Resource Allocation, Investment Decision and Economic Welfare: Capitalism, Socialism and Islam

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1. **Introduction**

The main aim of this paper is to discuss the nature and scope of allocation of resources among the goods and services produced in an interest-free economy. In this paper an attempt will be made to discuss the conditions or criteria required for efficient allocation of resources based on Islamic value system. The topic of allocation of resources primarily comes within the purview of micro-economics and its related discipline known as welfare economics. Micro-economics or welfare economics mainly deals with the utilisation of resources at a particular time. It is not very concerned with the growth of resources in response to changes in time. As a result, the discussion of micro-economics or welfare economics in allocation of resources is primarily static. It is not a dynamic one.

In this paper it is assumed that there is no difference between interest and '*riba*' and Islam recognises the concept of wage, rent and profit as stated in the Holy *Qur'an* and *Sunnah* of Prophet Muhammad (SAW).

In the paper it is shown that the efficient allocation of resources in an interest-free economy is possible through the introduction of the Islamic value-loaded concept of 'accounting price' for capital as one of the decision criteria. In other words, we must link up material considerations with economic ethics based on Islamic value system. Therefore, it is obvious that allocation of resources in an Islamic economic system depends upon both objective and subjective criteria. The objective criteria will be represented by the 'accounting price' of capital which must be based upon the Islamic opportunity cost and the subjective criteria will be represented by the economic ethics which must be based upon the injunctions of the Holy *Qur'an* and *Sunnah*. So, the scope of allocation of resources is both wide and narrow at the same time. It is narrow or restrictive in the sense that the allocation of resources must take place under the framework given by the Holy *Qur'an* and *Sunnah*. It is wide in the sense that the allocation of resources must take into consideration the market and non-market forces like externalities, secular factors etc. and religious factors like moral, social and economic values of Islam (Mannah, 1984).

The paper is divided into four sections. Section I gives the introduction, Section II makes a review of the real process of allocation of resources in both capitalist and socialist economic systems, Section III deals with the theory and practice of resource allocation in an Islamic economic system and Section IV concludes the analysis and makes an attempt to bring about the policy implications of the analysis made.

II. **Resource Allocation Under Capitalist and Socialist Economic Systems: A Brief Review**

A. *Resource Allocation Under Capitalist Economic System:* One of the most important theories of resource allocation in the capitalist economy is the neoclassical doctrine.

Though neoclassical theory failed to answer clearly why interest is paid, yet it plays a vital role in the allocation of resources from the micro and macro-economic viewpoints of the capitalist economy. In the market economy the commodity price and the rate of interest are established in such a way that they can ensure equilibrium between demand and supply of a particular commodity at a particular time. Attempt has been made to formalise the concept of market economy through the competitive equilibrium model. Therefore, it is claimed that perfect competition helps to make a choice of Pareto Optimum. For instance, if the rate of interest becomes equal to marginal productivity of capital in both present period (t) and future period (t+1) of a particular investment project, the optimum level will be reached. In this case both the variables are defined with respect to a particular commodity which is chosen as a numeraire (Mannan, 1984). Since the present market system ensures perfect equilibrium between investment plans of different agents of the economy, we need some planning for achieving the optimum level. If we assume that the marginal benefit and cost of relevant combinations of different variables like individual-social, direct-indirect, economic-non-economic etc. have already been determined, then the criteria for choosing between different investment projects must reflect time-value of money. Because the benefit from capital comes from an income-flow over a long period of time. To compare anticipated income stream with cost we require to find out the present value of the benefit to be received in future over a long period of time (i.e. the life-time of the project). Usually the present value of the future benefit is found out by discounting interest-income from the returns of the life-time investment. In fact, the reversal of the cumulative interest to be received in future is known as discounting. Hence interest occupies a place among decision criteria irrespective of the kinds of interest receivers in a capitalist system (Mannan, 1984). Leaving aside discussion regarding the question which will be the appropriate rate of interest to be used for discounting future income stream or if the discounting by the rate of interest is appropriate, let us now discuss about the investment decisions in the following:

Usually two types of decisions are needed: (1) whether a particular investment will be carried out or not; (2) which investment project should be chosen among the limited number of alternative projects. Certainly a project should be chosen which is quite different from the investment projects already undertaken. According to the neo-classical theory, four types of criteria are used for taking investment decisions. These are: (i) present value criterion, (ii) cost-benefit criterion, (iii) internal rate of return, and (iv) criterion of break-even time. Let us now discuss them one by one:

(i) *Present Value Criterion*

The present value criterion should be expressed with the help of the following formula:

$$PVMNB = \frac{r_1}{(1+i)^1} + \frac{r_2}{(!+i)^2} + \ldots\ldots\ldots\ldots + \frac{r_n}{(1+i)^n}$$

Where

PVMNB = present value of the marginal net benefit;
r's = marginal net benefits obtained from investment project;
i = rate of interest.

According to the above criterion we get two principles of choosing an investment project:

(a) The project should be undertaken for allocation of resources on the basis of the assumption that the social opportunity cost of capital is represented in the rate of interest.

(b) The project whose present value of net benefits is the highest should be chosen for allocation of resources.

(ii) *Cost-Benefit Criterion*

This criterion may be represented with the help of the following formula:

$$BCR = \frac{\sum_{t=1}^{n} \frac{B_t}{(1+i)^t}}{\sum_{t=1}^{n} \frac{C_t}{(1+i)^t}} \geq 1$$

Where,

BCR = benefit-cost ratio;

C = amount of cost;

B = amount of benefit;

i = rate of interest or discount rate;

t = time;

n = number of years.

