actually can be seen as one manifestation of the Islamic revival of the late nineteenth century.²³ Specific Islamic science of economics did not emerge in the previous decades (i.e., the transitional phase), although the discussions were enormous. Islamic economics, with a distinct and systematic body of knowledge, therefore, is a modern creation that emerged in the twentieth century and can be divided into two phases; pre -1970's and post – 1970's.

2.3.1 Islamic Economics in Pre – 1970's

Islamic economics in pre – 1970's especially in 1940's – 1960's was mainly contributed by the *fuqaha* i.e., scholars and writers with a background in Islamic sciences (Haneef, 1995; Kahf, 2003). Scholars such as Abu al-A'la al-Maududi²⁴, Seoharwi Muhammad Hifzur Rahman²⁵, Syaikh Mahmud Ahmad²⁶, Sayyid Qutb²⁷, Yaqut al-'Ashmawi,²⁸ Parwez Ghulam Ahmad,²⁹ Muhammad Baqir al-Sadr,³⁰ and Ahmad Shalbi³¹ have continued the discussion of the works of Islamic economics in the transitional period and published specific book on

²³ See, Wilson, Rodney. (2004). The development of Islamic economics: Theory and practice. In Suha Taji-Farouki and Basheer M. Nafi (eds.), *Islamic Thought in the Twentieth Century*, (pp. 195-222), London: I.B. Tauris.

²⁴ Abu al-A'la al-Maududi, *Insan ka Ma'ashi Mas'alah awr uska Islami Hall* (1983), (Lahore: Islamic Publications Ltd., 18th ed. 1983; 1st ed., 1941), English translation. *Economic Problem of Man and its Islamic Solution* (Lahore: Islamic Publications Ltd., 2nd ed., 1970; 1st ed., 1947).

²⁵ Seoharwi Muhammad Hifzur Rahman, *Islam ka Iqtisadi Nizam* [Islamic Economic System], (Delhi, 1942).

²⁶ Syaikh Mahmud Ahmad, *Economics of Islam: A Comparative Study* (Lahore, 1947).

²⁷ Sayyid Qutb, *Al-'Adalah al-Ijtima'iyah fi al-Islam* [Social Justice in Islam] (Al-Qahirah, 1948) and *Ma'arakat al-Islam wa al-Ra'sumaliyyah* [The Struggle Between Islam and Capitalism], (Al-Qahirah, 1951).

²⁸ Yaqut al-'Ashmawi, *al-Khutut al-kubra li al-nizam al-iqtisadi fi al-Islam* [Major Principles of Islamic Economic System], (Al-Qahirah, 1959).

²⁹ Parwez Ghulam Ahmad, *Khuda aur sarmayadar* [God and the Capitalist], (Lahore, 1967).

³⁰ Muhammad Baqir al-Sadr, *Iqtisaduna* [Our Economics], (Beirut, 1961).

³¹ Ahmad Shalbi, *Al-Siyasah wa al-Iqtisad fi al-Tafkir al-Islami* [Politics and Economics in Islamic Thought], (Al-Qahirah, 1964).

‘Islamic economics’. Their works are an initial work on Islamic economics in contemporary time which are characterized by looking economics in a general picture and not really systematic, more *fiqhi* oriented, less economic framework, much study was devoted to the construction of *ideal* worlds, by arguing the superiority of Islamic system and attacking Western socialist and capitalist system and very much influenced by the earlier transitional works on Islamic economics.³²

The main contribution of the scholars in this period is in coining the term ‘Islamic economics’, developing the philosophical foundation of Islamic economics and initiating the study of economics from an Islamic framework in a distinct dedicated works which was not done by previous scholars of transitional period. The period of 1940 – 1960 is an initial phase of development of contemporary Islamic economics in the 20th century.

Based on their works, Islamic economics gained wide recognition worldwide, and new generation of young Muslim western trained economists started to study economics from an Islamic perspective and late on Islamic economics in the form of a discipline with a distinct subject matter, body of knowledge, methodology and theory, emerged in 1970's and officially declared in the first international conference on Islamic economics held in Makkah in 1976.

Although, many scholars believes that the term Islamic economics was initially coined in this phase. Scholars, however hold different views on who is the first in coining the term Islamic economics. Kuran argues that Islamic economics was initially coined by Abu al-A’la al-Maududi in 1941 by his book *The Economic Problem of Man and Its Islamic Solution* which was first published in Urdu in 1941 and then translated into English in 1975.

