Maximization Postulates and Their Efficacy for Islamic Economics

Zubair Hasan

Abstract

This paper examines the nature and role of maximization postulates concerning profit and utility in the mainstream price theory formation, from a methodological perspective. Mainstream economics retains these postulates, despite much criticism, mainly for two reasons. Firstly, they help establish cause-effect linkages among economic variables and markets. In that they greatly facilitate predictions and their empirical verification over a wide field of inquiry. Secondly, no other behavioral rule has so far been established that gives equally valid, if not superior, results over such range.

It is argued that the postulates are required in Islamic economics as well for the same reasons. Maximization, per se, is not un-Islamic: what is maximized, how and for what purpose are the real issues to investigate before passing judgment. Contrary to the current position in the literature, we find it preferable to include moral values and social considerations of Islam in the assumptions of economic theorems, rather than attempting to include them in the objective elements of the models, until Islamic economics evolves as an independent subject. *For maximization is a mathematical concept, and cannot fruitfully accommodate what cannot somehow be measured.*

Zubair Hasan is a professor with Department of Economics, Faculty of Economics and Management Sciences, International Islamic University, Malaysia, Jalan Gombak, 53100 Kuala Lumpur, Malaysia. email: zubair @ iiu.edu.my

Introduction

The postulate that the conditions of equilibrium are almost always determined with reference to the maximization (or minimization) of some magnitude has been the fulcrum of a number of micro economic theories. Two leading examples of the commitment to a postulate of the sort which this paper seeks to examine from an Islamic viewpoint are: (1) *that the firms in general desire to maximize their profits,* and (2) *that the consumers attempt to maximize their satisfaction or utility.* The postulates underlie respectively the supply and demand curves of the simple Marshallian cross, giving the equilibrium price-output combination for the market. Through price theory, they pervade most branches of the discipline. Not all is considered satisfactory about the postulates. There exists a sizable body of literature on their theoretical and operational limitations in the mainstream economics. Still, the discipline finds their retention appropriate, indeed necessary, for analytical purposes because of reasons we shall have occasion to mention.

Maximizing behavior may promote avarice and come into conflict with notions of impartiality and justice in decision-making. Therefore, expression of uneasiness concerning the postulates has been all the more pronounced in writings on Islamic economics. For example, according to Kahf, the proposition of profit maximization, as it stands in the capitalist system, is not in line with the Islamic rationale in relation to the time horizon and the connotation of "success."[1] Metawally feels that a Muslim entrepreneur activated by the relatively impersonal motive of fulfilling his obligation as trustee will not have profit maximization as his motive.[2]

Following Herbert Simon, Syed Omar mentions many constraints leading to the non-maximization of individual satisfaction: the individual "satisfies" rather than "optimizes."[3] This approach for analyzing economic behavior became quite common in economic literature after the fifties, and soon led to the generalization of the issue, focusing on motives in decision-making beyond economics to other social studies, especially to political science and sociology. It was insisted that human beings do not make all calculations to obtain a maximizing solution. Rather, guided by bonded rationality, they take to a "heuristic search to find satisfying – good enough – courses of action." Islamic economists were particularly attracted to the position because it allowed them to bring moral and ethical values of religion into the picture. They ignored the fact, even recognized by Simon, that these ideas have not been assimilated into mainstream economics. Thus, one finds Siddiqi insisting that no maximization hypothesis is "very helpful" in

understanding an economy, secular or Islamic.[4] Such observations have substance, but what must be the alternative behavioral rules for price formation, if the maximizing postulates were to be dropped, Islamic economists fail to spell out. Presumably, an appropriate answer to the question requires *inter alia* a prior decision concerning our approach to Islamization of knowledge.

Two shades of thought are identifiable in scholarly writing on the subject. The first seems to insist on what may be called an all-or-nothing approach to the subject. It requires Islamic economics not to brook any intrusions which the classical interpretation of the Shari›ah would not permit. The underlying assumption of the writings in this vein is of a practicing Muslim society being in existence at all levels. Under the assumption Islamization would result, as it does, in producing "pure" Islamic models rarely having links with ground realities.[5] However, the assumption could, hopefully, enable the proponents to shun, *inter alia*, the maximization postulates from the purview of Islamic economics. But in that case, it would be a subject aiming more at the explanation and formal tractability of economic events, rather than envisaging the construction of theories and making predictions. It would have an independent paradigm with primary emphasis being on equity, not efficiency.

In contrast, the second view seems to look at things in a rather pragmatic way. It underlines a step-by-step approach for Islamization to achieve the ultimate, in an evolutionary mold rather than at one go. In fact, recent writings in the area of Islamic economics are increasingly following this course. Today, there is more talk of teaching economics from an Islamic perspective than of Islamizing economics.[6] The shift probably is in recognition of the compulsions of history, the ever-increasing sway of the "economies without boarders" concept, the job market requirements, and the aspirations of the young. Thus, the Islamic universities remain dominated by the curricula frames, course structures, reading materials, and evaluation procedures largely borrowed from the West.