The formula may also be stated in the following way:

$$\text{Benefit Cost Ratio} = \frac{\text{Present Value of Benefit (PVB)}}{\text{Present Value of Cost (PVC)}}$$

According to this criterion, if the gross benefit and cost ratio of a project after discounting becomes equal to unity or more, the project should be taken up for allocation of resources.

(iii) *Internal Rate of Return*

The internal rate of return is a rate which may be compared to any interest rate representative of social opportunity cost of public capital. It is such a rate of interest which makes the present value of benefit and cost equal. If the rate is higher than the rate of expected return, more investment will be preferred subject to the availability of sufficient capital required for additional investment. The internal rate of return for discounting can be expressed in terms of the following equation under the assumption of indefinite rate of return:

$$r^* = \frac{B}{C}$$

Where,

B = present value of returns;

C = present value of costs.

In other words, the internal rate of return under fixed total benefit and cost over the life-time of the project and under the specified period of time is one which makes benefit and cost equal. That is:

$$\sum_{t=1}^{n} \frac{B_t - C_t}{(1+i)^t} = 0$$

Where,

B_t = amount of benefit in each year;

C_t = amount of cash in each year;

t = time;

n = number of years;

i = rate of interest or discount rate.

There are two implications of the above formula:

(a) The project whose rate of return is higher than the market rate of interest is acceptable.

(b) The project whose rate of return is the highest should be finally chosen for allocation of resources.

(iv) *Criterion of Break-even Time*

The break-even time is a time after which the net return of the investment project begins. The break-even time may be expressed in terms of the following formula:

$(B_t - C_t) \geq 1$, for $t = t^*$, the break-even time.

The implications of the above formula are the following:

(a) The project whose break-even time is lesser than the pre-determined time is acceptable.

(b) The project whose break-even time is the least should be undertaken. According to the classical economists, interest is a reward for waiting. Keynes and other proponents of liquidity preference theory regarded interest not only as a reward for saving, but also as a reward for parting with liquidity. Interest is the price paid for investing a part of the liquid money kept idle for speculative purposes. Interest may also be regarded as a premium to compensate for the money kept in asset forms like bonds, securities, etc., to face the uncertainties. The higher the degree of future economic uncertainties, the higher will be the rate

of interest. When the price of all economic assets including bonds ceases to rise further, the speculators become very much concerned of a possible fall in asset prices. As a result, they are willing to hold money in cash. On the other hand, when the speculators foresee a rise in the price of economic assets, then they reduce their demand for cash and want to hold more economic assets.

When price of assets increases, the economic assets can be sold out at a profit. Of course, if the rate of interest falls to a very low level, then the speculators want to hold infinite amount of cash. In the circumstances, the economy is caught under a "liquidity trap" and the demand curve for money becomes perfectly horizontal. In this case, the rate of technological progress is usually so slow that the marginal efficiency of capital gradually decreases with the increase in capital. Of course, it will not be unreasonable to think that if money supply increases further, it will increase consumption and the demand for money for transaction purposes. Usually the individual and firm are inspired by the expectation regarding future economic conditions to give priority to economic assets over cash money. If the speculators think that the marginal efficiency of capital and rate of interest will increase in future, then only they give preference to the investment of capital asset. Therefore, the asset holders must take into consideration the future price of assets and prospective yields (which is reflected in the marginal efficiency of capital) compared to bond and other debt instruments. The present and prospective (expected) price of capital asset partially depends upon the present and expected rate of interest. That is why the relationship between money, loan and equity is very complex. According to the Keynesian investment theory, if the marginal efficiency of capital is higher than the prevailing rate of interest, investment will take place. That is, profitability is the main factor for investment decision (Mannan, 1984). Therefore, in the capitalist growth theory, the rate of interest is relevant so long as it influences the amount of investment. It is also argued that the rate of interest is a technical concept since it is not only relevant in case of gross investment in new machines, it is also relevant in case of influencing human behaviour. The rate of interest affects the level of use of old machines (because it affects the installation of new machines) and these become competitive with old machines in the framework of discounted value of future returns. As a result, the rate of interest also affects the value of these assets and capital formation. According to capitalist theory, capital formation is a tool for effective technological progress. The economy will come to the adjustment path by the change in investment rate and as a result, the rate of interest will come closer to its equilibrium path. The optimum level of interest rate appears to be equal to the growth rate of gross output. Therefore, we find that in a capitalist economic system the rate of interest is linked up with investment decisions in a very complicated way. Hence we can rightly say that the rate of interest plays a vital role in the allocation process under market economy (Mannan, 1984).

B. *Resource Allocation in a Socialist Economy*

According to Schumpeter (Schumpeter, 1951), in a socialist economy there would be no interest as an independent value phenomenon. In the erstwhile Soviet Union interest was not observed in the cost of production of the state enterprises after the abolition of private enterprises. Apart from very few exceptions, in most cases interest was not paid for the use of fixed capital. Since capital was not so abundant to bring down the rate of interest to a zero level, its relative efficiency in alternative employment was considered for achieving welfare. Moreover, since an important range of investment decision was really decentralised, it was necessary to inform the decision makers about the scarcity price for national allocation of resources, and everybody had to abide by it. According to the well-known conditions of

profit maximization, the rate of interest should be uniform throughout the economy so that the supply of investment fund (which is politically determined) becomes equal to demand (Grossman, 1953). Therefore, the makers of investment plan in the then Soviet Union introduced different coefficient of deficiencies relating to the norms of functioning of capital. These coefficient were used by the makers of investment plan and natural data and parameters for modifying the unjust lower price of material inputs supplied through rationing. In the then Soviet Union, three arguments were shown for capital charges:

(1) The use of capital charges may be supported for the developed concept of opportunity cost required for allocation of scarce capital.