Chapra (1996) on the other hand, in his comment to Kuran’s article said that such impressive emerges if one only looks at some of the literature available in English, if we also look at the literature in Arabic we would have a different perspective on the launching and popularization of Islamic economics.³³ Although he does not sure when the word *al-iqtisad al-Islami* or Islamic economics originated, he argues that it has roots deep in the historical writings of Qur’an commentators, jurist, historians, and social, political and moral philosophers. Likewise, Al-Hassan (1996) found that the books of Sayyid Manazir Ahsan Gilani of the Osmania University (India) and Seoharwi Muhammad Hifzur Rahman in Urdu language, titled Islamic Economics and Islamic Economic System, respectively was actually earlier written by Maududy’s book.³⁴ Their works then immediately followed by the inspiring works of Abu al-A’la al-Maududy in the subcontinent (in Urdu and English) and Hasan al-Banna (Arabic). Furthermore, Yelcintas, quoting Prof. Sabahuddin Zaim's survey argues that about 4% of the modern Turkish publications related to Islamic economics for the period ending 1975, came actually before 1950 reflecting that spirit to manage life in Islamic way was a worldwide phenomenon.

Wilson (2004) has tried to reconcile the differences. Although Maududi might not the first writer who coined the term Islamic economics in early 1940’s, but Maududi is certainly the one who ‘popularised’ the term ‘Islamic economics’. This is because, unlike other writers, Maududi was a populist and able to attract growing number of followers amongst the young generation of economists in the Indian sub-continent. Maududi’s work immediately gained wide recognition due to its Jama’at-i Islami movement who has many intellectuals who had

³² See for example Wilson (2004) and Nienhaus, Volker. (2000). Islamic economics: Dogma or science. In Kay hafez (ed.), *The Islamic world and the West*, (Mary Ann Kenny, trans.) (pp. 86 – 99). Leiden: Brill.

³³ See Chapra, M. Umer. (1996). Comments on Islamic economics and the Islamic subeconomy. *Journal of Economic Perspective*, 10 (3), 193-195.

³⁴ Refer to Al-Hassan, Ahmad Y. (1996). Factors behind the Decline of Islamic Science after the Sixteenth Century. In Sharifah Shifa Al-Attas (ed.), *Islam and the Challenge of Modernity: Historical and Contemporary Contexts*, (pp. 351-389), Kuala Lumpur: ISTAC.

undertaken postgraduate degrees in economics in the West and later on promote Maududi's legacy.

2.3.2 Islamic Economics in Post – 1970's

In the post 1970s era, Islamic economics' discussions have incorporated a more 'standard economic approach' even utilizing mathematics and econometric tools of analysis- to discuss both micro and macro level questions. Since then, a more distinctive discipline of Islamic economics has been firmly established.³⁵

Contemporary Islamic economics is officially declared in 1976 when the first Islamic economics conference was convened in Makkah. Muslim scholars, from all over the world, at that time, had reached a 'consensus' on the need for a new economics based on the Islamic worldview and derived from legitimate Islamic sources of knowledge. This historical effort, according to Khurshid Ahmad (1981), is a watershed in the development of contemporary Muslim thinking on economics. The spirit was to transform the "Islamic teaching of economics" that have been done massively by Islamic scholars in pre-1976 into a further systematic articulation of "Islamic economics" in post -1976.³⁶

Serious theoretical works on Islamic economics begin to be published by the scholars who are educated by the Western economists such as Monzer Kahf (1978),³⁷ M.A. Mannan (1980),³⁸ S.N.H. Naqvi (1981),³⁹ M. Umer Chapra (1985),⁴⁰ and M. A. Choudhury (1986)⁴¹ reflecting the shift of Islamic economics from a more *fiqhi* framework into a more standard economics framework. Their works, however, were written with a strong intellectual commitment to release economic studies from the conventional paradigm and establish a new economics based on a new framework that incorporates religious teachings into its theory and system. This new economics considers economics as an integrated and multidisciplinary science that is not value-neutral; a moral economy that pursues material well-being together with spiritual well-being; an economics where its epistemological foundations are based on divine revelation (*wahy*), the fact observation as well as intellectual reasoning (*'aql*).

However, after its 30 years of development where Islamic economics is heading? Does Islamic economics make progress? What is the future direction of Islamic economics? There are four critics and scenarios on the trend and future direction on Islamic economic development.

