SUPPLY SIDE OR PRODUCER BEHAVIOR

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Introduction

This chapter will deal with the theory of producer behavior with special emphasis on issues that are affected by the Islamic viewpoint. It is, therefore, divided in three sections. Section One deals with the motives and objectives of production. Section Two examines the factors of production and their returns, and Section Three discusses the Producer's equilibrium.

SECTION ONE

MOTIVES AND OBJECTIVES OF PRODUCTION

Why do people produce? This is a simple and basic question which rarely strikes our mind and for which we usually have a ready and simple answer, that is to sell and make profit. This answer carries as much truth as complexity and maybe confusion, in some of the contemporary literature on Islamic economics.

To sort things out, it may be appropriate to look in the objectives of the producer during the different stages of human association or *'imran*. Undoubtedly, the objectives of production at each stage were influenced by the prevalent process of production during that stage, as the process of production has, itself, gone through different stages of development.

Each of the stages has its own effects on the thoughts and ideas of ordinary people as well as philosophers and thinkers. Hence, it will be an interesting exercise to briefly study the objective of the producer throughout different production processes.

Hand-to-mouth production

For the early humans on earth, the process of production was very simple. They apparently felt hungry and must have thought of trying a fruit which must have looked attractive on certain nearby tree. The simplest form of a production process is, thus, very much mixed with consumption as it takes the form of picking up free goods and making them available for consumption.

Today we tend to think of this process as a part of the consumption operation in that it is usually carried out by consumers not by producers. The objective of this form of production process is to satisfy the consumption needs of the producer who was clearly motivated by feeling need and by the availability and attraction of the free goods.

Production for future consumption

With the development of civilization and the advancement of science and technical know how, humans learned land cultivation and developed a concept of family and tribal togetherness. Therefore, production for future consumption came into existence.

People started planning a production process lasting for a whole season or even a year and applying storage techniques which allow them to consume their product all year long.

Obviously, they learned a lot about the characteristics of their products, especially their perishability and storability.

Production for future consumption also meant a separation between the time of the work input and the time of harvesting the output. This implied, inter alia, that laborers must have something to live on until the crop becomes ready for consumption.

Moreover, production for the consumption of the family and community rather than the single consumer also came into existence with an objective of not only satisfying their needs and necessities but improving their standard of living by making goods available them at times other than harvest.

This process of production carries the seed of the idea of rewarding labor from resources other than its own product. It also developed into a certain form of wealth accumulation and income exchange. The latter developed a market system which introduced tremendous improvement on the exchange of goods.

Production for the market

From production for future consumption and growing exchange , people turned to a new process of production for the market. This process consists of someone venturing to put together certain quantities of the factors of production and sending the output to the market for sale.

At the time factors of production start working, market prices of the output are usually unknown. Some or most of these factors are usually paid given amounts determined at the time they are engaged in the process. This applies mostly to labor, land and sometimes capital. Capital and management or entrepreneurship take their reward at the end of the whole operation, i.e., after the sale of the products is completed.

The objective of the person who takes responsibility for production, whom we shall call the entrepreneur, is unquestionably not merely to satisfy personal or family consumption needs, as is the case in the previous two processes which do not imply intensive dependence on market exchange.

The entrepreneur aims at making return from the sale of his or her output sufficient to compensate the amounts paid or committed during the process of production and to leave some surplus for himself or herself.

This does not exclude other secondary objectives from the mind of the entrepreneur. In addition to making a surplus, the entrepreneur may be interested in improving the welfare of family, tribe and community, presenting a model of organization to be imitated by community fellows, pursuing certain moral or spiritual upliftment or performing a religious, tribal and/or national duty of which material output is only a by-product.

It should be noted, however, that most of the secondary objectives can usually be satisfied by means other than a given production venture.

On the other hand, the amount of the return must be high enough to motivate the entrepreneur to take responsibility for the venture. This includes the payments made to contracted factors of production, what he/she considers fair compensation for personal effort, and those factors, if any, with which net profit is shared.

It is obvious that without such a return the production process itself cannot be sustained or at least cannot be self sustained, knowing that self sustenance is a necessary condition for the continuation of production and for fulfilling the requirement of being a production operation rather than a distributive measure.

Production for the market is also characterized by what one may call two-tier process. The production process is split in two processes. In the first phase production does not aim at satisfying consumption needs and wants of people. it rather aims at producing tools and machines which help in the second phase of production that results in consumer goods and services.

This indirect method of production requires even more time between the beginning of production and the final demand it aims to satisfy. It also gives rise to a market of machinery and equipment which are not wanted by consumers but because they fulfill the needs of future entrepreneurs who venture to demand these capital goods in order to start a second phase of production.

Separation between management and ownership

Lastly, the growth of business relations brought about a form of production organization in which the management is separated from ownership. From this point of view, two kinds of management came into being, hired and sharing. Hired management is paid a contracted compensation for its executive labor and sharing management is given a piece of the net profit.

Separation between management and ownership introduced a distinction in motives and objectives between the managers and the owners.

Sleeping owners are now interested in the net return they derive out of their investment. They care little about the kind of output or its process. Intrinsic to this objective is capital preservation and the degree of security of the net return. Making profit is about the only motive they have. This profit may be used for the purpose of accumulation of wealth, consumption, charity, or any combination of these.

On the other hand, hired managers have their own functions which they try to maximize.

This function may include the net return to the owners to the extent such a factor affects the manager's welfare in terms of the latter's zeal for being honest with his employer, God consciousness, job security and future promotion, job environment, etc.

The manager's function may also include certain community elements such as improvement of the living and working conditions of the whole community. It may also comprise considerations derived from the ideology of the manager such as resource preservation, abstention from extravagance and wasting, respect of other fellow human beings, care about the ecology and ecological life. What is important is that it must always be kept in mind that the manager's objectives are distinct from those of the owner.

By the same token, sharing managers also have their own objectives. They may have certain attachment to the output they manage to produce; for example, they may aim at using it for their own consumption. In such a case, the objective of producing to satisfy one's own and one's family consumption needs may apply to sharing managers as it applies to an owner-producer. Alternatively, they may be producing for the market only.

In all cases, sharing managers have also their functions which they maximize. The sharing manager's function is also distinct of that of the owner. But it may give more weight to the owner's self interests as the material benefit of the sharing manager coincides more with the profit objective of the owner.