(2) The use of capital charges may be supported for increasing capital required for new net investment on the basis of the needs of the economy.

(3) The use of capital charges may be supported for introducing a criterion for a minimum amount of capital and current cost in an arbitrary period (T) if the annual present operating cost flow is assumed as constant. This process is equivalent to the method of applying 100 percent interest charges to primary capital investment in time 'T'. (That is, 100/T percent). As Mannan said, "But the makers of investment plans were careful to dissociate the capital charges advanced by them from the capitalist category of interest, even to the extent of asserting that there is nothing in common between the two." (Mannan, 1984). The proposed capital charge was just a calculating device and this was neither a price paid to the capitalist for the use of capital nor a kind of personal income prevalent in the capitalist system. Though the proponents of capital charges brought some changes in the concept of capital charges subsequently and though they failed to realise that the proposed interest came within the accounting cost of investment project and that this was a price forming element, yet they did not recognise the existence of interest (Grossman, 1953).

It should be mentioned here that the capital charges played a vital role in one way or the other in the allocation of scarce capital in East European countries like Poland, Bulgaria etc. though the financing of large-scale investment projects through the non-reimbursable interest-free grants of the Finance Ministry and paid by the Industrial Bank of the countries concerned continued in Czechoslovakia and Hungary. Even new financial disposition in Rumania in the years 1967 and 1970 also did not include any capital charges. Of course, it is argued that the allocation of scarce capital in Marxian theory is not efficient. Professor Grossman said that there was no doubt about the fact that the then Soviet economists faced some problems in removing this inefficiency. Among the problems, the important one is the axiom represented by the labour theory of value for resource allocation. This obstacle is more acute in cases of capital allocation. Its fatal blow is that it measures output in terms of labour. But according to the logic of rational allocation the alternative combination of resources should be measured in terms of maximand or minimand. Therefore, the inputs must be measured in terms of production units in case of minimisation of labour inputs (maximisation of leisure) with a fixed bill of goods where unit of minimand is the unit of labour time. It should be mentioned here that Professor Friedman (1962) criticized Marxian labour theory of value from distributive point of view. In the words of Friedman, "Even if one accepts the basic ethical proposition, the Marxian theory of exploitation is logically fallacious. Clearly, some part of current product is attributable to non-human capital. The Marxian answer is that non-human capital is the product of past labour-embodied labour, as it were. But if this were so (and I do not mean to imply that it is), the Marxian slogan would have to be rephrased: present and past labour produce the whole product but present labour gets

only part of the product. At most, this implies not that present labour is exploited but past labour is, and a new ethical proposition would have to be introduced to argue that present labour should get present and past labour produce" (Friedman, 1962).

From the above discussion it is clear that the rate of interest or capital charges play a very vital role in both the capitalist and socialist systems. The capitalist system is based upon consumer's sovereignty while the socialist radical paradigm is based upon producer's sovereignty. As a result, the nature of role played by the rate of interest in both the systems is quite different. Since the ownership of production organisation and objectives of production are different in both the systems, the implications of opportunity cost, the nature of the rate of interest and the motivation properties are also different in both the systems. Therefore, the allocation of investment resources under producer's sovereignty is quite different from marginal productivity criterion under consumer's sovereignty (Mannan, 1984).

III. **Allocation of Resources in Islamic Economic System**

The allocation of resources in Islamic economic system is quite different from the allocation of resources in a capitalist or a socialist system. The resource allocation in Islam differs from allocation of resources in a capitalist system in the following ways (Mannan, 1984):

(i) In a capitalist system interest is considered as an element of cost of production while Islamic economic system rejects interest as an element of the cost of production. In a capitalist system the distributive shares are four: wage, rent, interest and profit, while in the Islamic system the distributive shares are three: rent, wage and profits. There is no place of interest in the Islamic economic set up since it is not included in the cost of production in the Islamic economic system.

(ii) In a capitalist system the rate of interest is linked up with the capitalist money market in one way or the other. The money, bond, loan and equity in which economic values can be held overtime are influenced by the rate of interest in one way or the other. There is no such counterpart of this type of money market in Islam. Islamic money market is both simple and complex. It is simple because it recognises the right of the shareholders and encourages equity participation on the basis of profit-sharing. It is simple also because it does not support such speculative activities which distort resource allocation. In the Islamic money market, speculation is to be replaced by forecasting and prediction based on solid economic data.

(1) Resource allocation in Islam has not only economic objective, but also has social and moral objectives. The Marxian welfare and investment functions disregard moral, ethical and non-material values. Of course, it does not mean that Marxian social system is value-neutral. The idea of accounting price in Islam differs from the Marxian idea of accounting price. The accounting price of capital in the Marxian economic system takes a form of price forming element and it is reflected in price. On the other hand, accounting price in Islam is not a part of price. Because if it becomes a part of price, it implies that it indirectly recognises interest.

(2) Marxian theory is based upon the labour theory of value. According to this theory, price reflects production cost and production cost is measured in terms of absorbed labour time. Only labour yields surplus value. Because the value of labour received by the capitalist for using labour is higher than the value paid to labour by the capitalist for using labour services. According to Marx, other factors of production like machines, plant, raw materials, etc. reproduce themselves in the production process. Islam does not accept this narrow

view. Like Marxian theory Islam also rejects interest as a category. But like Marxian theory Islam does not consider labour as the only source of value.