The latter process of Islamization takes appropriate parts of secular knowledge that can be sifted, pruned, and modified, where needed, to conform to the norms of the Shari`ah. Thus, it allows in Islamic economics, as in other social sciences, those useful portions of mainstream knowledge which do not defy the tenets of the Shari`ah, and seeks to alter or reject those which do. However, the process of submerging Islamic economics into the mainstream must severely restrict one's freedom to change the "hard core" of the latter: we may not do many things here which we can in

an all-or-nothing approach. The issues of maximization postulates may need, for example, different treatment in the two cases. Since Islamic economics is presently following the step-by-step approach, the critics rightly suggest modifications in the postulates, not their elimination. However, as maximization is often rejected *ab inirtio*, the subsequent insertion of modifications in the postulates tends to go awry. There seems to be little awareness, let alone concern, that the way chosen to effect changes cripples the postulates, and renders price formulation infirm.[7] Methodological issues of significance are involved.

It seems to us that the dissatisfaction concerning maximization postulates in Islamic economics mostly arises because of a lack of proper understanding of their nature and role in the formation of price theory. We shall argue that the postulates are not only relevant to Islamic economics; they are in fact needed by the discipline. However, the step-by-step approach to Islamization of knowledge, in our view, does not permit us to attempt the modification of the postulates, as is often attempted, by assimilating into them the moral norms and social considerations of Islam.[8] We shall plead that these norms and considerations could better be incorporated in the assumptions of maximization models without detracting in any way from their Islamic conformity. The issue essentially is epistemic: the postulates have to be evaluated with reference to certain methodological considerations: what problems do the postulates address, do they have any empirical content, and what is their predictive value?[9]

To accomplish our task, we have divided the paper into five sections including the present one. The following section provides the methodological reference-frame for the work. This contains what is quite basic and known in mainstream economics, but here it serves a purpose. Section 3 examines profit maximization as a business objective. Section 4 looks at utility maximization as a behavioral norm for consumers. The last section summarizes the argument, and makes a few concluding remarks.

Methodological framework

In economics, the pursuit of self-interest and maximization postulates invariably go together in deriving the equilibrium conditions both for production and consumption. This association is, in some measure, responsible for misgivings about the postulates in Islamic economics. Pursuit of self-interest has so often been discussed in the literature. However, ever since Adam Smith thought of it as the fulcrum of human behavior in eco-

nomics, it is difficult to add anything new to what has already been said on the subject. Still, we consider it useful to make a few clarifying remarks in the context of the indicated association.

Self-interest and Ethics

As the elementary needs of the people have always been the same everywhere, individuals desire well-being through need fulfillment, and must seek wealth. The pursuit of personal gain – satisfaction, utility, or profit – is ingrained in human nature. However, the pursuit never implied the denial of the existence of other motives, including altruism, as affecting human conduct. Self-interest came to the fore in economics, as its primary aim was to study the relevant economic phenomena *en mass* – the crowd, not the individual.

Mainstream economists maintain that of the motives which condition the economic conduct of people, the relatively more universal and stable one is that of self-interest. It underlies a greater element of uniformity in human behavior, providing in that a firmer base for constructing economic theories. Islam too is not averse to the seeking of personal gain, provided the tenets of the religion are not violated. Even the moral, spiritual, or ethical motives spur people only to act in their *own* interest. These motives may ignore their urge for pecuniary gain, but not for satisfaction in a wider sense.

Mainstream economics is aware of the role of non-pecuniary motives in shaping economic conduct. It just relegates them either to the considerations of other disciplines or consigns them to the *ceteris paribus bin*. It is essentially, a question of discretion, not of elimination. Furthermore, the pursuit of self-interest need not invariably be equated with selfishness. Selfishness implies deficiency in the consideration for others, while self-interest can be pursued along with sympathy and benevolence. In a world based on division of labor and increasing economic interdependence of individuals as well as of nations, the pursuit of self-interest rather compels us to care for the interests of others. The "prosper thy neighbor" approach to enrich self signifies the elating change that greets the new century.

It comes about that promoting self-interest may not by itself be unwelcome to Islamic economics. There are, however, reasons why the seeking of personal gain has run into disrepute at times, to the extent of being ridiculed even in mainstream literature. The first, and presumably the foremost, is that mainstream economics imposes the pursuit of self-interest as the sole and inviolable condition for being rational. It is this that makes people equate

self-interest with selfishness. But Islamic economics need not, as it does not, endorse this view of rationality. Second, the idea is entangled without any compelling reasons with individualism and the related ideology. However, individualism need not always operate against the ideas of cooperation and spirit of brotherhood in the Islamic system. Third, it is objected that the individual is not only actuated by personal gain, he is urged to maximize it.

We shall argue later that this again is not a serious problem from an Islamic viewpoint. The desire for personal gain primarily stems from the natural urge for self-preservation. The famous (or infamous) "economic man" need not have been painted out of it. Economists could have achieved what they did even without him. Economics could have been better off by remaining "the study of mankind in the ordinary business of life," as Marshall put it in the opening sentence of his principles.