In the Islamic tradition, separation between ownership and management is known in the same two forms mentioned above.

Fiqh emphasizes that the manager is a sort of an agent-cum-trustee and both a trustee and an agent are supposed to always look after the best interests of the owner in the area of the trust or agency.

Consequently, *Shari'ah* requires that the manager must consider the maximization of profit for the owner as the first objective of his activities. This obligation means that the manager is not permitted to make any action whose nature is purely and exclusively philanthropic without prior permission from the owner.

Therefore, the function which a Muslim manager maximizes should include the owner's profit as its first and most important argument and all other objectives, including those related to the community and acts of charity assume a secondary position.

Obviously the owner's profit maximization is presumed to be subject to the *Shari'ah* requisite limits of permissibility.

Moreover, the manager should treat any other objective he may aim at as subject to the condition of owner's profit maximization, i.e., other targets may be considered to the extent they do not negatively affect the objective of the owner.

Objectives of the producer--Islamic perspective

The general theme of honoring work, manual and intellectual alike, respecting self sustenance and cherishing production for the satisfaction of one's and one's family needs and for charity is well established in Islamic texts. This theme is mentioned in many verses and sayings.

The Qur'an persistently repeats the idea that man should rove through the earth, avail themselves of its resources and extract its God-given bounties.

The Prophet (pbuh) glorified working in order to satisfy personal and family requirements and described such work as being an act for the sake of God.

In numerous occasions, the Prophet condemned asking others for support in the provision for living and advocated self-reliance.

Moreover, laziness, parasitic living, abstention of work for devotion to worship and lack of interest in producing are all emphatically castigated in the *Qur'an* and the *Sunnah*.

Additionally, production for the purpose of improving the material level of one's living and for accumulation of wealth is mentioned in several places of the *Qur'an* as an intrinsic human drive and it is known in Islamic doctrine that human drives are not only not condemned, but their satisfaction is considered rewarding as long as it is done within permissible limits.

God says "Know ye (all) that the life of this world is but play and amusement, pomp and mutual boasting, and multiplying (in rivalry), among yourselves, riches and children" (57:20), and "Fair in the eyes of men is the love of things they covet: Women and sons, heaped up hoards of gold and silver, horses branded (for blood and excellence) and (wealth of) cattle and well tilted land" (3:14).

Other verses (24:31, 16:8 and 7:31) talk about use of ornaments and decorative objects as inborn to human beings.

Hence, the objective of better enjoyment and amusement of the worldly life and the objective of accumulation of wealth and riches are not disregarded or neglected in the economic system of Islam; they are rather recognized and considered as a natural thrust which men and women pursue on their own and which need not be damned as long it is done within the limits of *Shari'ah*.

Furthermore, production for the benefit of the community and for all other human beings is also advocated in the sources of Islam. This is considered means to appease God and to obtain His pleasure and consent.

Benefiting other human beings, especially those who are close to the person such as relatives and community creatures, is an act of worship and piety as all human beings are dependents of God and doing good to them appeases the Lord.

Siddiqi combines the service to humanity with the pursuit of personal interests and ambitions:

> "Morality and spirituality do not demand from an entrepreneur the abandonment of his ambitions and retirement to some humble pursuit; rather it encourages and further stimulates his ambitions by calling upon him to make his enterprise, besides properly satisfying his own ambitions regarding life and its enjoyments, a means of serving humanity. Thus the statement that it is goodness and virtue which should be the center of our attention even in our economic activities does in no way mean asceticism or negation of economic ends. The way to Islamic spiritualism passes directly through the hustle and bustle of practical life. It is nothing separate and cut off from life. It is only a particular 'way' of living. And when we say that goodness and virtue should be our end we merely imply this particular way of living"[1]

Thus the pursuit of economic progress is not a vice according to Islam. In fact, it becomes one of the virtues if it is balanced and intended for a good cause. Material wants are intermingled with spiritual and moral uplifting.

Lastly, production for the sake of improvement, construction and beautification of the environment, and all earth in general, is endorsed and promoted in the *Qur'an* and *Sunnah* even in the extreme cases where no benefit may be foreseen or expected.

The Islamic concept of good deed and action is not restricted to spiritual and moral matters alone but covers the whole arena of material matters as well in an integrated whole.

By the same token, the Islamic concept of wrong deeds is also inclusive of all material, spiritual and moral issues together. The *Qur'an* insistently uses the terms "good action" and "bad action" in a way which is inclusive of material and non-material aspects.

In the *Qur'anic* concept, a good course of action includes amelioration of the surroundings, development of the environment, advancement of knowledge, construction of earth, betterment of habitat conditions, etc.

Additionally, in a celebrated saying, the Prophet (pbuh) told that should the Day of judgment begin while a small plant is in the hand of a believer he must implant it in the ground regardless of whether its fruits are going to be harvested or not.

Another saying refers to the perfection of work just for the purpose of beautification; the Prophet said: God loves that When a servant of His does a thing, he do it perfectly.

Islam seems to assign an aesthetic value to concepts like improvement, betterment, construction, advancement, perfection, etc. These are virtues and they relate to righteousness and piety in the Islamic faith.

Consequently, production for the purpose of upgrading the quality of life and ameliorating its environment, construction of earth, advancement of the human race, etc., is something which is esteemed and considered appeasing to God.

From this discussion, one may like to sort the objectives of producers from an Islamic point of view as the maximization of a multi-dimensional function which includes satisfaction of material necessities, improvement of the standard of living, accumulation of wealth, community and societal benefits as a means to seek a Divine reward and pure aesthetic values which focus on the virtues of improvement, advancement, construction and progress.

This function, obviously, gives weight to the quantitative increase in material goods and services and to the intrinsic value of the products concerned in addition to the matter of profit. It may be important to note that such a function should not be tagged as idealistic and not down to earth.

It rather recognizes varying degrees of piety and religious feeling since different levels of piety and religiosity can always be reflected in different weights each of the arguments in the function takes.

The idea of maximization itself is inherent to the human intuition and to the Islamic conceptualization. It is part of human nature which the religion of Islam recognizes and affirms. Hence, one finds in the *Qur'an* and *Sunnah* many references to the idea that one looks, and should look, for the highest reward at the lowest cost.

Maximization applies to all issues, material or otherwise. A Muslim is very often urged to reach the top, maximum, or highest in all good things.

It should also be mentioned that the maximization of the producer's function is always subject to material, moral and legal constraints.