(iii) According to Marx, the welfare function for influencing investment decision is created from the source within the society and it represents the will of the Communist Party in power. The welfare function in Islam is created from the source outside the society and it represents the will of God. This role of the constant exogenous variable in building Islamic economic structure is very important. The flexibility of the endogenous variables does not depend upon the whims of the capitalist or the bureaucracy of the Communist Party, it depends upon the principles of *Shari'ah*. Of course, this does not mean that there is no scope for new thinking or argument in Islam. The real allocation of resources in Islam mainly depends upon subjective factors. The objective factors in Islam play a limited role in allocation of resources.

The objective factors may be expressed in terms of accounting price of capital while the subjective factors may be expressed in terms of Islamic welfare criteria. Let us now discuss about the two types of factors in the following:

(a) *Objective factors*

The objective factor is the accounting price of capital. The accounting price of capital may be used for ensuring efficient allocation of resources in Islamic economic system. The accounting price can be determined by the profit index or the share dividend index of a selected industry based upon time series or cross section data. This kind of accounting price may be based upon the concept of opportunity cost. It is possible to have a range of accounting price in an Islamic system. Ideologically, this accounting price may be seen as a neutral concept since it can work in any economic system as an accounting device. But in Islam it must have ideological orientation and bias. Because the accounting price of capital must be evaluated in terms of explicit value judgement based upon the criteria of Islamic social welfare with a view to ensuring efficiency and equity in resource allocation. It is likely that the pattern of accounting price in different sectors of the economy will be diversified to reflect the pattern of priorities given by the national plan. Needless to say, the main task of the national plan is to determine the amount of fund to be invested in public and private sectors in a particular period of time and to determine the nature and pattern of investment under Islamic set up. It implies that Islam supports a good deal of flexibility and decentralisation in investment and output decisions. Islam supports freedom of choice in occupation and consumption consistent with the *Shari'ah* Law (Islamic Law). It may be shown with the help of the following example how the accounting price of capital helps the process of resource allocation in Islam (Mannan, 1984):

Let us suppose that the Central Planning Authority has identified three investment projects. The projects are X, Y and Z. Let us suppose that all the three projects are equally socially desirable and consistent with the Islamic values. But the resources at the disposal of the state at present allow only two projects to be taken up. Now the problem is how to decide which one of the three projects should be given up. Based on the past experience let us suppose that the accounting price of capital is 15 percent and the calculated rates of return of the three projects are 17 percent, 10 percent and 19 percent respectively. Therefore, according to the accounting price of capital, we are to choose projects X and Z since the rates of return of these two projects are higher than the assumed accounting price of capital. Of course, before final acceptance for implementation, the two projects should be analysed and evalu-

ated from welfare viewpoints. Needless to say, the accounting price has only been shown in paper; it is not used for real transactions. Till now this concept is ideologically neutral and it has only helped in the decision making process since it has brought objectivity in the allocation process of resources. It will be erroneous to include accounting price of capital in the same class of interest of the capitalist system.

The accounting price in the socialist system is determined by the objectives and evaluation of the national plan and the bureaucracy in charge of administration. Therefore, the accounting price in the socialist system reflects the preference of the people at the top and the level of this preference works as the level of valuation of the consumer goods. The consumers in the socialist system depend upon the mercy of the Central Planning Authority or the bureaucracy. But in Islam the accounting price reflects the economic, social and moral welfare functions. The preference of both the consumer and producer is subordinate to it.

In Islam neither consumers nor producers exploit anybody. They co-operate with each other for the wellbeing of all the people of the society. Therefore, we see that the accounting price of capital in Islam must take into consideration the factors like consumer's preference, preference of the private sector, preference of the public sector, the relative scarcity and profitability in terms of displaced alternatives at home and abroad and Islamic ideological weight (Mannan, 1984). This concept of accounting price may be applied in the following cases of resource allocation:

(i) *Resource Allocation in the Pure Public Sector*: There is a need for supplying social good in this sector and externalities exist in this sector. In this case market system does not work. The national importance of this sector is very high.

(ii) *Resource Allocation in the Pure Private Sector*: In this sector smaller investment is needed for producing consumer goods and producer goods and the people do not feel the need of borrowing.

(iii) *Public Sector Induced Investment with Private Sector*: The projects in which the risk exists and the private initiative is not encouraged in investment, the participatory investment on the basis of profit and loss sharing is needed.

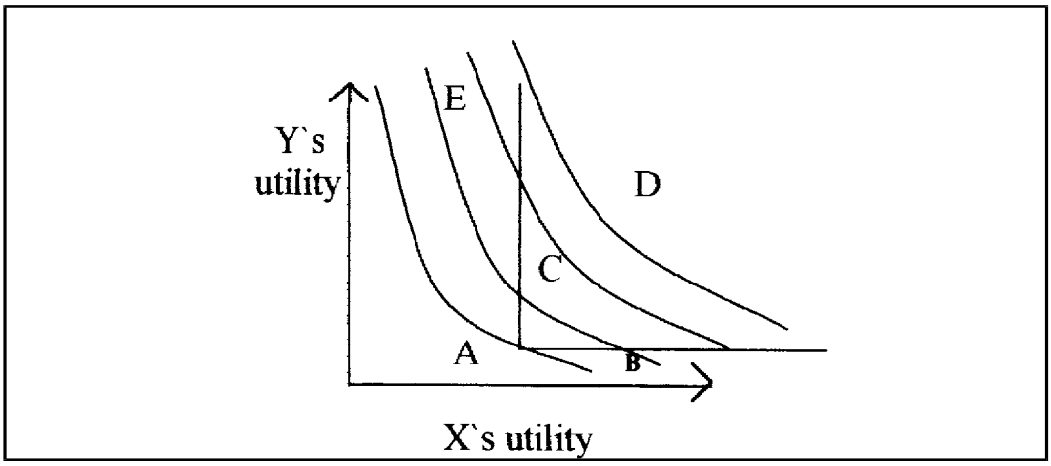
(iv) *Externally Induced Investment*: The investment on the basis of profit and loss sharing may be made in those sectors where there is a scope for technology transfer from one country to the other.

