A COMPARISON BETWEEN CONVENTIONAL AND ISLAMIC ECONOMICS ON SIMPLE EQUILIBRIUM MODEL AND THEIR IMPACT ON POTENTIAL SUSTAINABLE ECONOMY

By: Syahrituah Siregar; Akhid Yulianto
(Fakultas Ekonomi Universitas Lambung Mangkurat, Banjarmasin)

Abstract
The actual issue raised globally nowadays is about finding out solution for sustainable development. Various efforts have been formulated and implemented in dealing with environmental degradations. However, most of all existing approaches are more technical oriented. At the same time, we need a long-term solution that can harmonize inevitable resources exploitation for fulfilling human needs with environmental supporting capacity. Conventional economics proposes market mechanism as the solution. It is because prices convey a lot of information not only in demand side but also in supply side. Price level, as it believes, is to bring into an efficient level of scale. In facts, an efficient allocation for today does not meet with future. The results of the analysis conclude that resource allocation in conventional economics is mainly determined in market mechanism while in Islamic concepts it works in various ways of allocation. Accordingly, the two concepts have differences; firstly, through conventional perspective there would be excessive resource exploitations. In accordance with Pareto Optimun, the efficient level would not be in a fewer level so that future generations are better off. Islamic perspective argues on consumption and resource utilization ethic that could maintain scale size preserved for future generations’ needs. There is a specific mechanism in Islamic society and government’s responsibility to ensure people’s basic need fulfillment. Secondly, the concern in a just distribution relieves it from the trap of growth fetish. Capital concentration is believed to create growth system in which the poor if they remain patient will soon be relieved from their misery. In popular terms we know very well about what so called “trickle down effect” and “spread effect” that is hardly proven. Islamic value of money would create a just monetary system by clearly defining function of money as flow concept not asset concept. It ensures that capital will flow into productive sectors that will benefit larger number of people. At last, Islamic concept propose specific role of government in controlling some certain resources, i.e. the energy, water, and other strategic resources. It of course is a mean of controlling resource use for sustainable scale and just distribution.

Keywords: resource allocation, sustainable scale, just distribution, market mechanism

BACKGROUND
The actual issue raised globally nowadays is about finding out solution for sustainable development. Various efforts have been formulated and implemented in dealing with environmental degradations. However, most of all existing approaches are more technical oriented. At the same time, we need a long term solution that can harmonize inevitable resources exploitation for fulfilling human needs with environment capacity of support. Conventional economics proposes market mechanism as the solution. It is because prices convey a lot of information not only in demand side but also in supply side. Price level, as it believes, is to bring into an efficient level of scale. In facts, an efficient allocation for today does not meet with future.

Daly and Farley (2004) remind us that neoclassical economics is concerned almost solely with efficient allocation. Ecological economics also considers efficient allocation important, but it is secondary to the issues of scale and distribution. Meanwhile, efficient allocation cannot even be theoretically determined without a prior resolution to the distribution and scale questions. Islamic economics perspective in dealing with resource allocations trough market mechanism will fit into this precondition.

The research is meant to be an onset for advanced discussions of this topic. A dynamic and open mindset will bring us into setting up more applicable models of economic ideas. This is actually urgent for the development of the promising Islamic economics to answer the on going questions.

An empirical model framework is conducted by tracing historical sites. Due to the facts that Islamic economics and conventional economics are not comparable in an empirical implementation then this analysis is limited into a conceptual exploration. The concepts to explore deeply were those related to equilibrium mechanism in conventional and Islamic concept, the difference, hence its impact to potential sustainability. As a consequence, the research method will be a library research.

SUSTAINABILITY AND THE RELATED TERMS
Talking about sustainability we will end up with various types of definitions. Each term conveys the idea regarding its own scope and perspective. However, sometimes in many ways definitions and limitation among terms cannot easily be distinguished from one to another. We, of course find the very popular terms like sustainable development (SD), besides others, like sustainable economy, sustainable growth, green economy, or green GDP.