Material constraints of resources, natural endowments and state of technology are very often discussed in conventional economic literature and the moral and legal boundaries are usually highlighted in Islamic economic writings.

In addition to the ethical values which are attached to goods, we have seen earlier that the Islamic system assigns ethical, religious and aesthetic values to work and production. These values have their own impact on the producer's function.

Hence, the maximization of profit and/or quantity is restricted to the area of permissibility and subjected to the scale of moral values which are connected to products and courses of works.

Additionally, ecological and environmental restrictions have their routes in the aesthetic harmony which is presumed with nature and natural resources. Moreover, the concepts of self-control and refraining from extravagance apply to work and production too.

Finally, the Islamic law reflects the value system of Islam in channelling inter-personal relationships within the desired limits.

The Islamic system provides two kinds of legal control on business activity. One is the conventional law enforcement mechanism and the second is the semi judicial agency of *al Hisbah* or the Ombudsman.

The function of *al Hisbah* was first performed by the Prophet (pbuh) himself. He also appointed a special government officer for this purpose. The function was then carried out by a special agency throughout Islamic history.

The main objective of the *al Hisbah* agency is to watch the observance of the rules and values of *Shari'ah* in the market. It has a semi-judicial authority in the sense that it can take direct action in small matters or refer the problem to the court when needed.

SECTION TWO

FACTORS OF PRODUCTION AND THEIR REWARDS

There seems to be no agreement in contemporary Islamic literature concerning the factors of production. Mahmud Abu Sa'ud, for example, goes along with any intermediate level microeconomic textbook in the West to classify factors of production as land, labor and capital, whereas Abdul-Mannan excludes capital from this list.

The divergence seems to have risen from either of the following two problems: firstly, confusion between the ultimate and the immediate factors of production and secondly, the concept of capital as accumulated labor.

This confusion is intensified by the failure of some writers to reconcile the prohibition of interest in Islam with the obvious role capital plays in production. This may be attributed to a presumption, in the back of some writers' minds, that capitalist idea which regards interest as price of capital is inevitable.

Dealing with the first problem carries us into the heart of the value theory, and dealing with the second introduces us to the distribution theory.

Is labor the source of value?

Capital is a stored labor embodied in a commodity and used in the process of producing other commodities.[2] Understood in this way, labor is the only factor of production which deals, economically, with the gift of God, the natural resources, to create value. This is the way some Muslim writers view the theory of value while others argue that value is formed in the market and influenced by market forces of supply and demand.

On the other hand, if we look into the classical works of the Middle Ages we find that in their discussion of the relationship between labor and natural endowments *fiqh* scholars were more interested in determining who has claim of ownership over output than in finding out the source of value.

Hence in order to analyze the Islamic view on value, we have to see the *fiqh* position on ownership of output.

The Entitlement of Ownership of the Product

In this regard, classical *fiqh* works seem to distinguish between cases in which product is obtained by association of labor with natural endowments which were already used in production and cases in which natural endowments are still fresh or virgin.

(a) The case of not previously owned natural resources:

Classical works on the combination of labor with land which was never in use before seem to distinguish between mere acquisition and economic labor.

While acquisition means simply bringing something under the personal authority of the acquirer, economic labor is defined in the present context as the labor applied to land in order to create a productive opportunity.[3] It does not include acquisition or monopolization of land on the basis of power. Such an act of acquisition is not considered economic since by itself it does not produce anything. Rather a mere acquisition privatizes an already existing natural endowments.

With regard to land, economic labor, which is called in Islamic jurisprudence *ihya'*, utilizes land not previously cultivated, and brings it into the cycle of rural or urban production. The creation of such an opportunity in land entitles the person who applied this kind of labor to the right of ownership of the land.

On the other hand, economic labor may also be applied to mobile natural resources such as water in a river. In this case, acquisition coincides with economic labor in their effects as both create a consumption utility. By the act of acquiring certain quantity of water in a pail, for instance, the laborer becomes entitled to the ownership of that quantity.

Hence, there are two kinds of economic labor, one applying to immobile natural resources and the other applying to mobile endowments. Both entail the creation of a new economic opportunity, productive in the case of immobile resources and a consumable in the case of mobile resources. Lastly, both kinds of economic labor entitle the laborer to the right of private ownership of the new opportunity created by one's work.

It should be remembered however that up to this point, *fiqh* still deals with ownership not a theory of value, as it is still silent about the value created by the economic labor. Additionally, it should be noted that this right of ownership rests on the opportunity created not on the natural resources themselves. The importance of this point is seen when one looks into examples of which the opportunity is distinct from its sources such as the following:

i. A person who brings life to a lot of non-cultivated land owns the productive capacity created by person's labor. He/she can lease the result of his labor for an agreed-upon rent. Once he/she neglects the land and it goes out of economic use, he/she loses claim on it, and the land becomes free and available to any one to reclaim it by putting it into productive use once more.

ii. A person who digs a well to water his land, has a private claim on that part of water which meets his needs, and if there is any extra water, he has to give it away free of charge because his claim is not on the well but only on the use of its water.

The difference between the use of a well and the use of a piece of land is that in the latter case a second person cannot extract a utility for himself from the land without competing with the interests of that who brought it into economic use. Such a second person would be making an infringement on the right of the first. But in the case of a well the second user will not affect the quantity of water consumed by the first user. It must be noted that this example does not apply to a person whose economic enterprise is to dig wells and sell water.

Hence the claim of ownership is applicable only to the opportunity created and within its limits. Once an opportunity is created, any further labor cannot compete with the earlier one. The share of such new labor is the extra opportunity which it adds.

Thus far, the *fuqaha* seem to agree that when economic labor is applied to natural resources which are not owned by anybody, it creates a new right of ownership. In *fiqh*, a right of ownership rests on an object which has value. Therefore, economic labor becomes a source of value in the sense of being the cause of creating it. But one should notice that value created by labor does not necessarily reflect the amount of labor invested in natural resources for two reasons:

First, the same amount of labor may create a variety of opportunities of different values, depending on the natural resources dealt with, i.e., it is not assumed that natural resources do not contribute to the created value.

Second, the demand side has, generally speaking, an equal role in determination of exchange value of the output obtained by a combination of labor and natural resources.

(b) The case of already-owned resources:

The previous discussion focused on labor when it is applied to not- already-in-use natural resources, and it showed that labor is not the sole source of exchange value although it provides an entitlement to ownership of valued output.