The price mechanism in terms of the market forces of demand and supply under the overall Islamic structure of production, consumption and distribution is approved in Islam. There is no place of a socialist solution regarding directed labour, administered output plan and price in the Islamic set up. Of course, it does not mean that the Islamic market system is identical with the capitalist solution of output plan and price. In the capitalist system the market mechanism generates impersonal forces of demand and supply. In the capitalist system all transactions are impersonal and profit-oriented. In Islam this is true in a very restricted sense. In Islam the market mechanism generates such demand and supply forces which are consistent with the value system derived from faith in Allah (SWT). In this sense all kinds of transactions in Islam are personal and welfare-oriented. Because in the Holy *Qur'an* time and again stress has been laid upon high degree of honesty, reliability and truthfulness in economic and commercial transactions. Therefore, if a project is chosen on

the basis of objective consideration led by market forces, it should also be acceptable from welfare viewpoints (Mannan, 1984). Let us now discuss about the welfare function in Islam and its role in the allocation of resources in the following:

(b) *Subjective Factors (Welfare Criteria)*

In Islam investment criteria and welfare criteria are interlinked. In the same way individual and social welfare are also interrelated. So, unlike capitalist system the Islamic welfare economics is not different from individual consumer behaviour or the individual firm's behaviour. Because both the individual and firm work under *Shari'ah* Law, therefore Islam does not support Pareto Optimum Criterion. The Pareto Criterion wants to say that if a change makes someone better off without causing any harm to anybody, then it will be regarded as welfare or betterment. To compare this concept of Pareto Optimum with the Islamic insight let us now discuss the Pareto Criterion with the help of diagram as follows:



Let us suppose that there are two individuals in the society: X and Y. The utility of individual X is represented by the horizontal axis while the vertical axis represents the utility of individual Y. According to the Pareto Criterion, if a change from point A takes a person to the right of point A, to point B or above point A to point C or D, then that situation may be regarded as an improvement. Because individual X will be better off at point C, but individual X is also not worse off and both will be better off at point D. But according to Pareto Criterion, point E can not be evaluated. Because at point E, individual Y is better off, but individual X is worse off. The Pareto Welfare concept is not able to solve the basic social problems of distribution and redistribution.

Islam is very much concerned with these social problems. Even when the capitalist Government faces allocational problems, then it tries to solve the allocational problems on the basis of its own arbitrary value judgement. This arbitrary value judgement works on the basis of capitalist welfare function. In this sense there is no solid foundation of welfare economics under capitalist economy. But in Islam the social and moral considerations are so interrelated that these must encompass the *Qur'anic* value judgement. This kind of welfare function is only confined to the Islamic society. If an economist does not know how to distinguish between development and underdevelopment resulting from a policy change due to new investment decisions, then he will not be able to give any recommendations regard-

ing any allocation of resources. There is no way of weighing the net result on the basis of the objective priority despite the problem of interpersonal comparison. The only way out is the formulation of a set of explicit value judgement which enables the analyst to evaluate investment decision on the basis of welfare criteria. The *Shari'ah* principles will provide the basis for making allocation, production and distribution fair and legitimate. Therefore, it is imperative to classify the general criteria which will help construct an indifference map. The indifference curve will help us rank the utility of the different combinations of goods consumed by the members of the Islamic society. The indifference map upon which the individual decision is based may be regarded as social and moral welfare functions of Islam (Mannan, 1984).

The Islamic concept of utility is a much wider concept than the concept of utility under capitalism. Islamic concept of utility is best known as '*maslahah*' (*masalehat-al-Ibad*). The term '*maslahah*' refers to the wellbeing of the human beings. According to Al-Shatibi, *maslahah* is the property or power of a good or service that governs the basic elements and objectives of life of the human beings in this world. According to him, there are five basic elements of existence in this world. They are: (i) life (*al-nafs*), (ii) property (*al-mal*), (iii) faith (*al-din*), (iv) intellect (*al-aql*) and (v) posterity (*al-nasl*). All goods and services which have the power to promote these five basic elements are said to have '*maslahah*' and the goods and services which have *maslahah* will be termed as needs. Want in capitalism is determined by the concept of utility while need in Islam is determined by the concept of *maslahah* (Khan, 1989).

The concept of goods is also different in Islam. In Islam goods are bounties bestowed by God upon mankind. According to the Holy *Qur'an*, the consumable goods are those which attribute moral and ideological values to them (mankind). In the Holy *Qur'an* regarding goods two terms are used. These are: *al-tayyibat* and *al-rizq*. The word, *al-tayyibat* has been used 18 times while the word *al-rizq* has been used 120 times in the Holy *Qur'an*. *Al-tayyibat* refers to good things, pure and good things, clean and pure things, good and wholesome things and sustenance of the best. *Al-rizq* refers to Godly sustenance, divine bestowal, Godly provision and heavenly gifts (Ali, 1975). According to Islam, consumer goods are the useful, beneficial consumable materials whose utilisation brings about the material, moral and spiritual betterment of the consumer. Things which are not useful and prohibited in Islam are not goods in the Islamic sense. In capitalism goods are those which are exchangeable. But in Islam goods are those which are exchangeable and morally useful (Choudhury, 1991).