There are definitions of SD as mentioned below, such as one that United Nations World Commission on Environment and Development (WCED) has: “Sustainable development meets the needs of the present without compromising the ability of future generations to meet their own needs.” (1987). There is another definition similar to what WCED has addressed by Strange and Bayley (2008).

Ruckelshaus (1989) says that “Sustainability is the emerging doctrine that economic growth and development must take place, and be maintained over time, within the limits set by ecology in the broadest sense – by the interrelations of human beings
and their works, the biosphere and the physical and chemical laws that govern it. It follows that environmental protection and economic development are complementary rather than antagonistic processes.

Sustainable Growth (SG) simply means able to keep on growing (Daly and Townsend, 1993). Regardless the differences between the two concepts, they are same in common in suggesting maintaining development and growth by ensuring future generation’s ability to meet their needs. (Strange & Bayley, 2008; Ravago, Raumasset & Balisacan, 2009).

The concept of green economy and green society, according to some experts, is not simply to make the world greener. It also has to meet the needs for creating justice, adequate employments, securing energy and foods availability, and alleviate poverty, besides, of course, maintain the environment. There has been a transformation of understanding about the real problem of human life, thus the fields of the concept are almost the same as sustainable development fields or objectives. If we only think of how to make the world greener and share the responsibility among developed countries and under-developed countries then it will tend to worsen the inequality. Sustainability toward green economy and green society has to play in broader perspective. The awareness turns traditional indicators of economic, social, and environment to indicators of sustainability.

Sustainability indicators reflect the reality that the three different segments are very tightly interconnected, as shown in the figure below:

Figure 1: Communities are a web of interactions among the environment, the economy and society.
Source: http://www.sustainablemeasures.com/node/89:

From all of the above explanation we will assess the sustainability in only two focuses: a) distribution and employment, and b) sustainable growth. In these two focuses we will trace the difference in concepts between conventional and Islamic economics. The difference will due to the characteristic of the way the concepts suggest to reach and determine the optimum level that has sustainability implication.

EQUILIBRIUM CONCEPTS AND ITS IMPACT ON DISTRIBUTION AND EMPLOYMENT

The difference between conventional and Islamic concept occurs in production function. In terms of financial capital use, conventional argue that it bears cost of loanable fund, represented as interest rate. On the other hand, use of capital in Islamic concept applies revenue-sharing contract.

Following Karim (2001), from below figure at any given TC, interest rate based production system will produce less than the revenue sharing system. It is because the interest that goes to the lender adds total cost so that total cost in interest based system is TCi. Profit sharing contract will encourage the entrepreneur or borrower to optimize its fund in production without worrying about paying a certain amount of money as cost of fund, thus total cost curve is TCrs which is lower than TCi. Due to the fact that cost per unit in revenue sharing system is lower than conventional one, it is possible to reach Qrs, which is more quantity than Qii of interest based system.
In Islamic system, based on revenue sharing contract, production tends to be at the higher level. Consequently, the rate of employment will be higher than the conventional system. At the same time, without any cost of fund paid in advanced, unlike interest based system, the return will be more equally distributed. If the firm gains positive return, then the lender and borrower of capital will share the profit as agreed. However, if they were not successful with the venture then they will share the lost. There will be no cost of the capital fund to bear by the borrower. The loss is on both parties because the borrower has already dedicated himself making effort in running the business. The capital owner, generally the wealthier, gets loss in terms of his money.

In money market, conventional economy accommodates speculative motive. Money is commodity or asset. An alternative for accumulating liquidity asset other than deposits is investment in bonds. Liquidity preference by speculative motive is represented as L2 in below diagram.

Speculative market, wherein bonds are brought into transaction, grows spectacularly until recently. In facts, the bigger the market the less productive will be the money, as shown in IS-LM equilibrium model in above diagram. Once the size of speculative transaction growing, as described by L2 that moves to L2', money market equilibrium, represented by LM curve moves backward to LM'. Potential national income, Y₀ decreases into Y₁. It means that aggregate demand in economy gets smaller. The condition could be a threat to economy through shrinking employment and social welfare.