Let us now turn to study the role of labor when it deals with already owned resources with the help of classical works of *fiqh*. *Fuqaha* argue that ownership of the product belongs to whoever either owns the origin or source of it (such as cattle where owner of mothers owns also their babies), or takes responsibility for providing venturous labor or venturous capital.[4]

In fact, owning a property implies carrying any risk this property is exposed to. Consequently, ownership of a source or origin of a product, e.g., the seeds, entails carrying the implied risk. Hence, it boils down to relating the title of the product to the venture involved; as the Prophet (pbuh) puts it "Return (or outcome) is by (virtue of carrying the risk entailed) liability". Such liability may take the form of owning a property or providing venturous capital or labor.

Ventures That Give Right of Ownership of a Product

At this point, it is necessary to define the concept of venture which, if associated to ownership of a factor of production i.e., capital or to labor, entitles the owner of that capital or labor to the ownership of the output. The *Fuqaha* talk about venture in the sense of sustaining any possible loss in a property, capital, labor, or any factor of production in general. For instance, capital is venturous when it is exposed to profit in the algebraic sense, i.e., when it absorbs losses if they happen.

It is interesting to notice that *fuqaha* treat labor as an asset, say human capital, and look at its entitlement of the ownership of the product, exactly on the same footing as capital; that is, if labor sustains losses, it becomes eligible to own the product.

Therefore, a venturous labor is the kind of labor which is exposed to losses. This requisite allows it to own the product. But how can labor carry a loss? Since labor is a service measured through the passage of time, its carrying of a loss can only be effected by reducing its valuation. The maximum loss a given amount of labor may carry happens when its owner gets zero value in exchange of that amount of labor.

By the same token, capital is charged losses by reducing its valuation which may also reach its maximum when capital is depleted and its owner receives nothing at the end of business venture.

In other words, the symmetry between material capital and human capital, from the point of view of the effect of venture on the entitlement of the ownership of the product, is complete.

For example, an amount of labor, whose fixed market value is $100, may assume a venturous position, and be entitled to the ownership of the product if it exposes itself to losses. Such losses affect negativity its valuation. Hence the value of the product owned by the owner of the said labor may be more or less than the original $100 it started with. This is theoretically symmetrical to an amount of capital whose market value is $100 which assumes a venturous position and gets an ownership right on the product whose value may be less or more than the original $100 worth of material capital.

Value added and Ownership of Product

The conclusions, so far, can be formulated in the following four points:

i. Labor is a source of value, but not the only source since ultimately, when labor deals with virgin natural resource, exchange value, depends on the natural endowment and consumer desires in addition to labor.

ii. When we deal with already-owned material capital, capital and labor both entitle their owners to the right of ownership of the product provided they assume a venturous position.

iii. Venture is defined as exposure to losses.

iv. There seems to be a symmetry between material capital and human capital from the point of view of their respective role in earning ownership of the product.

Nothing has yet been said about specific contributions of labor and capital to value added. To do so we should refer again to the classical works on *fiqh*, where we notice a clear distinction between ownership of the product and value added. While *fuqaha* assign ownership of the product to venturous human or material capital, or to them together if both take a venturous stand, they do not deny the contribution to the value added by non venturous factors.

Take for instance the case of a sharecropping contract in which three persons supply three different factors, land, labor and seeds (capital). The *fiqh* judgment is that the contract is void and produce is owned by the owner of the seeds because seeds are its origin. Seeds owner is required to compensate, at a fixed rate determined according to fair market prices, the other two factors for their contributions as seeds grew by means of the growing power embodied in the land and by the labor invested in seeding, watering, and other kinds of work.

In other words, the *fuqaha* do not assume that non venturous factors do not contribute to the value added. Rather, such factors are productive and thereby deserve shares in the product.

To say that non-venturous factors do not own the final product is not equal to depriving them from their role in making it. This implies that non-venturous factors deserve part of value added but do not earn ownership over output. The *fuqaha* deal with legal issues and legal issues distinguish relationships between persons and things from relationships between persons and other persons.

This in mind, the classical works on *fiqh* must be understood as stating that venture creates a claim on output whereas non-venturous relationship is one between people only and not between people and things. But all this does not mean nor imply that non-venturous factors do not contribute to the production.

What does a relationship between people mean? It simply and obviously means that the owner of non-venturous factor had sold his factor to the venturous factor of production, therefore, the latter owes the former the price of that factor.

In this relationship between owners and users, which takes the form of a sale contract, apples, iron ore, man-hours, machine services and units of land services are sold in the same way for contractual prices, i.e., prices which are fixed at the time of the contract. These prices become debts to the seller on the buyer if they are not paid at the time of the contract. The deserving of fixed prices by non-venturous input owners is something which has nothing to do with the amount and value of the product that is made by these inputs as long as their contribution to the production process was not made on a venturous basis.

Rent, wage, price and interest

The symmetry between labor and capital that the *fuqaha* have in the background seems to extend to the issue of rent and price. Rent is given against the use of the services of a fixed amount of material or human capital.

Therefore, the same word "ajr" is used in *fiqh* literature for rent of land, building, machine and human capital.

All these factors of value added production may take one of two forms when they enter a production process. They can be combined together on the basis of sharing together in the venture. In this case they own the product and carry liability for it according to their shares. Or some of them may be sold to the owner(s) of one or more other factors. In this case, the purchaser owes a fixed price, rent or wage to the seller, and the venturous party owns the product and carries all related liability.

It must be noted, however, that an owner of something, be it material or human capital takes venture by the very act of owning that capital. A laborer, land owner, machine owner, or owner of any other commodity is in a sense an entrepreneur who holds something which he/she wants to sell in the market for a return.

He/she enters relationships in which owned factors of production are given in exchange of either fixed return, as in sale contracts, or a share in the final product, as in the case of sharecropping. This entrepreneur takes a risk because of the very fact of owning that material or human capital.

In other words owning any real thing, a factor of production or a final product, always entails a risk. This is the nature of life and this is also implied in the definition of right of ownership. This risk exposure makes a basis for entitlement to gain too, i.e., the right of ownership gives the person all the outcome of ownership, negative or positive.

If we turn to debts or loans, the matter becomes different. Debts or loans are guaranteed by debtors or borrowers. Hence, they do not expose the owner to the risk which is inherent in all other kinds of ownership of material or human capital.