The criterion to judge if a particular good has *maslahah* is fixed in Islam while the criterion to determine utility differs from person to person. Individual *maslahah* is consistent with social *maslahah* while individual utility may be in conflict with social utility. In Islam *maslahah* underlies all economic activities in a society such as consumption, production and exchange while utility is the objective of consumption and profit is the objective of production in capitalism. The utility derived from the similar quantity of same good differs from person to person and the comparison of utility can not be objectively determined. But comparison of *maslahah* in several instances may be possible. For instance, person A may be protecting his life by eating an apple while person B, by the same act may only be improving his health. So, *maslahah* of A is more than *maslahah* of person B.

Islam associates belief in the Day of Judgement and the life in hereafter inextricably with belief in the Unity of God. This extends the Muslims' time horizon beyond death. Life

before death and life after death are closely interrelated in a sequential manner. This has two effects as far as allocation of resources by the consumer is concerned. The outcome of a choice of action is composed of two parts: immediate effect in this life and effect in the life to come. The number of alternative uses of one's income is increased by the inclusion of all the benefits that will be gained by them in the life hereafter. For instance, interest-free loan, *qard-e-hasana, sadaqah* to the poor and the needy, caring for animals, spending for the welfare of the future generation, improving community life, propagating the message of Islam, promoting good deeds and thoughts, time in the remebrance of God.

Therefore, many alternative uses of one's income may have positive utility in the Islamic frame of reference, although their utility or benefits in the capitalist or communist frame of reference may be zero or negative. True success for the Muslims refers to the total horizon of time since it is the same effort to do good which results in success both in this life in all aspects and in the life after death (Weber, 1958; Shows, 1972; Ali, 1975; Kahf, 1989; Choudhury, 1991; Shatibi, undated). The Holy *Qur'an* unequivocally emphasizes this behavioural norm for material and spiritual matters with a view to securing a balanced life.

According to Islam, resources should be first allocated to the essentials (*daruriyyat*). After meeting the essentials, the resources should be allocated to the fulfillment of complementarities (*hajiyyat*). Resources left out after allocation of resources to essentials and complementarities may be allocated to amelioratories (*tahsiniyyat*). This ordering is a type of lexicographic ordering and cannot be represented by convex indifference curves that neo-classical economics assumes for preference ordering. The second level of preference ordering comes when choice is involved within three categories of needs. In this case of essentials and complementarities we may not be able to construct a preference ordering that can give smooth convex indifference curves. Only in case of amelioratories we can use smooth indifference curves (Banna, 1965; Siddiqi, 1972; Khan, 1989). In other cases, we need balancing and there is no room for prodigality (*Israf*).

The concept of extensive complementarities among life-sustaining and moral possibilities is better addressed by the theory of social well-being. This is distinct from the entire utilitarian idea of social welfare, happiness, freedom and rational choice in favour of extensive interactions, integration and creative evolution. These attributes are causally related with the organizational behaviour of the *shuratic* process world view in Islamic political economy. Thus a thoroughly non-neoclassical perspective is introduced in this way into resource allocation in the Islamic political economy (Choudhury, 1991).

In the light of the Holy *Qur'an* and *Sunnah* we can specify at least four principles and twelve criteria of welfare from Islamic viewpoints. The four principles are: permissibility, consistency, balancing and desirability. The welfare criteria are: ideological promotion, efficiency in resource allocation, equity in distribution of resources, collective good, priority to the immediate need, stability, certainty, continuity, productivity, human consideration, universality, ethics and morality. Let us now discuss these principles and criteria in the following section in some detail.

The Principles of Resource Allocation in Islam

(1) *Permissibility*: According to this principle, the allocation of resources for investment should be made in such a way that it is permissible in Islam.

(2) *Consistency*: The allocation of resources should be made in such projects or sectors which are consistent with the principles of the Holy *Qur'an* and *Sunnah*. The concept of consistency is very dynamic. If a particular investment is ideologically consistent with the principles of the Holy *Qur'an* and *Sunnah* should be decided by the *ijtihad* and *qiyas*.

(3) *Balancing*: According to capitalist principle of transitivity, if among the three projects X, Y and Z, X is more acceptable than Z and Y is more acceptable than Z, then if X is accepted for investment. Z can not be accepted instead of Y even though project Z also is consistent with the Islamic value system. Arrow used this criterion in 1963 in developing General Possibility Theorem regarding social choice and individual price. This criterion is based upon the assumption of capitalist economy which is not acceptable in Islam. In Islam one should make a desired balance between subjective and objective factors of life. The rules of life in Islam is to maintain an honest living with the appropriate and balanced use of human intellect and bounties provided by God. Therefore, if the principle of balancing is violated, then it may give rise to a problem of inconsistent use of resources.

(4) *Desirability*: According to this principle, the investment should be made in those projects which are desirable and beneficial for the wellbeing of the society as a whole and which satisfy the basic elements of *maslahah*. Needless to say, this concept of desirability must be in conformity with the Islamic value system.

Welfare Criteria for Allocation of Resources in Islam The criteria of welfare will work as conditions for choosing among different investment projects for allocation of resources on the basis of Islamic *Shari'ah*. Of course, most of these criteria are mutually overlapping. However, it should be mentioned here that these criteria are just indicative, but not exhaustive. Let us now discuss the criteria in some detail in the following.

1. *Ideological Promotion*: The investment expenditure should be such that it leads to the promotion of Islamization. The allocation of resources cannot be made in any project which downgrades the Islamic image. God says "The similitude of those who spend their wealth for the cause of God is like the similitude of a corn which grows seven ears, in each ear a hundred grains. God is Bountiful, All knowing." (2:261). Man must make appropriate use of the resources bestowed upon him by God for their balanced growth. Otherwise it will not be able to promote Islamic value system. Therefore, the investment of resources in projects which directly or indirectly accelerate the promotion of Islamization should be promoted.