First, Although, in 1960's-1970's, as observed by Haneef (2005), Islamic economics has entered the next phase of its development which is more modern, but the *fiqh al-mua'amalah* approach in Islamic economics analysis is still apparent in contemporary times, especially if one read the literature in Arabic and in the field of Islamic banking and

³⁵ On the characteristics of contemporary Islamic economics in post-1970 see for example Haneef (1997) Islam, the Islamic worldview, and Islamic economics. *IIUM Journal of Economics and Management* 5 (1), 39-65.

³⁶ Ahmad, Khurshid. (1981). Introduction. In M. N. Siddiqi, *Muslim economic thinking: a survey of contemporary literature*, Leicester, United Kingdom: The Islamic Foundation.

³⁷ Monzer Kahf. (1978). *The Islamic Economy: Analytical Study of the Functioning of the Islamic Economic System*. Plainfield, Indiana: The Muslim Students' Association of the United States and Canada.

³⁸ Mannan, M. A. (1980). *Islamic economics: Theory and practice*. India: Idarah Adabiyat Delli.

³⁹ Syed Nawab Haider Naqvi. (1981). *Ethics and economics: An Islamic synthesis*. United Kingdom: The Islamic Foundation.

⁴⁰ M. Umer Chapra. (1985). *Towards a Just Monetary System*. Leicester, UK: The Islamic Foundation..

⁴¹ Choudhury, Masudul Alam. (1986). *Contributions to Islamic economic theory: A study in social economics*. New York: St. Martin's Press.

finance.⁴² Their approach to Islamic economics is based on *fiqh* framework and put the discipline of Islamic economics in *fiqh al-mua'amalah* framework. Islamic economics in this regard is only concerned to establish a 'shari'ah compliance' transactions in the case of Islamic banking and finance and in defining Shari'ah regulation, lawful or unlawful in consumption, production and distribution in the case of Islamic economics. If this 'orthodox' view of Islamic economics, as put by Jomo (1993), still dominant, the scope of Islamic economics discipline will be narrowed as it is concerned merely on the legal side of Islamic economics.⁴³ In addition, Islamic economics as a discipline will not have an expanded scientific growth of knowledge and will have limited framework of study to *Shari'ah* or even narrower into only *fiqh al-mu'amalah*. Addas (2008) in his preface to his book originated from his Ph.D dissertation after observing the nature and methodology of Islamic economics concludes that Islamic economics presently (after its 30 years development) is no more than the result of applying the Islamic rules and injunctions, i.e. *Islamic fiqh*, to secular economics. Islamic economics is not yet a discipline that replaces secular economics.⁴⁴

Second, while early writings in contemporary Islamic economics of the 1970's and 1980's did pay attention to some aspects of economic theory and philosophy, the 1990s clearly saw a shift of emphasis to more commercial areas such as Islamic banking and finance. Philosophical studies and approaches were almost extinct in most of Islamic economics writings. There exists lack of philosophical studies in Islamic economics discourse that would develop distinct philosophical foundations of the discipline. As a result, there exists some confusion in the discussion of what Islamic Economics consists of as many writers limit Islamic economics studies to the study of its principles of banking and finance. In addition, larger area of Islamic economics, both microeconomics and macroeconomics become neglected and not properly explored as more resources, thinking and funding, have been mainly put in the sector of Islamic banking and finance. At the end, if Islamic economists maintain this scenario Islamic economic discourse then we are unable to promote a coherent school or schools of economic thought. The larger significance and the future of Islamic economics becomes narrowed and blurred, resulting in a limited growth of the scientific framework of Islamic economic thought.(Nasr (1987); and Sardar (1988)).⁴⁵

Third, Islamic economics is often claimed by its proponents to be an Islamic *alternative* approach to conventional mainstream economics. This means that Islamic economics has *different* views on *most* of the notion of economics. In order to proof it, Islamic economics thus should initially attack and propose alternative of the core of neoclassical economics theoretical foundations. This means it has to make an *Islamic view* as point of departure in economic theorizing and analyzing rather than from a *neo-classical paradigm* and then try to Islamize it. But, the current scenario shows a different thing. Islamic economics heavily depends on conventional economics especially neo-classical paradigm in order to develop Islamic economics. Syed Farid Alatas (2006) recently observes that Islamic economics as empirical theory has not done much. It remains within the fold of Western modernist

⁴² Haneef, Mohamed Aslam Mohamed. (2005). *A critical Survey of Islamization of Knowledge*. Kuala Lumpur: Research Centre, IIUM.