This imbalance between risk and gain is the basis for the prohibition of interest, or to put the matter in a more general form, of any increase in a monetary or physical loan over and above its principal; regardless of whether the subject of a loan is a monetary or physical asset.

The borrower is the one who is exposed to all the risks which are intrinsic to holding the physical or monetary asset.

Therefore, it is the borrower who should be entitled to all the gain and the lender, who is guaranteed by definition, is only entitled to the equivalent of his asset back, no more, no less. Lenders of assets are not like renters of assets, as renters are always exposed to risks intrinsic in their property which they rent out.

An essential conclusion lends itself at this point: It is the important differentiation between the principle for the prohibition of interest on loans and that of permissibility of wages and rent on human and physical capital.

Wages are earned in exchange for man-hours given to an employer; so is rent which is earned in exchange for services of physical capital (land which has been in prior use, i.e. on which there exists a right of ownership, building, equipment, or any other commodity which has a service age longer than the rented period) measured in units of time too.

Hiring human or physical capital is done like selling a commodity,at a price (wage or rent) fixed at the time of the contract regardless of the value of the final product which this land and labor are utilized to manufacture.

Furthermore, the owner of physical or human capital is a risk taker similar to any other risk taker, and entitled to the fixed price of his/her capital in exchange for delivering the goods, e.g., the number of man-hours or the rental period of the service of land or machinery.

On the other hand, interest is prohibited not because capital is not a factor of production, nor because it can only enter a production process on a venturous basis, nor because it is unproductive unless it is combined with labor, but because a lending relationship does not expose the lender to the full implications of the right of ownership. The creditor is not exposed to a risk similar to that which a seller of commodity or labor or land services is exposed to. Entitlement to a fixed share of the value added is associated with taking venturous risk intrinsic to ownership (and sale of services) of human and/or physical capital.

In other words, because the loan, being a right owed the creditor, is guaranteed, it cannot be entitled to a fixed price. Unlike labor owner or physical capital owner, the loan owner does not expose himself to the risk which is intrinsic to the ownership right.

Lastly, if capital is given on a loan basis, such as seeds in agriculture, raw materials in industry or a sum of money in any kind of business, does it still contribute to the value added? From Islamic point of view, the answer to this question is a definite "Yes"! But the entitlement of ownership of output is another matter.

Giving capital as a loan does not change its nature or role with respect to production process, it rather changes the inter-personal relationships between owner of capital and owners of other factors of production. The borrower, who carries responsibility for any risk related to borrowed capital, is the person who deserves title of the product and profit/loss associated therein.

Once again this is not similar to selling man-hours, machine-days or land-years for a fixed *ajr* (wage or rent) because there is no such a guarantee in this sale. This implies that sellers of services of these factors of production bear liability of what may happen to their assets during the production process.

Rent, wage and Profit

The distinction between value added and ownership of the product is very crucial in explaining the difference between rent and wage, on one hand, and profit on the other. Rent and wage represent the share of labor and land in the value added, whereas profit is the share of the venturous party.

A venturous party may be the owner of land, labor, or capital. He/she may be a fourth person, an organizer or an entrepreneur. But whenever the venturous party provides capital, labor, or land, the factor of production so provided becomes also a venturous factor whose sole return becomes profit/loss.

This is a little different from the conventional theory of distribution, where profit is defined as the share of the entrepreneur in an exclusive manner.

In the classical works on *fiqh*, one always finds that profit is earned by labor, capital, or guarantee. Guarantee is acceptance of responsibility to perform a job or to pay for purchased merchandize. Therefore it is a responsibility for labor or capital which is a special case of providing capital or labor.

Hence, the *fiqh* sources of profit become only two, labor and capital, as each of them embodies intrinsic liability.

Alternatively, one may express the same by stating that earning "profit" is caused "only by guarantee,"[5] since both capital and labor entail a form of guarantee which is inborn in the very ownership of human or material capital[6].

Additionally, labor and land can be engaged in production on the basis of sale whereby man-hours or land-years may be sold to the venturous party, since such a sale does not change or alter the guarantee or responsibility element inborn in human capital and in land.

This means that use by the lessee of a laborer for eight hours in a factory or use of land for 2 years by farmer/renter does not interrupt the responsibility or guarantee relation the laborer and the land owner have towards what they own, i.e., keeping their leased capital available for use by the lessee. Therefore, their share in the value added can be fixed contractually.

By the same token most kinds of physical capital, e.g., machinery and equipment, may also be engaged on the basis of a contractually fixed rent or price of machine days, as the provider of such kinds of physical capital still maintains his/her own guarantee and responsibility as an owner of leased machinery and equipments.[7]

On the other hand, monetary capital cannot be engaged in production on the basis of fixed return, because unlike labor, land, or machines, the nature of money does not allow the lessee to use it while an ownership relation along with its inborn guarantee or responsibility is maintained by the owner.

Indeed, once money is given to a venturous party, on a lending basis, the guarantee rests on the shoulders of borrower. Consequently, the fixed return concept does not work with regard to money while it works with respect to machinery and equipment as much as it works for land and labor.

Raw materials which are used up in production are like money. Their user cannot use them in a capacity of a lessee and their owner cannot maintain an ownership relation with them while they are used up by someone else. Therefore, if raw materials contribute in production on lending basis, the owner does not preserve a guarantee relation. Therefore, no contractually fixed return can be earned by him.

Yet, we must notice that *Shari'ah* does not negate the contribution borrowed capital makes to production or the resulting value added. All that is said until now is that the share of a factor in the value added can be fixed on a contractual basis if an ownership relation can be maintained.

If such a relationship cannot be maintained, either because of nature of the factor or because of choice of form of contractual relationship, the share in value added becomes due to the party who carries the responsibility, i.e., the borrower in the case of loaned monetary or raw material capital.

However, it should be added that owners of monetary capital (as well as raw materials) may choose a relationship which maintains their ownership and its inborn responsibility or guarantee intact.

This combination of the factors of production is an extension of the concept of sharecropping to business outside agriculture. It consists of having the venturous party act as an agent/partner toward whom, the owner of monetary assets assumes the position of a sleeping partner.

The entrepreneur in this relationship receives monetary assets and makes the first move in the capacity of an agent. Then what he/she buys with them becomes a property of the money-owner.