Despite much truth in the criticism of the way the pursuit of self-interest has been projected in mainstream economics, the bulk of it seems to be rather stretchy and misleading. This also is valid, we shall see, for the unqualified condemnation of maximizing economic gains either by the producer or by the consumer in a market economy, mainstream or Islamic.

Concepts Versus Reality

Another methodological point to be noted is that mainstream economics picks up its notions of production, consumption, firm, profit, exchange, demand, supply, entrepreneur, growth, and so on mostly from the bin of common parlance. But when out of these notions the economists construct the ideal or abstract types to facilitate explanation or argument, the import of the words changes, often radically. Not many can always understand that economists may be talking about altogether different things when they use the same words, as do the ordinary people. Even among economists, differences of opinion can often be traced back to the divergence in the meaning each attaches to the same term. This can happen because terms assume different connotations depending on the goal of a theoretical model one has in mind, or the type of market structure the model has to deal with, or the conditions that underlie it.[10]

Take, for example the concept of a firm. The theoretical construct of the firm is quite different from its real empirical meaning. A distinction has to be made between the heuristic fiction and an actual organization The notion of a firm in price theory is merely of a "theoretical link, a mental construct helping to explain how one gets from the cause to the effect."[11] It is designed

to explain and predict changes in prices as an effect of specified changes in conditions like wages, rates of interest, technology and so on. It is not designed for explaining and predicting the actions of real firms. Likewise, the consumer on the demand side is merely a thought-object serving merely "as a theoretical link between changes in prices, and changes in the labor services supplied and consumer goods demanded."[12]

Lastly, the concept of maximization may relate to an economic or to a non-economic magnitude, e.g., pecuniary gains or the pleasure of God. But the point is that the act of maximization cannot be condemned unless we know the context. Relevant to passing judgment on a case would be the questions: what is being maximized, how, and for what purpose? In not a few situations the maximization of some magnitude may be essential for obtaining the optimal result. Maximization of tax collection, for example, would clearly be welcome in Islamic economics too, given the rates and administrative set-up. However, maximization is a mathematical concept, which can be applied to quantities of strictly uniform and measurable units. To apply the concept to moral values or social relationships is a mere deception.

Writings in the area of Islamic economics touching on mainstream theory structures generally do not take note of the above methodological intricacies. Tampering with the structures may often demand the tracing of backward and forward linkages all along the line much beyond the point of impact. Efforts at modifying concepts like maximization to meet Islamic requirements have to be evaluated with relevant methodological perspective.

Profit Maximization: Real Issues

Marginal analysis dominates modern textbook microeconomics. Maximization postulates are in a way the logical outcome of the process underlying this sort of analysis. The analysis, in explaining supply and demand, imparted elegance to price theory. The profit maximization postulate probably became prominent because it focused attention on both the supply and demand sides of the market at one go. The postulate shows the firm as an intermediary between the commodity and factor markets in the price circuit, with profit emerging as a difference between the two sets of prices: one at which the firms sell their output and the other at which they buy their inputs. The real issues in price theory from the viewpoint of Islamic social justice, therefore, are: (1) how fair the firms' actions are towards the buyers in the product market; (2) how equitable likewise are their actions towards the sell-

ers, especially labor, in the factor market; and (3) how the difference of the two price sets (profit) is used: who gets it and why?

Profit maximization, as a condition of rationality, is a legacy of the classical model of perfect competition. The essence of the model is that transactors have no pricing power in the market: they are price takers, not price makers. The model has a few well-known social welfare aspects. Firstly, it allows the entrepreneurs in the long-run only normal profit on their capital, which is no more than what is needed to just keep their heads above water: a legitimate reward for the services they render to society. Here, the maximum is the minimum required for survival. Again, the drive for self-enrichment, as disciplined by competition, also maximizes the social product: plant utilization is optimal in each case. Furthermore, each factor of production can be shown, as we discuss later, to get what it contributes to the value product of the firm. Last, society pays only what it must for the commodity – price equals marginal cost. Thus, the model goes to prove that promotion of self-interest is a social virtue in a free enterprise economy.

The critics attack the model as unrealistic. But unrealistic the model had to be for achieving what it did to put price theory on an even keel. The real difficulty is that the model is not internally consistent. The infinite multiplication of sales, without any fear of spoiling the market that it allows, must make sooner or later some of the firms large enough to assume pricing power. Thus the model tends to destroy itself. The cause and effect relationships it forges for price theory still remain intact, but with firms now having pricing power, its efficiency and equity enforcing claims evaporate.

The failure of the model because of sale multiplication could have been innocuous. What impels the firms to exacerbate the situation is the insistence of mainstream economics that the entrepreneurs are *exclusively* and *rightfully* entitled to all profit defined as the difference between revenues and costs, now including normal profit as well. We may call it the profit exclusion principle or the PEP for brevity. The principle has a built-in temptation for the entrepreneurs to pull as far apart as possible the prices at which they sell their output and the prices at which they buy their inputs. Logically, it must trigger in them what is sometimes called the propensity to monopolize. They are tempted to attack the forces of competition that seek to discipline them, and create monopolistic or monopsonistic shelters for enlarging the volume and continuity of *their* profits. Accordingly, the attack of Islamic economists on profit maximization is akin to attacking the windmills, not the fortress, the PEP.