⁴³ Jomo, K.S. (1993). Introduction. In Jomo K.S (ed.), *Islamic economic alternatives: critical perspectives and new directions*, (pp. 1-7). Kuala Lumpur: Ikrq.

⁴⁴ Addas, Waleed A. J. (2008). *Methodology of Economics: Secular vs Islamic*. Kuala Lumpur: IIUM Press.

⁴⁵ Nasr, Seyyed ali Reza. (1987). Towards a Philosophy of Islamic Economics. *The Muslim World*,. LXXVII, 175-196 and Sardar, Ziauddin. (1988). *Islamic futures: The shape of ideas to come*. Kuala Lumpur: Pelanduk Publication.

discourse in terms of theoretical concerns and methodology and therefore failed to offer an alternative principles to modernization and dependency to the dominant paradigm.⁴⁶

Fourth, Islamic economics emerged in contemporary time as the result of intellectual movement among the Muslim scholars to *Islamize knowledge* or *dewesternize knowledge* and infuse with Islamic principles. Islamic economists in this case attempt to re-evaluate contemporary economic theories which have been infused and biased by Western values, from an Islamic perspective and at the same time attempt to formulate economic theories based on Islamic sources of knowledge. Since the late 1970's and 1980's there is awakening consciousness among Muslim intellectuals to revive Islamic perspective in various kind of knowledge (Haneef: 2005).

Islamization of knowledge is an intellectual movement in modern history of Islam that is done massively by the Muslim scholars who do not merely come from traditional-religious background, but come from modern-western educated background but able to speak to the growing proportion of Muslim societies and modern-western educated background but not willing to become secularists (Esposito and Voll (2001)).⁴⁷ According to this scenario, Islamic economics is essentially a product of creative synthesis of modern economy and Islamic heritage. In other word, while the roots of Islamic principles is well maintained in developing discipline, the advance development of economic analysis of conventional economics is well welcomed.

But again, the critics currently is that in doing Islamization of economics, Islamic economists often trapped into conventional paradigm and hence doing a westernization of Islam by fitting Islamic teaching into neo-classical outfit. The 'integration' program of modern economics and Islamic teachings in Islamization of knowledge is often led into 'replication' of conventional theory into an Islamic mould in the process of theory appraisal. The current development of Islamic economics promoted by a 'mainstream school' in Islamic economics discourse is modeled along neoclassical lines, working almost within the boundaries of neoclassical theory, with some adjustments to incorporate teachings/norms/values that reflected certain requirements of Islam (Haneef: 2005). Choudhury (1999) also argues that: In recent years when Muslim scholars wrote on Islamic economics, they had to turn to mainstream economic theories and clothe these up with a palliative of Islamic values.⁴⁸ But no new challenge was posed on the epistemological beginnings of a new field of analytical and scientific study. There was no demand from the Muslim scholars to well-define a distinctive field of Islamic economics. The Muslim scholars thus approached the study of Islamic values in neoclassical economic models of behaviour and resource allocation without questioning either the value-orientation of neoclassicism or the possibility of treating Islamic values in such otherwise value-free models of economic behaviour, pricing and allocation.

This is because Islamic economists unwittingly use 'Western criteria' for building and evaluating economic theories. This scenario is very terrifying and worrying. Islamic economics instead of becoming a distinct discipline that could analyze economics using its own distinct philosophy, concept, framework and method of analysis as intended by the

⁴⁶Alatas, Syed farid. (2006). Islam and the Science of Economics. in Ibrahim M. Abu Rabi' (ed.), *The Blackwell Companion to Contemporary Islamic Thought*, (pp. 587-606), USA: Blackwell Publishing.. He criticizes that Islamic economics as an empirical theory with "neo-classical guise" that "merely substituted Islamic terms for neo-classical ones, retaining the latter's assumptions, procedures and modes of analysis. As such, it has failed to engage in the analysis and critique of a highly unequal world economic order in which the gaps are ever widening."

⁴⁷ Esposito, John L and Voll, John O. (2001). *Makers of contemporary Islam*. Oxford: Oxford Univeristy Press.