At that very moment a partnership relation is activated between the two parties with regard to any increase in the value of the property, because such an increase is the result of the purchased property in which the work of the entrepreneur is embodied.

This form of relationship is called *mudarabah* or *Qirad* in *Shari'ah*, and it is described as a relationship which starts as a trust when money is given to the entrepreneur. Then it becomes a power of attorney, when the entrepreneur purchases assets and merchandises. Then it continues as a partnership in the increment in value which purchased materials may have.

In *mudarabah* relationship, the owner maintains ownership and responsibility while giving up the right of disposition, i.e., decision-making, along with certain contractual proportion of profit. On the other hand, the entrepreneur earns remuneration for decision-making labor.

This sheds some light on the different treatment of profits and losses in *mudarabah* according to *Shari'ah*. Profits are distributed between the money owner and the entrepreneur while losses are charged to money capital alone.

The *fiqh* literature rephrases this as "loss is a reduction in capital" which means the ownership of capital is reflected in responsibility for losses. On the opposite side, profits are shared by the two parties together since the owner gave up a portion of profit in exchange for being relieved of the managerial and entrepreneurial burdens. In this respect, treatment of losses is distinguished from treatment of profit which is increment above cost attributable to venturous factors of production.

Is Capital a factor of production?

From the preceding discussion and from the *fiqh* views, answer to the question in the sub-title is definitely yes. The prohibition of interest is by no means a denial of the productive role of capital.

In the preceding paragraphs, we have seen that material capital may contribute to production on the basis of venture taking and therefore it deserves ownership of the product, which means that algebraic profit belongs to capital.

Machinery and equipment, as a form of capital, may also participate in production on a rental basis, whereby they have a fixed share in the value added. Lastly, monetary capital and raw materials may contribute in production on *mudarabah* basis.

The prohibition of interest in the Islamic system is by no means a rejection of the role of capital in production, as shown earlier in this chapter. Interest is charged on loans and is not a price of capital. A little reflection on the definition of capital will explain the reasons for which conventional economic thinking has mixed up interest, loans and capital.

Capital is defined as "the accumulated stock of plant and equipment held by business[8]". It consists of goods which are used in producing other goods and services. This definition does not fit the use of the term "capital" in the usual jargon of newspapers and Wall Street dealers, in which "capital" means "money which can be borrowed in the financial market". The money market is in turn called a capital market.

The fact that money can buy machinery or be exchanged for physical capital, does not imply that both are the same, because money can also buy other goods, whether used in production, such as land or labor, or in consumption, such as food or clothes.

This requires that we distinguish between capital and loan. The latter defines a relationship between two persons, a lender and a borrower. This personal relationship is not an integral part of production. Rather, it is an independent relationship which may be applied to any loanable commodity as well as to money regardless of the use which will be effected on borrowed commodity or money.

This distinction between loan and capital leads to a parallel distinction between their remunerations. The price of capital, assuming homogeneity or existence of a common index, is rent per machine, and the price of loan is the rate of interest per unit of loan. This distinction can be easily understood if we look at the interest rate through the Fisher-Patinkin-Hansen tradition as the percentage difference in the real price of money in a unit of time, i.e., $\underline{p_2 - p_1} / p_1$. Of course this tradition assumes in its background that the act of abstention from consumption, i.e., the act of saving must be rewarded, and it is therefore a function of the differential in the evaluation of money between present and future.

The motives for saving are discussed in Chapter six where it is shown that saving is done for genuine objectives on the part, of the economic unit, e.g., income earners. saver is a maximizer of his/her own success not an interest earner. The mere act of saving is not an act which needs to be rewarded by assigning part of value added to savers. Rather the act of investment is the act which deserves reward as it participates in creating the value added.

Conclusion

In Islamic economics, we do not need to downgrade the role of capital goods in production, as some writers do in order to justify the prohibition of interest. capital needs to be rewarded since it adds value to the economy.

Distinction between capital and loan on one hand, and the positive, *Shari'ah* recognized role of capital in production in all forms capital may take (including equipment, physical raw materials and monetary capital), on the other hand, point up the fact that the prohibition of interest on inter-personal loans does not interfere with the classification of factors of production.

Therefore, one does not need to take the dubious position of downgrading the role of capital in production in order to justify the prohibition of interest in the Islamic economic system, nor need one deny the permissibility of contractually fixing rents and wages in order to be consistent with the prohibition of interest since it is not a reward for a factor of production, capital but an increment on inter-personal viabilities.

SECTION THREE

PRODUCER'S EQUILIBRIUM--ISLAMIC PERSPECTIVE

MAIN ASSUMPTIONS

From the previous two sections we can derive the main assumptions regarding producer's behavior in Islamic economy:

1. Profit is not the only factor which moves a Muslim Producer. Besides profit there are other factors which include care for the material and spiritual welfare of other people, beautification and improvement of the environment, promotion of virtues and religious values, reconstruction and reformation (imran) of earth which leads to increasing output as an aim in itself, etc. These other objectives do not necessarily compete with profit making although a producer may sometimes be faced with a choice between profit maximization and some of these factors.

1. The prohibition of interest (riba) while capital may still participate in production on the basis of sharing changes the cost equation for a the firm. The reward of capital is no more a cost element. The cost of production for the firm becomes the total of wages and rents. if capital owner is the manager of the firm, the share of these two factors of production are intermingled together and no distribution of profit is needed. But if capital is owned by other than the manager, then after production is completed and output is sold, the net residual is divided between the owner of capital and the management of the

firm. This means that if management is going to serve its own interest it is at the same time serving the interest of capital as any increase in the share of management necessitates a proportional increase in the share of capital owners.

3. The separation of management from ownership has certain implications from Shari'ah point of view. It implies that the manager, who is considered as an agent of the owner with regard to decision making related to invested capital, is required to serve the best interest of the owner. Therefore, the manager is not permitted to take any action whose nature is purely benevolent such as giving for charity or granting a loan unless clearly authorized to do so by the owner. When some body gives money to another for investment, it may be fairly assumed that the owner's intention is profit making. Consequently, any deviation from this objective without prior authorization is considered in violation of the Islamic moral standards as well as law and the manager is held responsible for the action's results. However, ii is always possible that mudarabah contracts may include necessary authorization as a part of their normal clauses.