There are at least two ways in coping with the problem according to the conventional perspective. Firstly, it is done by increasing interest rate (i) and the second is by adding up to money supply (M₀). By increasing the interest rate potential national income goes up because corresponding point between interest rate and national income climbs up along LM curve. The increase
in interest rate will create partial-temporary equilibrium.

The facts shows that the increase in interest rate often bring economy into some problems. It is an unpopular policy in real sector. Interest called as Riba in Islam is one of the sources of unjustified enrichment (Chapra, 1986). Accordingly, Agion et al (200) imply the difficulty of ensuring interest based monetary policy to reach the goal. An interest rate increase has an ambiguous effect on firms. In terms of wealth distribution, the policy worsens the gap between the poor and the haves. Rich people who have abundant liquidity asset, including deposits gain benefit every increase in interest rate taking place. In contrast, it is more difficult for the poor to get access from capital sources because the costs become higher than the costs in previous time.

As shown in the following diagram, the addition in money supply can boost the economy. As money supply curve (MS) shift into MS’, the LM curve also shift from LM to LM’. The goal to increase economy is achieved as national income increase from \( Y_0 \) to \( Y_1 \).

![Figure 4: Increase in Money Supply in order to regain level of national income](image)

As we already knows, increase in money supply without adequate addition of productions in real sector will shock balance. The instrument of creating money without any real back up is from conventional concept, not in Islamic concept. Raise of interest rate and money supply in such way actually plants seeds of inflation, instability, and unequal distribution.

<table>
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<tr>
<th>Impact of Equilibrium Model Using Classical Quantity Theori of Money</th>
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<td><strong>Conventional</strong></td>
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<td>( M \times V = P \times T )</td>
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Form the above chart, according to classical quantity theory of money, the increase of money supply will turn price into a higher extent (inflation). Inflation can distress economy, not only in consumptive, but also in productive activities. This mechanism will not take place if money is managed using Islamic economics concept. In Islamic concept, money is not a static asset instead it should be treated as flow concept (Karim, 2007). In Islamic way, money should be utilized for fulfilling consumptive needs and invested in real sector. It is prohibited to keep money and save it without any clear productive intentions. From the chart, we can see that in Islamic concept money will be circulated in the economy so that the velocity of circulation is
This will enhance productive activities, increase productions and transactions, and finally assure more optimum just distribution.

**IMPACT IN SUSTAINABILITY YIELD**

In conventional perspective there would be excessive resource exploitations. In accordance with Pareto Optimum, the efficient level would not be in a fewer level so that future generations are better off. Islamic perspective argues of consumption and resource utilization ethic that could maintain scale size preserved for future generations’ needs.

Capital concentration is believed to create growth system in which the poor if they remain patient will soon be relieved from their misery. In popular terms we know very well about what so called “trickle down effect” and “spread effect” that is hardly proven.

**Figure 5: Corner Solution for Islamic consumer**

In consumption, when facing with harmful goods, there will be a corner solution. Islamic concept about harmful things especially those that can harm environment is already advanced. Before climate change issue was broadly spoken, in Islam there is an ethic, such that it is prohibited to cut any tree without any reasonable purpose. Meanwhile, for his dignity, human is not advised to be greedy. Accordingly, we can conclude that the rate of exploitation of resources in conventional is higher than that of Islamic concept.

Islamic economic concept protects more to the environment. As a consequence, the exploitation rates in all way are less than that of conventional economics. The difference between conventional and Islamic economic in terms of the rate of exploitation is described using the following maximum sustainability yield curve in figure 6.
Sk1; sk2 = stok if using conventional paradigm
Si1; si2 = stock if using Islamic economics concept

Figure 6: Comparison of the effect of exploitation rate to the stock

From the above diagram, the ideal rate of exploitation of resources is at point “se” which can assure a maximum rate of consumption not only for today’s necessity but also for necessity in the future. The rate of sustainable yield is called as maximum sustainable yield. That is the real income (Djayadiningrat et al, 2011). Sir John Hicks had explained it as a maximum value of consumption in a certain period now and in projected next periods his wealth will not get smaller than at the beginning.