⁴⁸ Choudhury, Masudul Alam. (1999). Editorial: Islamic economics and Islamic political economy. *Managerial Finance*, 25 (5), 1

project of Islamization of knowledge, it becomes a sub-discipline of conventional economics that heavily depends on all aspect of the discipline.

3. An Evaluation of Future Direction of Islamic Economics

Muslim scholars have put efforts to develop this new economics based on Islamic principles. The spirit was to transform Islamic teachings into economic realities. Although contemporary Islamic economics is a modern creation of twentieth century its roots is dated back to the 7th–12th century when the classical Muslim scholars dominated the world scientific tradition. Many progresses have been achieved so far to make Islamic economics study become more advance, systematic, and modern. However, as the above evaluation of the future of Islamic economics, much efforts and times still needed to accomplish the task of a discipline of Islamic economics with the criteria of a clear '*subject matter*', an organized '*body of knowledge*', a distinct '*epistemological/methodological foundation*' and new '*theories*' in economics.

The future direction of Islamic economics as a distinct discipline as explained in above scenarios give us clear message that Islamic economics in order to sustain itself and to evolve to a position of greater strength, has to persistently develop its own foundations and body of knowledge by using its own epistemological framework to reach a discipline status (i.e. an '*ilm*' of Islamic economics) and to determine its future direction in order to ensure a sustainable growth of knowledge. The program of Islamization of knowledge as well as dewesternization of knowledge in developing Islamic economics should be done by the spirit of putting Islamic economics into its 'proper' outfit and not into a neo-classical, socialism, or other outfit. And this will require a qualitative renewal of its philosophical base that constitutes the elements of philosophy of sciences of the ontology (of what is the nature of Islamic economics in Islam), epistemology (of how to develop Islamic economics using Islamic sources of knowledge) and axiology (for what Islamic economics is in terms of its application and direction). Without our distinct and solid epistemological foundations that are projected from an Islamic worldview or vision that represents Islamic approach it is difficult to create and develop a 'distinct' Islamic economics as conceived by Islam.

3.1 Tawhidic Approach

Masudul Alam Choudhury (1999) tries to investigate whether Islamic economics can be logically pursued within the existing methodologies and axiomatic bounds of mainstream economics.⁴⁹ Or must Islamic socio- economic analysis be based on an altogether new epistemological premise?

According to the first of these pursuits in the area of Islamic economics, it will be an incorrect view to treat Islamic economics as Islamic political economy. The field of Islamic economics simply constitutes the theoretical and empirical study of positive economic phenomenon with the use of correcting policies and behavioural norms prescribed by Islam. Islamic economic history can then be taken up in this area to play an exogenous body of study, which at best, conveys the historical ways in which the Islamic norms were understood and implemented. Such an approach to the study of Islamic economics necessitates no fresh demand on nor development of, the epistemological foundations of morals, ethics and values that essentially endogenize the Islamic system of socio- economic reasoning. It is not

⁴⁹ Choudhury, M.A. (1990) Islamic Economics as Social Sciences. *International Journal of Social Economics*. Vol. 17, pp. 35-59.

sufficient for such endogenous premises of values to be simply drawn from the Qur'an and Sunnah, and then be subjected to rigorous scientific investigation. It is necessary as well for such an intellectual inquiry to become universally acceptable in some form to the scientific community and institutions by its sheer analytical prowess. The ideas so discovered and developed must then be capable of intellectual dissemination in the classrooms, scientific fora and through national and international institutions. This is the Islamic worldview that remains pervasive, inexorable universally.

In this second approach to the study of Islamic socio-economic doctrines, such a discipline must intellectually cease to be classified as 'economics'. It will be substantively replaced by the idea of political economy. But here too, the idea of political economy would be a singularly different one from that of classical, neoclassical, Marxist and institutionalist persuasions. Included in the last category is also the Keynesian idea of political economy.

The reason for this difference in substance of the terminology is that Islamic political economy is essentially a study of the endogenous role of ethico-economic relationships between polity and the deep ecological system. Within this grand ecological system is the subsystem of the market. But the Islamic market is neither severed from the social and socio-political system nor is it overly interrupted by institutional policing. Islam places high respect on the market process, but necessitates its moral standing.