FIRM'S OBJECTIVE FUNCTION

Let (U_f) be the utility function which the firm maximizes. This objective function represents the firm's total benefits arising from pursuit of its objectives which comprise profit, (P) and all other aims that may all be summed up under benevolence, (B). Hence we get:

$$U_f = F(P, B) \qquad (1)$$

It may be reasonable to assume that firms set certain profit target once achieved they would turn towards benevolent actions. In other words, management, regardless of whether it owns invested capital or not, considers that certain level of income is crucial for it. Until this level is reached it will pay little or no attention to all benevolent objectives. This target level of profit is not the same for all firms. some firms may have higher profit targets than others. the setting of this target depends on many factors which include: size of capital and whether it is provided by the managers themselves or by independent capital owners, opportunity cost of invested capital, social conditions in the country such as extent of the incidence of poverty, risk involved, nature of commodity produced, being a good of basic food or luxurious use, government regulations, etc.

Hence, up to the firm's profit target, call it (P_*), the firm is a pure profit maximizer. Once this target is reached the management starts giving more and more attention to the benevolent objectives.

For the firm which has not reached its profit target P_*, (B) is zero and equation (1) becomes:

$$U_f = F(P) \qquad (2)$$

Moreover, for some firms the benevolent motive may be very trivial or even absent, the behavior of these firms may also be explained by Equation 2.

The profit maximization behavior requires that firms shall increase their output as long as any additional unit brings any net profit to the firm, i.e., as long as the cost of that additional or marginal unit is less than the market price.

COST ANALYSIS

Keeping in mind that there are four factors of production: labor, land, capital and entrepreneurship, we should notice that for the first two the firm has to pay their costs regardless of the outcome of its activity, i.e., without any consideration of whether it succeeds in selling its output at a profit or not.

On the other hand the rewards of capital and entrepreneurship represent a distribution of the final residual after payment is made to labor and land.[9] But both capital owner and the entrepreneur have certain idea about an amount of expected reward they consider normal for their services without expecting it they would not accept to participate in the firm. This normal reward or profit is a kind of survival compensation which keeps business running. In conventional economic analysis this normal profit is also considered part of the cost.[10] Hence the out-of-pocket cost of the firm consists of the compensations of labor and land. Let, for simplification, technology be not changing for the moment. As the firm begins its activity it acquires certain acreage of land, its fixed input, and puts with it certain quantity of labor, the variable input.

Since the firm does not yet know how will it do in the market, it has to be conservative and it will hire the smallest possible number of units of labor. This allows each acre certain number of labor units to work on. If the firm wants to increase its output in the short run it adds more units of labor, the input which is easily acquired is small units. This allows more land to be used, better distribution of labor within the firm and/or better use of the time of management. All these gives more output per each additional unit of labor. This we call increasing return.

But as the firm keeps increasing its output it has to use more of the variable input, labor, with the same quantity it already has of the fixed input, land. After certain point, the productivity of additional units of this variable input begins to decline because they have decreasing area of land to work with. This is called the law of diminishing return. The short-run production function is shown in Figure 1.

Figure 1: Production Function

Since the cost of additional units of labor is the same as old units, increasing then diminishing returns as more and more units of labor are used give a U shape to the curve of average cost per unit of output. Likewise cost of the marginal unit of output is first declining then increasing in the same U shape. But since the marginal cost curve represents the first derivative of the U shape average cost curve, marginal cost reaches its minimum while the average cost is still decreasing and the two curves intersect (AC = MC) in the upward segment of the marginal cost curve. This point also represents the minimum average cost as shown in Figure 2.

Figure 2: Average and Marginal Costs

This point at which $AC = MC$ is the most efficient point for the firm in the short run. At any point to the left, $MC < AC$, i.e., a unit increase in the firm's output adds less than the unit's cost to the total cost, and at any point to the right where $MC > AC$, the increase in total cost due to an additional unit of output exceeds its average cost.

In the long run, the firm can increase its fixed input, but at each time the firm adds a new block of the fixed input, new U shape average and marginal costs curves are applied.

The effect if technological change is to increase the productivity of production inputs, i.e. to enable the firm to produce more quantity with the same units of inputs or to maintain same output at smaller amounts of inputs.

FIRM'S AND INDUSTRY'S SUPPLY CURVES

The short-run supply curve of the firm is depicted by the upward sloping segment of its marginal cost curve. It is important to notice that normal profit mentioned in endnote No. 10 is included in marginal cost reflected in the firm's supply curve. This supply curve shows the relationship between offer prices and quantities of the firm. The supply curve of an industry is the sum of the supply curves of all the firms in that industry.

If the market price happens to be at the point a^* on Figure 3. The firm produces the quantity Q^* which represents optimal production and only make its normal profit. But if the

Figure 3: Firm's Supply and Economic Profit

market price is above a^*, say at a^1, the firm would produce more quantity at a higher marginal cost and would make an economic profit (above the normal profit) as shown by the area a^*a^1m in Figure 3. At this point resources are not used efficiently because a reduction of one unit of output reduces the marginal cost of the firm.

On the other hand, if the market price is bellow a^*, say at a^2, the firm produces at a negative economic profit per unit equals to the difference between average cost, n and the price, a^2.

Obviously, the firm cannot afford to remain in this kind of situation for a long period, but more important is that the firm cannot go below the average variable cost and if the price goes lower that AVC the firm prefer to shut down than to remain in the market. Needless to say that at this point, the firm functions below its optimum because as shown in Figure 2 an additional one unit of output can be produced at a cost which is below the average cost of production and the firm can reduce its losses by increasing its sale.

PROFIT MAXIMIZATION UNDER PERFECT COMPETITION

The conditions of perfect competition are very idealistic and can rarely be materialized in actual life but they usually are studied because they render the analysis simple and easy. For this purpose let us first study the decision of the firm under a situation of perfect competition

Perfect competition requires that:

1. Freedom of entry and exit in all markets. This freedom is enjoyed by all consumers, producers and owners of factors of production.
2. The number of buyers and sellers in each market is so high that none can affect the market price by any decision one may make
3. All relevant information in all markets is available to everybody at no cost
4. in each industry commodities are identical. There are no differences

whatsoever between the product of any firm and any other.

A firm working under perfect competition is a price taker, it can only decide on the quantity it is offering in the market. This means it is faced with a flat demand curve which give only one price to accept or leave. It this price is higher than the point a^* many other producers would rush to this industry and offer more quantities. This will drive the price down. On the other hand if the price is below a^* the firm whose optimal point of production (AC = MC) will be driven out of the market. Consequently, perfect competition conditions keeps in the market only the most efficient and the price at the a^* which clears the market at optimality conditions.