The propensity to monopolize has probably contributed, in no small measure, to the rise of large corporations and non-competitive market structures in the business world over the past hundred years or so. The separation of management from ownership and the decentralization of decision-making in modern firms has caused the disintegration of both the entity and functions of the classical entrepreneur. The retention of the concept in economic theory personifies today no more than the decentralized decision-making phenomenon in modern business firms. The bulk of business profits assumes the character of a surplus that can rarely be attributed to the efforts of any one functionary: it largely benefits the segment of stockholders that controls the modern firms. Appropriation of profit today is hardly based on any logical theory, it is essentially based on power structure in a firm. In this circumstance, profit maximization under the PEP has a real chance of having an exploitative edge.

There is realization in the mainstream literature of other unwelcome consequences of the propensity to monopolize, but the issue of the PEP not remaining tenable under the changed conditions is seldom taken up. Instead, there is now effort to disown profit maximization. Firstly, the separation of management from ownership is claimed to have made the managers independent in taking business decisions. This has led to the mushrooming of the managerial and behavioral theories of the firm.[13] Secondly, it is asserted at times that motivation need not always create feasibility. Even if the firms want to maximize their profits, they cannot because of dynamic uncertain conditions. This has led economic theory into the barren lands of scholastic speculations.[14]

These claims and diversions open a vast area for debate on the issue, but here it is hardly relevant to our purpose. What we need to demonstrate is that under monopolistic competition, mainstream theory fails to show that the functional income distribution brought about by the market meets the norms of equity.

Profits Versus Wages

The determination of factor rewards has always been a fascinating, yet controversial area in mainstream economics. Lumping together the factors of production, economic models generally reduce them to two broad categories, capital and labor. The categories are just facilitating theoretical constructs, containing as they do extremely divergent elements in each case: they are not identical with real life empirical notions. Given the classification, the issue of

factor rewards virtually boils down to determining workers' wages, the remaining value product automatically going under the PEP to the owners of capital as profit including interest. Assuming perfect competition and the supply of labor schedule as given, mainstream economic theory demonstrates that the market-determined wages are "just" as well. The instrument used for demonstration is the celebrated marginal productivity theory of income distribution. As Islam also upholds the contribution as a just basis for determination of rewards, Islamic economists mostly subscribe to the validity of the theory, albeit adding varying qualifications.[15]

The development of the marginal productivity theory might be explained as a reaction to the economic ideas of Henry George and Karl Marx, i.e., to the emergence of some socialistic ideas in the area of income distribution. One virtue of the theory, based on the assumption of perfect competition, and constant returns to scale, was shown to be that each factor of production gets equal to what it contributes to the revenue of the firm. The amount was claimed to be a just return to the factor and also a fair cost to society. Profit going to capital was no less just than the wages of labor. In summary, the income distribution brought about in accordance with the theory was ethically valid: neither was rent of land an unearned income, nor was profit the fruit of exploitation.[16]

There are endless arguments in the literature about the assumptions the theory relies on, let alone about what it predicts, and how well it has faired. What has not been much in focus is the fact that the theory is misleading, if not erroneous, on its own terms. Payments based on marginal productivity need not be "just" on the basis of contribution. For, it is not the contribution of a factor to output but its scarcity relative to other factors that determines both its marginal product and reward. To demonstrate that under the assumptions of the theory every factor is paid the same amount as the value of its product does not prove that marginal product determines the factor rewards.[17] Again, we do have production functions, which yield constant returns to scale, but it was mistakenly assumed that all production functions must be of this type.

We need not go deeper into the debate.[18] Relevant to our purpose is the investigation of whether the workers get compensation equivalent to what they contribute to the value product of the firm even when operating under conditions of monopolistic competition. We assume for simplicity that competition in the labor market is perfect, and the returns to scale diminish. We may begin with a few statements without providing formal proofs.[19] The wage rate w at a level of employment (L) equals, even under increasing

returns,[20] the marginal revenue product of labor (MRP_L) that is equal to marginal physical product of labor (MP_L) times the marginal revenue (MR_Q) of the firm for the corresponding output: $MRP_L = MP_L . MR_Q$. On the other hand, the value of the contribution of a labor unit (VMP_L) to the average revenue (AR) of the firm equals $MP_L . P_Q$, where P_Q is the price for the corresponding output. Thus, under perfect competition $VMP_L = MRP_L$ because $MR_Q = P_Q$: the contribution criterion for payments is met.[21] But it is not so under monopolistic competition: As $P_Q > MR_Q$ we have $VMP_L - MRP_L > 0$. Following Joan Robinson, the difference is treated as a measure of workers' exploitation under monopolistic competition: one gets less than what one contributes to the revenues of the firm.[22] This is true for individual firms as well as for the industry. (See Appendix 1 for a diagrammatic demonstration.)