The polity of the Islamic socio-economic system is called Shura. The Shura is constituted of decision-makers who are learned persons in the tenets of Shari'ah on specific political, socio-economic and scientific issues. These fields when viewed in the light of the broadest application of Shari'ah, become of the nature of Deen (divine code of life). The decision-makers in such Shuras come from very decentralized areas of life with participatory democratic privileges to form collective decisions. Such decisions are collectively formed through voting (complete or partial social consensus) in the Shura. The Shura formulates market friendly, socially friendly policies for morally ethicizing such systems. Such on-going interactions generate polity-market interrelationships, with the market system responding to the policy regimes instituted by the Shura on the basis of knowledge of Shari'ah on specific issues (formation of Ahkam, or rules from fundamentals, Usul). The power structure of polity-market interactions of an ethico-economic type thus explained by the Islamic concept of political economy, is aimed at developing integration through interactions between the Shura and the market system in accordance with the precept of the Qur'an and Sunnah.

The strength of these sources of knowledge in Islamic political economy is based on the belief that human reason must comprehend naturally the inevitability and perpetuation of truth in God's Oneness in the order of things (Tawhid). The Precept of Oneness forms the primordial foundation of Shari'ah. This guides the Shura in deriving its knowledge from the premise of Shari'ah (Usul) and developing necessary policy prescriptions on specific issues (Ahkam). A knowledge-based process of transformation is then generated in the socio-scientific thinkers in the Shura (i.e. among the Sharees), in the institutions that such knowledge development influences, and in the society at large that the above two integrate to transform. In this knowledge-forming process, the Precept of Unicity of God as the unifying worldview (weltanschauung) for understanding and inculcating truth through integrating interrelationships between God (Shari'ah), man (socio-economic order = Istihsan or Muamalat) and nature (scientific order, Khalq).

One then notes carefully, that the concept of Shura as consultation, now taken up as interactions leading to integration (=social consensus) in all issues before it, is a universal property of systems and processes. It is not simply limited to the political order. It takes up polity-market (better as deep ecological interrelations) interactions. Such interactions are also pervasive in all enterprises and institutions, wherever decision making exists in the small and in the large. Shura thus assumes the intrinsic property of a universal process. Such a

worldview of the universal and infallible character Shura is essentially the Qur'anic idea of creative evolution combined by the attributes of just balance, just purpose, certainty, felicity and re-origination.

3.2 New Theories in Islamic Economics

Although, there is not many new theoretical innovation that has been introduced recently, but in the following discussion, we will look at the possibility to introduce several new economics theories:⁵⁰

a. The Life-Cycle Model of Consumption

The life-cycle framework is the standard way that economists think about the inter-temporal allocation of time, effort and money (as capital). The framework has a venerable history in the economics profession, with roots in the infinite horizon models (including our life hereafter) and the finite horizon models. Developments since the 1950s have considerably increased the breadth, depth and coherence of the framework so that the modern version provides a guide to thinking about the modeling of many life-cycle choices—such as consumption, saving, education, human capital, marriage, fertility and labor supply.

However, the earlier version of life-cycle models started from the story of Prophet Yusuf in Surah Yusuf, verses 42-48. The Pharaoh of Egypt summoned Prophet Yusuf, then an imprisoned slave, to interpret two dreams. In the first, seven plump cattle were followed and devoured by seven lean, starving cattle. In the second, seven thin ears ate full ears of corn. After hearing these dreams, Prophet Yusuf prophesied that Egypt would enjoy seven years of prosperity, followed by seven of famine. He recommended a consumption-smoothing strategy to provide for the years of famine, under which Pharaoh would appropriate and store a fifth of the grain produced during the years of plenty. According to the tafseer Ibnu Khathir, Pharaoh embraced this plan, made Prophet Yusuf his finance minister, and thereby enabled Prophet Yusuf to save Egypt from starvation.

Why did Prophet Yusuf recommend storing the grain (a form of domestic investment yielding a rate of return of zero before depreciation) rather than lending it broad at a positive rate of return? Thus storing the grain at home was a much safer course. More importantly, the saving decision for later consumption is considered as effective strategy.