But real life is full of imperfections: products of different firms are no similar, advertisement uses a multiplicity of means to make, true and false, attractions unique to certain commodities, information is not available to all and when available it is costly and rationed among those who pay for it, exit and entry are not totally free especially in industries which require intensive training such as the practice of medicine, and the number of buyers and sellers is not always very large.

More important is the fact that innovation is a continuous phenomenon in economic activity. There are always firms who create new ideas in terms of new products, new methods of production, new markets or new inputs and input markets. Even under perfect conditions, it takes time for these new ideas to reach other producers. This means there are always firms who are ahead of others and who therefore can reap an economic profit as shown in Figure 3.

Imperfections are recognized in the Islamic market. The Prophet (pbuh) considers that lack of information is a natural phenomenon through which God redistributes sustenance among people[11]. The firm's objective function given in equation 1 is more realistic Because it assumes that there are always firms which can, and actually do, increase their output or reduce their offer price for the same amount of output without exposing themselves to be driven out of the market. It implicitly reflects the reality that even under most humanly possible perfect conditions of competition and with taking all necessary measures against fraud, cheating, monopoly and other market-distorting practices, there will be firms who collect economic profit and can afford to reduce their offer prices so they are called upon to do so.

Moreover, The normal profit embodied in the average and marginal costs is not always so normal and there is no market mechanism to assure that it is really and always at a level conducive toward most efficient use of inputs. Therefore the moral call for benevolence may exercise pressure of the firms to shrink their normal profit for the sake of other benevolent objectives.

PRODUCER'S EQUILIBRIUM WITH BENEVOLENCE

For the general case of maximizing an objective function which includes profit and benevolence as in equation 1, one must notice that while P is a function of market conditions, cost and quantity produced, B is a factor of the social and spiritual conditions, i.e., B is affected by the social needs for benevolence, and by the level of altruism which is nourished by faith, religion, spiritual upliftment, etc.

The target profit, P^* may either coincide with the normal profit mentioned above or it may be higher or lower than normal profit. In all cases target profit is added to out-of-pocket cost of labor and land in the determination of all combinations of quantities and prices on the supply curve of the firm.

Since the perfect information assumption is relaxed we may proceed with the analysis on the basis that in each industry there are innovative firms for whom the market price is above the optimality point at which MC = AC.

Obviously, this allows them to collect economic profit and attract other firms to the industry but since information is not free and time consuming, those firms that are more efficient than other always exist.

Once the target profit for such an innovative firm is reached, its benevolent drive may be activated and it tends to offer more quantities for the same price. In other words, unless the target profit is extremely high that it cannot be fulfilled in the short run the firm's supply curve becomes right-ward bent after it reaches this target as represented in Figure 4.

Figure 4: Firm's Supply Curve under benevolence assumption

What is the effect of a right-ward bending supply curve? It may fairly be assumed that in a less that perfectly competitive market which the Islamic theory of market behavior seems to assume, at each point on the industry's supply curve there are producers who reach their target profit.

Hence the shape of the industry's supply curve, which is the sum of all firms supplies becomes less steep than what it is under perfect competition. This means that at each point the quantity offered is more under the benevolence assumption than under perfect competition as shown in Figure 5.

Figure 5: Industry' Supply under perfect competition and under benevolent assumptions

Finally, it may be noticed that introducing a benevolent objective in the behavior of the firm reinforces and enhance the long- run effect of perfect competition in putting downward pressure on prices toward wiping out any economic profit and driving inefficient firms out of the market. Moreover, the presence of benevolent motives in some firms exercise a downward pressure on the normal profit and the target profit and it thus reduces the valuation of capital and entrepreneurship in the economy. Additionally, more flat industry supply curve implies that more quantity is made available at each price which result in attaining higher welfare at the same cost.

CHAPTER NOTES

[1]M.N. Siddiqi, Some Aspects of the Islamic Economy,pp. 15-16.

[2]Mahmud Abu Sa'ud, *Khututun Ra'isiyah fi'l Iqtisad al-Islam,* Beirut: Matba'at Ma'tuq Ikhwan, 1965, p. 55, and al-Sadr, op. cit., p.547.

[3]Al-Sadr, *Iqtisaduna*, p. 573.

[4]Monzer Kahf: "Concept of credit in Islamic economics" in Arabic, unpublished study at the Islamic Research and Training Institute, IDB, Jeddah, 1407H.

[5]Words inside quotation marks are the translation of a saying of the Prophet (pbuh), they are also the exact text of a famous general rule of *Fiqh*.

[6]Remember that by "material capital" I mean monetary and or machinery and equipment, whereas for machinery and equipment, or in general, for goods used to produce other goods or services I use the term "physical capital".

[7]This brings under focus the relevance of the condition of owner's responsibility, which the *Fuqaha* always insist on. It is this condition which makes the essential difference between the lawfulness of rent and the unlawfulness of interest. It should be noticed however, that some leasing contracts shift this responsibility to the lessee. These are usually called financial leases and because of this shift of responsibility , contradict Islamic law.

[8]Edward Shapero. Macroeconomic Analysis. New York, Harcourt, Brace and World, Second Edition, 1970, p. 202.

[9]It is useful to mention that the Islamic organization of the firm allows any of laborer, landlord, or capital owner to assume the responsibility of decision making and takes risk of the firm, and considers that the party who takes risk is entitled to profit which is defined from Shari'ah point of view as the residual after payment to other factors which do not take risk and prefer to enter the process on the basis of fixed and predetermined compensation. However, cash capital is not permitted to participate in the firm on the basis of fixed compensation. The assumption in the text is meant for simplification and cost may be extended to cover compensation of all factors which enter production process on the basis of fixed return. The details and rationale of this will be discussed in Part Four.

[10]Economists usually distinguish between normal profit and economic profit. The latter is the difference between the price and average cost (which includes normal profit). This

difference results in case of monopoly and for the efficient firm in case of new inventions before they become known to all other firms. Under conditions of perfect competition economic profit is always zero. On the other hand accounting profit is the difference between total cost paid to non-risk taking factors of production and total revenue.

[11]The Prophet (pbuh) prevented an urban person to act on behalf of a bedouin as agent in sale and said "leave them God would provide sustenance to people from each other.