Textbooks of mainstream economics now generally exclude from discussion these implications of the marginal productivity theory, but Islamic economics with its insistence on achieving equity in income distribution just cannot. However, scholarly efforts in the area have so far largely been unconvincing. The main features of this effort include differences of opinion on the admissibility of minimum wages, agreement on opposition to union activity, and condemnation of profit maximization. Rather, the writers assume that employers will show humanism, magnanimity, and the spirit of brotherhood to pay "just" wages to their workers, and that the firms would only take reasonable profits on sales. Innocuously, they further assume that things would happen the way they think they should. Not only that, some of them have attempted to modify the relevant mainstream diagrams and functions by inserting into them the ethical norms and moral values of Islam, only to make things confusing.[23]

Business Firm and Profit Maximization

We may start with a few observations concerning the efficacy of profit maximization for the theory of the firm. Business firms may at times have goals other than profit maximization, and they may come into conflict with it.[24] However, micro models constructed on their basis is often situation-specific to permit overall generalizations. Being insular in character, they cannot integrate effectively in the web of price formation. Profit maximization is of global connotation, and has for that reason more and wider expository and predictive powers. Also, it admirably helps explain adjustments between the changes occurring within and between markets.

In summary, mainstream economics has retained the postulate, despite criticism, for methodological reasons. We think Islamic economics need not do away with it for the same reasons. In the dynamic uncertain world of monopolistic competition, can the quantum of maximum profit no longer be determined by the long-run interplay of impersonal market forces? Despite having pricing power, there is no way to *know* the maximum profit volume the firms could chase individually or collectively. In some circumstances, given certain constraints, profit maximization signifies no more than a firm's endeavor to create, enlarge, and keep open as much as possible the profit space between the total revenue and total cost curves. To find the price output combination for the widest space by equating the slopes of the curves (MR=MC) on which economics textbooks seem to concentrate becomes a technical matter of secondary importance. In order to understand correctly the ramifications of profit maximization one should not focus his attention on the space but on the levels of the curves that bound it.

In principle, a large number of feasible plans may be available to a firm for determining the level of the revenue and cost curves, and creating profit spaces. But only one of the plans would maximize the profit. The firm, however, has no means of knowing which one because of uncertainty. However, unless it strives continually to move in that direction, it is most likely to end up with an inferior plan in the matter of results. Rational conduct for that matter demands, in Islamic economics also, that maximizing plans be made and assessed on a comparable basis. In Islam such rational conduct is conditioned by its view of business as a *fard kifayah*, the protection it provides to consumers, and the sharing of profit between capital and labor it seems to allow.[25]

Fard kifayah connotes a duty the performance of which is obligatory on Muslims in general, but which when performed by an individual or a group of them absolves all others of their responsibility in the matter. The application of the principle in the case of business implies the achievement of a self-reliant economy. Also, it seeks to keep the social obligations of business in the forefront. Business operations have to be geared to the broad ends of an Islamic social order. Notice that Islam eulogizes the traders, but only the honest – not the unscrupulous – only the ones who overpower the greed that encourages the violation of the Shari›ah norms. Islam provides detailed instructions to the believers for conducting their business affairs in a way conducive to social well-being. The main instructions include the keeping of business transactions free, as far as possible, from all traces of *riba*, speculation, *gharar*, and deceit.

To protect the consumers, the Shari`ah imposes a number of obligations on the sellers with regard to having valid measures and using them correctly. There are also the instructions concerning quality, prices, and information. The goods sold are to be of declared quality or description. The price charged should not be more than what rules the market. Any attempt at raising prices by creating artificial scarcities e.g., through hoarding or cornering the available supplies must be avoided. An important departure from the usual practice is the requirement that not only should the seller avoid undue praise of his wares, but also he is under obligation to reveal to the prospective buyer defects latent or patent, if any, in the goods offered for sale.[26] The provision clearly instructs the producers to enforce strict quality control measures, and urges the distributors to accept from the suppliers only those goods that are free of defects. Furthermore, it seeks to keep advertising, indeed the entire selling effort, primarily informative and purposeful from the social viewpoint.

These Islamic measures for consumer protection are commonly known. They are expected to keep the revenue curves of the firms at a reasonable level in the context of profit maximization. The major difficulty arises on the side of costs. Even as there are clear instructions that production relations are to be based on the principles of trust, mutual benefit, cooperation, and justice, the PEP can only offer labor less than its contribution to the revenues of the firm, under monopolistic competition as shown above. As a corollary, the capital owners would invariably have more than their due. Exhortations to observe Islamic norms may affect human conduct, but rarely provide a sure and objective way that promotes division of value product according to factors' contributions. We feel that such division requires the granting of a share to workers in the profits of business to make up for the under-payment the PEP inflicts on them. It is not difficult to provide on an *a priori* basis a scheme for the purpose. Indeed, it is here that one sees the real contribution of the marginal productivity theorem.