2. *Efficient Use of Resources*: The concept of efficiency in capitalism is to maximize utility or profit with the use of available resources while in Islam it refers to the maximization of the fulfillment of needs with the use of available resources. The fulfillment of needs is desirable since the needs have *maslahah*. Greater emphasis has been laid upon the efficient use of resources. A great warning has been given in the Holy *Qur'an* to give up wastage and excessive expenditure with a view to ensuring efficient use of resources. God says, "But waste, not; By excess, for God loveth not wasters." (6:141). "Verily spendthrifts are brothers; of the Evil ones; And the Evil one; is to his Lord ungrateful." (17:27). The importance given by the Holy *Qur'an* regarding efficient use of resources should be understood in a wider perspective. The concept of resources stated in the Holy *Qur'an* refers to all kinds of resources such as human resources, natural resources, mineral resources etc.

3. *Equity in Distribution of Income*: The allocation of resources should ensure equitable distribution of income. The existence of different classes of people in society is recognised in

the Holy *Qur'an*. The Holy *Qur'an* mentions about the differences in intellect, income and asset or resources. (4:33). Islam does not advocate dead-level equality. The concept of equity depends upon the socio-economic level and stage of a society imbued with the Islamic concept of socio-economic justice.

4. *Collective Good*: In case of implementation of an investment decision the individual interest may clash with the collective interest. In such case preference or priority will be given to collective interest. Of course, it does not mean that the individual interest should be totally ignored. If the individual interest is affected, the system of compensation should be introduced if the necessity for the same arises.

5. *Priority to the Immediate Need*: It is impractical to think that allocation of resources in a particular time will bring equal welfare for all members of the society. Priority should be determined on the basis of immediate need for allocation of resources in the projects under consideration. This priority should be made in the light of the Holy *Qur'an*. God says, "Worship God and associate naught with Him and conduct yourself with beneficence toward parents and toward kindred and orphans, and the needy, and toward the neighbour that is a stranger, and the companions by your side, and the wayfarer, and those who work for you. Surely God loveth not the proud and boastful who are niggardly and enjoin people to niggardliness." (4:37-38).

6. *Stability*: The allocation of resources should be made in such a way that it does not bring any instability in the economy. It should be mentioned here that if there is undesirable inflation due to unplanned investment, it may lead to a lack of confidence in the home currency. The undesired inflation distorts real income level and efficiency.

Islam does not support hoarding, profiteering, speculation, monopoly etc., since these disturb stability of the economy. Therefore, balanced allocation of resources in accordance with Islamic ideology is the only means to attain stability in the economy.

7. *Certainty*: In the Islamic economy most of the investments are collective investments which have greater risk absorptive capacity. Despite this there is a need to reduce the risk of loss due to the possibility of uncertainty of profit. Since the economy is established on the principle of profit-loss sharing and equity participation, it is needed to earn profit from investment. There are many measures for overcoming risk and uncertainty such as discounting of risk, sensitivity analysis etc.

8. *Continuity*: According to this principle, the use of resources should be continuous so that growth is encouraged. An efficient but growing economy is better than an efficient but unworthy economy. Prophet Muhammad said, "The person who seized land belonging to nobody would cease to have any right to such land if he did not reasonably exploit it after three years of possession." In another Hadith stated from Ayesha Siddiqa Prophet Muhammad said, "Whoever cultivates land which is not the property of anyone has a better title to it." Therefore, the continuous use of resources is desirable so that it encourages growth.

9. *Productivity*: The allocation of resources should be such that it leads to productivity and it enables the people to satisfy their basic needs. God lays utmost emphasis upon the human effort and human involvement in the production process to satisfy material wants with a view to leading an honest and a decent living. God said, "And when prayer is finished, then disperse ye through the land and seek the bounty of God." (62:10).

10. *Humane Consideration*: The allocation of resources should be such that the poor and the needy are benefited. In Islam utmost importance has been laid upon doing welfare to the poor and the needy by investment in social insurance, social security, minimum wage etc. God says, "And in their wealth the poor and outcast have due shares." (51:19). God also says, "So give what is due to kindred, the needy and way-farer. This is best for those who seek countenance of God and it is they who will prosper." (30:38). "And in their wealth and possessions was the right of him who asked (the needy), and him who was prevented for asking (for some reason)." (51:19).

11. *Universality*: The allocation of resources should be such that it brings welfare to most of the people. Attention should be given so that allocation of resources does not serve the interest of a particular region or a particular section of people ignoring the collective good of the society.

12. *Ethics and Morality*: The final objective of the allocation of resources in investment project of the different sectors of the economy is to attain the satisfaction of God, to serve the cause of God both in the world here and hereafter. Therefore, the allocation of resources should be made in such a way that it serves this noble objective.

How to Apply Islamic Welfare Criteria in Allocation of Resources

The four principles mentioned above must be fulfilled in case of allocation of all types of resources. Of course, it is not likely that all welfare criteria or conditions should be fulfilled together. One criterion may come in conflict with another criterion. For instance, stability criterion may clash with the criterion of ideological promotion. The investment expenditure in ideological promotion may lead to excessive inflation which may pose a threat to economic stability. In this case even if some conditions are not fulfilled, we can take recourse to the second-best choice. Besides, some of the criteria are objective while others are subjective in nature. It is very difficult to assess the subjective criteria. In this case, appropriate decision-making depends upon the value judgement of the concerned decision-makers. The criteria may be evaluated in the following ways:

(a) The criteria influencing the investment alternatives under consideration should be identified.

(b) The selected criteria should be evaluated in such a way that they are well-defined and clear.

(c) The criteria should be ranked in chronological order in accordance with the value judgement of the decision makers.

(d) The criteria arranged in chronological order according to value or rank should be assigned a number. For instance, the most important criteria should be assigned ')100' and the least important one should be assigned '1'.