In its most general formulation, the life-cycle framework simply asserts that agents make sequential decisions to achieve a coherent (and “stable”) goal using currently available information as best they can. This view does not rule out many models which would not be consistent with earlier restrictive models in the life-cycle tradition (such as certain variants of the permanent income model). For example, we would certainly include within the framework the “buffer stock” model which assumes that agents cannot borrow and that they are impatient, even though this predicts much more tracking of consumption with income than earlier permanent income models can accommodate. More generally we would not rule out, a priori, that life-cycle behavior can include potentially important features such as habits, imperfections in capital markets, disagreements between husband and wife about how much to save, limited computational powers, and discounting of the future that changes over time. We would, in fact, go even further and include under the life-cycle framework, for example, models that do not assume expected utility so as to allow that agents may have a preference

⁵⁰ This theoretical approach becomes one of the core research area for EKONIS (<http://www.ukm.my/ekonis>).

for the early or late resolution of uncertainty even when this does not confer any planning advantages. What the life-cycle framework does rule out is “rule of thumb” behavior, in which households simply spend a fixed fraction of their income.

b. Islamic Bank Financing, Allocation of Capital and Economic Performance

The introduction of Islamic banking stems from the fact that Islam prohibits interest (*riba*) and encourages trade (*bay'*) and profit-sharing (*Shirkah*). Its role is to produce a viable alternative to the interest-bearing banking system. Parting itself from interest, Islamic bank encourages profits from *bay'* (trading & commerce) which are created via mutual trade and cooperation, while by means of profit-sharing and risk, profits are created through the demand-driven equity investment (*mudharabah* and *musharakah*). The latter can promote productivity and creativity as it is directly involved in real production and the provision of value-added goods.

Therefore, the role of Islamic banking industry is vital to generate productivity and consequently on the economic performance. Their role in providing funds and hence, fostering economic development with the innovative entrepreneurship as the critical element. Islamic banks play a pivotal role in economic development because they choose which firms get to use rabbul mal's funds. According to this view, the Islamic banks adjust the path of economic progress by affecting the allocation of capital and by receiving a favorable profit rate from firms. As a consequence, this view of finance and development highlights the useful impact of Islamic banks financing on economic performance.

However, as far as conventional banks are concerned, their potential to induce economic growth is doubtful given that the overdependence of conventional banks on credit-based products. Instead of direct and productive involvement in economic activities, their roles stay behind as debt-collecting agencies. Therefore, the theoretical study could be done to prove the following hypotheses:

- Hypothesis 1:* a higher utilization of profit-loss sharing financing would enable Islamic bank to look for entrepreneurial talents and take risks in the business.
- Hypothesis 2:* equity-financing of the Islamic banks promote higher productivity and creativity
- Hypothesis 3:* Higher productivity and creativity lead to higher growth
- Hypothesis 4:* Islamic banks' financing are associated with a better allocation of capital which contribute to a sustainable economic growth.
- Hypothesis 5:* Islamic banks are expected to increase investment in the growing industries and decrease investment in the declining industries. Thus, Islamic banks might invest via equity-financing (*mudharabah/musharakah*) at a higher level, they do seem to allocate their investment better.

3.3 Institutional Economics

Institutional economics is an economic perspective that attempts to extend economics by focusing on the social and legal norm and rules that underly economic activity. In the economic activities, law and finance are inter-related. Law is argued as set of contracts. These contracts are defined – and made more or less effective – by legal rights and enforcement mechanisms. From this perspective, a well-functioning legal system facilitates the operation of both markets and intermediaries. The operation would overall affect the level

and quality of financial services – which finally improve the efficient allocation of resources and economic growth.

Although, Islamic law has been in existence for more than fourteen hundred years, but its implementation have been subjected to the willingness of the rulers in the passage of history and civilization. Although, the study on financial contracts has been extensively reviewed, the role of Islamic contracts is not highlighted, except those in the historical institutional and contract theory literatures. For instance, a few of them such as paper done by Gonzales de-Lara (2001) which discusses risk-sharing in financial contracts with focus on the sea-loan (debt-based) contract and commenda (equity-based or *mudharaba*) contract. Whereas The *Mejelle Ahkame Adliye*⁵¹ was elaborated between 1869 and 1876 as a part of the Legislative purpose of the *Tanzimat*, initiated in imperial Turkey, with the approval of Sultan (Rahman, S.A, 1967), has been in the market since the late of nineteenth century but not implemented due to colonial era which forced the colonized countries to follow their laws, e.g. common law in Malaysia⁵² and Dutch law in Indonesia.