The Sharing Scheme

It is easy to demonstrate that under-payment to labor can be undone if the workers are given, in addition to market wage rate w, a proportion σ of profit π that would yield an amount equal to the difference of the value of marginal physical product of labor and its marginal revenue product multiplied by the number of labor units L used to produce the corresponding output Q. Profit is, as usual, total revenue PQ minus total cost, fixed and variable, but

excluding interest which Islam prohibits. The reader may refer to Appendix 2 for a mathematical demonstration of the position. The final result obtained there is:

$$\sigma = (1 / \eta) (1 / \beta) \lambda$$

It follows that for different price-output combinations, the profit sharing ratio σ for labor would vary inversely, within and between firms, both with the changes in price elasticity of demand η and β the amount of capital per unit of labor employed, and directly with changes in the ratio (λ) of the workers' productive contribution to the rate of profit on capital. Under dynamic conditions, the direction of the net influence would depend on the mutual interaction of the three determinants.[27]

The sharing would give the workers ($wL + \sigma\pi$) as compensation for their contribution to production. In practice, there can be difficulties in arriving at the value of σ but that need not negate the principle of sharing, and its efficacy. In essence, the scheme advocates for a flexible wage system with two components: fixed market-determined wages wL plus a share in profit varying with the performance of business. The assumptions of the scheme that economic agents would behave in accordance with the Islamic requirements would condition the revenue curves of the firms, and profit sharing can be expected to free their cost curves from possible downward pressure the management may otherwise be tempted to exert for enlarging the profit at the workers' cost. Thus, the scheme is likely to make the profit space bounded by the curves non-violative of the Shari`ah norms, and bring factor payments in reasonable relation to contributions. If so, there is no reason why a firm in an Islamic system should desist from the maximization of expected profits. Religious commitments remaining the same, will it not be akin to the folly of choosing the lower of the two possible profit figures under an equal risk situation?

Notice that the scheme does not cripple the market forces; it only seeks to modify their consequences in an attempt to ensure distributive justice. Sharing now is acceptable in mainstream economics both in theory and practice.[28] Under the scheme, the attempt at maximizing profit would rarely need an apology or defense. Also one is no longer obliged to identify (or invent) the entrepreneur in the modern gigantic corporations. Profit maximization would tend to be free of exploitation or strife so characteristic of the industrial scene in many economies. In general, it is likely to promote the urge for an efficient and improved performance; for that alone could give

more to each participant in the productive effort. *The scheme is fair not only to workers but to their employers as well.*[29] It keeps unimpaired the links between the firm and the industry, also between various markets, in matters of resource allocation and price formation. Of course, these benefits need not imply that sharing of profit with labor is entirely a catalogue of virtues.

Consumers and Utility Maximization

Even though there has been some controversy in the mainstream literature on the question whether the "economic man" is a businessman or consumer or both, the utility maximization postulate in the theory of consumption "is methodologically at a par with the hypothesis of profit maximization in the theory of the firm."[30] A consumer obviously does not spend all his income on one kind of commodity. The rationality assumption impels him to allocate his income on the goods he purchases in such a way that he cannot increase his benefit by transferring a dollar from one good to another; i.e., the consumer *ceteris paribus* attempts to maximize his total utility or expected satisfaction by making the relative marginal utilities of his purchases proportional to their prices.

It was this initial "pure" theory of consumers' behavior that continued to inspire all later developments in the area. The theory was meant to help explain the inverse relationship between price and quantity demanded on the assumption that the consumer attempts to maximize his expected satisfaction or utility, his income and prices of other goods, and also his preferences, remaining unchanged. Thus stated, the law of demand further assumed that the utility one gets from consuming a commodity depended exclusively on the quantity of it consumed, that the cardinal measurement of utility was possible, and that the principle of diminishing marginal utility was true.

This formulation of the theory of demand was questioned on the basis that the cardinal measurement of utility was not possible, that the notion of diminishing marginal utility was not valid, and that the empirical evidence on the point was inconclusive. The evolution of the indifference curve analysis eliminated, it was claimed, the first two of these three objections. But it was soon discovered that the notion "involving as it does pair-wise comparison between commodity bundles that are infinitesimally close to each another is just as introspective and unobservable as the concept of cardinal comparison between marginal utilities."[31]

However, the indifference curve technique relied on fewer assumptions compared with the "pure" theory, and did facilitate in some measure empir-

ical predictions concerning consumer behavior. More importantly, it allowed the decomposition of price responses into the income and substitution effects. The latter is invariably negative for the commodity that becomes dearer due to relative change in prices. However the income effect could in some cases be positive even to the extent of more than offsetting the negative substitution effect. This helped explain why one can sometimes observe an upward sloping demand curve, i.e., consumers buying more, rather than less, of a commodity with a rise in its price.