This paper is not trying to determine how the maximum sustainability yield will be achieved through the conventional as well as the Islamic economic. Rather, it will show the facts of which in any hypothetic intensity of exploitation, the rate of exploited sources through Islamic concept is always less than that of conventional one. It is in line with Aburounia & Sexton and Dadoo telling that the concept of sustainable development is inherent with Islam ideology from long time back. Islam, for example, warns in the Holy Qur’an and Hadiths against excessive and over extension of natural resources exploitation.

On the above diagram, at over exploited state of resources deployment, the activities through Islamic concept leave stock at carrying capacity at level sk1, which is more than conventional economics, at level sk2. Similarly, at under exploited state of resources deployment, Islamic concept will leave stock at level si2, larger than that of conventional economics, at level si1. The larger the stock left, the more sustained will be the yield, because the chance for regeneration of resources is more assured.

This issue is very relevant to actual phenomena. The practices of illegal logging, illegal mining, over fishing, and environmental degradation as the result of overexploitation become main problems on earth. These problems take place because the people do not run the economy by using Islamic concept. Tom Wessel’s thesis, as addressed by Goklany (2007), using the formula of I=PAT shows the relationship between environmental impacts (I), population (P), affluence (A) and technology (T). He believes that economic growth violates the three “laws of sustainability,” namely, the law of limits to growth, the second law of thermodynamics, and the law of self-organization in complex systems. His remedy is to go back to “Ancient Cultural Values” which provide extraordinary rich experience of life besides ensuring the sustainability. Furthermore, economic systems should mimic biological systems in that they should be self-organizing whose complexity, diversity and stability increases with time.

He suggests that the free market system, which he claims drives modern-day economic systems, leads almost naturally to the elimination of local and regional enterprises. Instead, it consolidates into large multinational enterprises because, for example nothing threatens existing large multinationals.

David Korten’s The Post-Corporate World: Life After Capitalism, revealed that he would replace multinationals with smaller local and regional enterprises specifically adapted to the area they serve. Public ownership of these enterprises would ensure that they would work for the good of their communities and environment rather than “solely maximizing profits”

Malek ben Nabi (1972) questions the thesis that the key to economic dynamism is capital investment. Instead, the source of dynamism lies in man and in the collective will of the society. Awakening the man should be the focus of the attention in planning for economic development

Siddiqi (1980) on other part quotes Mahmud Ahmad rejecting capitalism’s claim of being a self-adjusting process
leading to maximum satisfaction of human wants. Economic crises are sufficient to refute such a claim. The main weakness of capitalism according to Baqir is its failure on the distribution front. Its emphasis on more and more production is misplaced as more production does not ensure greater welfare. Every increase in the size of the “pie” in the capitalist system will ruin all sustainability aspects.

Islamic concept propose specific role of government in controlling some certain resources, i.e. the energy, water, and other strategic resources. Islam propose clear division of resource ownership. It of course is a mean of controlling resource use for sustainable scale and just distribution.

CONCLUSION.

The results of the analysis conclude that resource allocation in conventional economics is mainly determined in market mechanism while in Islamic concepts it works in various ways of allocation. Accordingly, the two concepts have differences; firstly, through conventional perspective there would be excessive resource exploitations. In accordance with Pareto Optimum, the efficient level would not be in a fewer level so that future generations are better off. Islamic perspective argues of consumption and resource utilization ethic that could maintain scale size preserved for future generations’ needs. There is a specific mechanism in Islamic society and government’s responsibility to ensure people’s basic need fulfillment. Secondly, the concern in a just distribution relieves it from the trap of growth fetish. Capital concentration is believed to create growth system in which the poor if they remain patient will soon be relieved from their misery. In popular terms we know very well about what so called “trickle down effect” and “spread effect” that are hardly proven. Islamic value of money would create a just monetary system by clearly defining function of money as flow concept not asset concept. It ensures that capital will flow into productive sectors that will benefit larger number of people. At last, Islamic concept propose specific role of government in controlling some certain resources, i.e. the energy, water, and other strategic resources. It of course is a mean of controlling resource use for sustainable scale and just distribution.

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