Since, Islamic teachings covers all dimensions of human life includes guiding the relations among people as individual and as a communal in various aspects such as economic, social, cultural and political. Accordingly Muslim individual cannot compartmentalise his/her behaviour into religious and secular dimensions as he/she is always asked to be bound by *shari'ah*. Islamic law thus embodies an encompassing set of duties and practices including worship, prayer, manners and morals, marriage, inheritance, crime and commercial transactions: that is, it embraces many aspects that would not necessarily be considered as law elsewhere (Lewis and Alagoud (2001)).⁵³ Based on this fact therefore Islamic teachings on transactions may have a strong distinctive character in the economy provided that they are implemented properly taken into account all necessary spirit, rules, regulations, and institutions.

The fact that under Islamic law on transactions there are various types of contracts, from contract of sales and purchases, contract of usufructs such as leasing, contract of sharecropping, partnerships and equity participation, and Islamic banking establishments, emerged significantly in the last three decades, are permitted to adopt all these contract types, then it is logical to classify Islamic banks into a universal banking institutions.

Most importantly the aspect of contracts as foundation for the distinctive Islamic financial products, i.e. the one resembling profit-loss sharing nature which contains cooperative spirit, will be analysed to establish a strong connection with financial stability as pre-requisite to achieve the economic growth. It is believed in this paper that embarking from cooperative spirit, through developing equity partnership instruments in the financial system, will be able to create a more sound value added in the economy, so that higher economic growth and more equitable distribution of resources can be achieved simultaneously.

3.4 Mathematical Economics

⁵¹ The Penal Code of 1850 and the Commercial Code of 1861 were the predecessors of the *Mejelle* but these two compilations had been largely based on the laws of European countries. The *Mejelle* represents an attempt to codify that part of *Hanafi fiqh* which treats of *muamalat* (transactions between people). The codification was the work of a Commission of Jurists, headed by Ahmad Djevdet Pasha, the Minister of Justice (Rahman, S.A, 1967).

⁵² For example, the Company Act 1965 does not make the payment of *zakat* as compulsory.

⁵³ Lewis, M.k., and Algaoud, L.M., (2001), *Islamic Banking*, Edward Elgar

Mathematical economics refers to the application of mathematical methods to represent economic theories and analyze problems posed in economics. It allows formulation and derivation of key relationships in the theory with clarity, generality, rigor, and simplicity. Mathematics allows economists to form meaningful, testable propositions about wide-ranging and complex subjects which could not be adequately expressed informally. Further, the language of mathematics allows economists to make clear, specific, positive claims about controversial or contentious subjects that would be impossible without mathematics. Much of Islamic economic theory is currently presented in terms of mathematical economic models, a set of stylized and simplified mathematical relationships that make clear their assumptions and their implications.

The Second World War cemented the use of applied mathematics in many disciplines, including economics. Operation research, a newly formed discipline from this marriage of mathematics and economics, would drive much new research and draw considerable government funding over the next few decades. Mathematical economics expanded in scope and use considerably during the immediate post-war period.

This assertion of structure is an attempt to turn economics into a behavioral science. This view drives the fundamental premise of mathematical economics: systems of economic actors may be modeled and their behavior described much like any other system. This approach could be extended to solve the problems of applying individual utility maximization over aggregate groups with comparative statics. Comparative statics compares two different equilibrium states after an exogenous change in a variable. This and other methods in the standard textbook would provide the foundation for mathematical economics in the 20th century.

In addition, much of Islamic economics can be presented in geometric terms or elementary mathematical notation. Mathematical economics, however, conventionally makes use of calculus and matrix algebra in Islamic economic analysis in order to make powerful claims that would be more difficult without these mathematical tools. These are prerequisites for formal study, not only in mathematical economics but in Islamic economic theory generally.

Therefore, graduate programs in Islamic economics and finance programs in UKM require strong undergraduate preparation in mathematics for admission and are attractive to an increasingly high number of mathematicians. Applied mathematicians apply mathematical principles to practical problems, such as economic analysis and other economics-related issues, in such a way that many economic problems are often defined as being integrated into the scope of applied mathematics.

Another tool of mathematical economics is econometrics, the use of statistical techniques to interpret quantitative empirical data. Strictly speaking, econometrics refers to empirical interpretation of data while mathematical economics refers to the formulation of models. A recent study of economic articles submitted for publication shows an increasing focus on empirical data and analysis. This technique focuses strongly on statistical methods. Some university programs cross-list courses in the statistics department and require students studying for their PhD enroll in supporting courses offered by the statistics department.

4. Conclusions