Despite some merits, one weakness of the technique from a methodological viewpoint was that an indifference curve had no empirical content; it was a pure theoretical construct. The revealed preference theory attempted improvement, claiming the removal of all traces of utility from the analysis of consumers' behavior through eliminating altogether the need for indifference curves. Based on simple axioms, the theory proposed that the consumers "will buy less of a good when its price rises, if they would have bought more of that good when their incomes rose."[32] The formulation accommodates all the observable implications of the indifference curve analysis and has in addition the merit of predicting consumers' preferences from the behavior they reveal in the market, and not the other way round. However, despite gains, one finds the revealed preference formulation logically no different from that of utility. The claim for the revealed preference theory as a new approach to the explanation of the consumers' behavior is hardly regarded as teneable.[33]

From the initial utility theory to all modern speculations concerning consumers' behavior, the most damaging charge is that the theories put forth have been tautological with no exceptions. To begin with, "utility has to be defined in terms of itself. Utility is the characteristic of commodities which makes individuals buy them, and individuals buy commodities to enjoy utility in consuming them."[34] An indifference curve depicts combinations of commodities which are equally welcome to the consumer because each has the same utility for him. Likewise, the revealed preference theory "expresses no more than the notion that consumers can be observed to buy what they can be observed to buy."[35] It only assumes what was actually purchased was preferred as well, and as the consumer was assumed to maximize, purchasing equaled maximizing also. Some recent developments in the "pure" theory, including the treatment of the risk element and consideration of differences in the characteristics of goods in the analysis, do impart some realism to the analysis of consumer behavior, but are yet to free it of its tautological import. Methodologically far from generating testable eco-

nomic hypotheses concerning consumer demand behavior or inspiring and guiding empirical research, the theory has almost always followed statistical studies.[36]

This brief statement of the position of consumers' theory in mainstream literature is inserted here with a purpose. Notice that even as more than a hundred years of *a priori* reasoning has not contributed much to our understanding about consumer behavior, textbook economics could not do away with utility maximization simply because a better tool of analysis is yet to be evolved. If Islamic economics could make a breakthrough in the area, it would certainly be a welcome development. It is well to toy with the idea of including in the utility function of the consumer moral ingredients of Islam for seeking the pleasure of God, including moderation in consumption, avoidance of *israf*, expenditure for the needy and the poor, saving for future generations, and so on.[37]

However, since we are not adopting, as indicated in the introduction, an *all-or-nothing* approach to Islamization of knowledge, and aim for the present only at teaching mainstream economics in an Islamic perspective, there are constraints on what we can or cannot do. So, while it is possible to insert empirical variables into mainstream consumption models, we shall just be adding to the existing difficulties by attempting to include what cannot be quantified into the objective elements of analysis. Let us take the case of zakah and moderation, i.e., the avoidance of *israf*, to illustrate our point. The first is measurable, the second is not.

Writers in the area of Islamic macroeconomics often seem to be obsessed with a desire to introduce *israf* with a negative sign in their models as a compensatory factor for the consumption-increasing potential of zakah so that the saving and investment rates at least remain intact and growth is not impaired.[38] Clearly, the concept of moderation in consumption is vague, as *israf* is a perceptive non-verifiable quantity. The consumer himself may not usually be able to separate *israf* from legitimate requirements. An external observer, e.g., an economist is all the more a poor judge in the matter. In contrast, zakah, including voluntary expenditure in the way of God, is at once objective and quantifiable. It is better to desist from obscuring its impact on consumption by introducing negative *israf* as a balancing factor in Islamic models: it can rarely give conclusive results or have predictive value. One would presumably prefer analyzing the impact of zakah on consumption in an Islamic model with the assumption that the level of *israf* is zero. Then we may describe how the results of the model would change if *israf* does take place.

We may conclude this section with one more observation. Islamic economists have mostly been seized with the psychological approach to the analysis of consumer's behavior. However, the use of the inductive method is probably a methodological compulsion in this rather fuzzy area of investigation. If this view were acceptable, an exploration of the life-cycle hypothesis or permanent income postulate for consumer behavior from an Islamic viewpoint may prove rewarding. Until something concrete is available, we have to live with the present basis of analyzing the behavior of the consumer emanating from utility maximization.

Conclusion

We had set out to examine the nature and significance of the maximization postulates concerning profit and utility in the mainstream price theory formulation to examine if we can avoid their use in Islamic economics, as the literature is full of such suggestions. The concept of maximization apparently seems to conflict with the moral code of Islam. Still, we have ventured the argument that the postulates under review are effective, indeed needed, as tools of analysis for Islamic economics. Mainstream economics has retained them, despite some scathing criticism, for a variety of reasons including price theory, the core of economic science, which cannot stand erect in their absence. Economists have not yet been able to propose alternative behavioral rules which could have the same, if not superior, predictive value, and lead to empirically testable conclusions. In Islamic economics too, one need not throw away the baby with the bath water. The view broadly is based on the following conclusions that follow from the foregoing discussion.

- Economic concepts are theoretical constructs evolved to explain the causal relationships between relevant variables, facilitate verifications of results, and help in predicting the behavior of agents in response to changes in conditions. They are not meant to depict the reality unless modified for the purpose. Economic postulates are to be evaluated with reference to this methodological frame.