(e) The assigned numbers will indicate the importance of the criteria and they will also help to decide which criteria should be ignored in making allocative decisions.

IV. **Conclusion**

We can derive the following conclusions from this paper:

1. The allocation of resources under producer sovereignty is different from marginal productivity criterion under consumer sovereignty. The resource allocation in Islamic economic system not only takes into consideration the good things of both the systems (capitalist and socialist), but also includes some additional criteria based on Islamic social and moral welfare functions.

2. The real allocation of resources depends less upon objective factors and more upon subjective criteria. The objective criteria are expressed either in terms of accounting price of capital which is determined by share-dividend index or profit index of the selected industries or in terms of opportunity cost.

   The accounting price of capital is Islamic value-loaded. It may be different for different sectors of the economy depending upon the national plan requirement and overall priorities.

   The subjective criteria are expressed in terms of welfare criteria and the investment criteria are intermixed with the criteria of welfare. We have identified in this paper four principles and twelve welfare criteria in the light of the Holy *Qur'an* and *Sunnah*. However, these are not fully exhaustive, but indicative.

3. It is not likely that all welfare criteria should be fulfilled at a time. The best way is to rank each criterion on the basis of importance and to see if most of the important criteria are satisfied as well as the investment decisions are taken in conformity with the Islamic values and ideology. That is, the best way is to follow the second-best policy to choose among the welfare criteria.

4. The concept of extensive complementarities among life-sustaining and moral possibilities is better addressed by the theory of social well-being. This is distinct from the entire utilitarian idea of social welfare, happiness, freedom and rational choice in favour of extensive interactions, integration and creative evolution. These attributes are causally related with the organizational behaviour of the shuratic process world view in Islamic political economy. Thus a thoroughly non-neoclassical perspective is introduced in this way into resource allocation in the Islamic political economy.

Bibliography

Arrow, K.J. (1963). *Social Choice and Individual Values.* (New York, USA: John Wiley and Sons).

Ali, Abdullah Yusuf (1975). *The Translation of the Holy Quran.* (Washington, DC: The Muslim Students' Association of the United States, Canada).

Baumol, W.J. (1965). *Economic Theory and Operations Analysis.* (USA: Prentice Hall).

Banna, Hasan-al (1965). *Mazmu'at Rasa'il al-Iman al-Shahid.* (Beirut: Dar al-Andalus).

Choudhury, M.A. (1991). *The Unicity Precept and the Socio-Scientific Order* (Lanham, MD: University Press of America).

Friedman, M. (1962). *Price Theory*. (London, UK: Frank Case and Co. Ltd.).

Galbraith, J.K. (1964). *The New Industrial State.* (Boston, USA: Houghton).

Grossman, G. (1953). "Scarce Capital and Soviet Doctrine," *Quarterly Journal of Economics*, August.

Kahf, Monzer (1989). "The Theory of Consumption," in *Readings in Micro Economics* (ed.) Sayyid Tahir, Aidit Ghazali, and Syed Omar Agil (Kuala Lumpur: Longman).

Khan, M. Fahim (1989). "Theory of Consumer Behaviour in an Islamic Perspective," in *Readings in Micro Economics* (ed.) Sayyid Tahir, Aidit Ghazali, and Syed Omar Agil (Kuala Lumpur, Longman).

Kaser and Ziclinki (1970). *Planning in East Europe* (London: The Bodley Head).

Keynes, J.M. (1935). *The General Theory of Employment, Interest and Money* (New York, USA: Harcourt Brace).

Leibenstein, H. (1970). "Some Notes on Economic Development Planning and the Rate of Interest under Multiple Sovereignty," in *Essays in Socialism and Planning in Honour of C.Landauer* (ed.) G. Grossman (USA: Prentice Hall).

Malinvand, J.M. (1965). "Interest Rate in the Allocation of Resources," in *The Theory of Interest* (ed.) F.H. Khan and Breechling (London: Macmillan and Co.).

Mannan, M.A. (1970). *The Making of Islamic Economic Society* (Jeddah, Saudi Arabia: International Centre for Research in Islamic Economics, King Abdul Aziz University).

Lindauer, J. (1968). *Macro Economics* (New York: J. Wiley and Sons).

Patterson, W.C. (1962). *Income, Employment and Economic Growth* (New York, USA: Norton and Co. Inc.).

Riggs, L.J. (1968). *Economic Decision Models* (USA: McGraw Hills).

Samuels, W.J. (1966). *The Classical Theory of Economic Policy* (Cleveland, Ohio, USA: The World Publishing Company).

Schumpeter, J.A. (1951). *Theory of Economic Development* (Cambridge, UK: Harvard University Press).

Shatibi, Imam (undated). *Al-Muwafaqat Fi Usul al-Shariah* (Cairo, Egypt: Abdullah Draz al-Maktabah al-Tijariyah al-Kubra).

Shows E. Warren and Burton, Robert H. (1972). *Macroeconomics* (Boston, DC: Heath & Company).

Siddiqu, Mohammad Nejatullah (1972). *Some Aspects of the Islamic Economy* (Delhi, India: Markazi Maktaba Islami).

Winch, D.M. (1971). *Analytical Welfare Economics.* (Australia: Penguin Publications).

Weber, Max. (1958). *The Protestant Ethics and the Spirit of Capitalism (New York: Carles Scribner's Sons)*

Zarqa, Md. Anas-al (1989). "A Partial Relationship in a Muslim Utility Function, in *Readings in Micro Economics* (ed.) Sayyid Tahir, Aidit Ghazali and Syed Omar Agil (Kuala Lumpur Malaysia: Longman).