- Maximization as a notion is value neutral. *What* is being maximized, *how*, and *for what purpose* are the deciding questions. For example, maximizing survival, employment, equity, or the pleasure of God would probably be welcome to most of the people. The indiscreet condemnation of maximizing behavior in Islamic economics is untenable.

- Pursuit of personal gain primarily stems from the natural urge in human beings for self-preservation and self-promotion. Islam upholds the desire for personal gain if exercised within the prescribed behavioral norms.

- It is not possible to confirm or deny on an empirical basis if a firm has really maximized its profit. Maximum profit under dynamic uncertain conditions is not a *known* quantity that a firm could attempt to obtain. There usually is a large number of overlapping profit spaces that it can visualize. But only one of these could be chosen for taking action, and that one need not necessarily be the best. Logically, profit maximization is no more than a movement in the direction of what is *perceived* to be the largest gain. For men intuitively prefer more of worldly possessions, no matter how much they may already have (Qur'an 3:14-15).

- The real difficulty with profit maximization is that the entrepreneur, though he/she is no more identifiable in the changed circumstances of modern business firms, is still thought of as the *exclusive* and *legitimate* residual claimant. We have argued that if the firms fulfill their Islamic duties towards the consumers, the employees, and the society in general in arriving at their total revenue curves, their level need not attract any objection. In the same way if the total cost curves exclude interest, and a flexible wage scheme based on granting labor a share in profit is enforced, the level of these curves could be devoid of the exploitation the economists admit does take place under monopolistic competition even in the long run. The point is that if the revenue and cost curves are what they should be, and factor relations are made exploitation-free in observation of the relevant Shari›ah norms, why should a firm in Islamic dispensation desist from maximizing its earnings?

- The same applies to a consumer who is fully observant of the Islamic code of conduct. He certainly is free to maximize his satisfaction (including spiritual) out of his disposable income. Rather, he would be unwise if he does not do so.

It follows that the maximizing postulates need to be retained in Islamic economics, of course in the framework spelled out above, more so if we are to teach mainstream economics from an Islamic perspective.

Appendix 1

The following figures show that with diminishing returns, marginal productivity payment will fall short of labor's contribution to total revenue of the firm or industry and leave to that extent an excess profit for the capital owners. This cannot be justified unless, contrary to the known fact, entrepreneurial input (here merged in capital) is treated as a variable exhibiting constant returns to scale.[39] However, the proposition being dubious, excess payments are sought to be justified as the cost of variety which consumers cherish. But how much variety do we really need, are not brand names too many, is not advertising much too aggressive, and are not the consumers' preferences becoming distorted in the process? These are the sorts of questions which, though vital, cannot be discussed here. Any way, even if the variety argument were admitted, is it not startling to ignore that workers alone should pay for everybody else's gain, getting less than what they must?

Appendix 2

$$\sigma\pi = (VMP_L - MRP_L)\, L \qquad (0 \leq \sigma \leq 1) \tag{1}$$

This can be written as

$$= (P_Q - MR_Q)\, MP_L .\, L \tag{2}$$

$$= [(P_Q - MR_Q) / P_Q\,][P_Q .\, MP_L .\, L] \tag{3}$$

$$= [1 / \{PQ / (PQ - MR_Q)\}][PQ .\, MP_L .\, L\,] \tag{4}$$

Putting ? for price elasticity we have[40]

$$= [1 / \eta\,][VMP_L .\, L] \tag{5}$$

This gives

$$\sigma = [VMP_L . L] / p \quad (6)$$

Putting rate of profit on capital π / K equal to r, we may rearrange (6) as under:

$$\sigma = 1 / \eta][VMP_L / r][L / K] \quad (7)$$

Putting (VMPL / r) = λ, and capital expenditure per unit of labor K / L = λ, we have:

$$\sigma = (1 / \eta) (1 / \beta) \lambda \quad (8)$$

Notes

1. Monzer Kahf, "The Theory of Production'" in *Readings in Microeconomics in Islamic Perspective*, eds. Sayyad Tahir et al. (Kuala Lumpur: Longman, 1998), 115.
2. M.M. Metwally, "A Behavioral Model of an Islamic Firm," in Ibid., 131.
3. Syed Omar Syed Aghil, "Rationality in Economic Theory: A Critical Appraisal," in Ibid., 38.
4. M.N. Siddiqi, *Teaching Economics in Islamic Perspective* (Jeddah: Scientific Publications Centre, King Abdulaziz University, 1996), xiii, 17, 56.
5. Most chapters in Tahir et al., eds., *Readings,* are of this sort.
6. Zubair Hasan, "Profit Maximization: Secular Versus Islamic," in Ibid., 112.
7. Just take examples of definitions: How to specify a "fair" profit, decide about a "just" wage, or set the limit beyond which spending would become *israf* or wasteful. The literature abounds with predilections on such matters. For illustrations see Ibid., 12, 13, 18, 173, 220, 278, and 279.
8. For some illustrations, see Hasan, "Profit Maximization," in Ibid., 113, note 6.
9. Although recent writings in the philosophy of economics are replete with criticism of logical positivism, methodological goals and evaluation criteria still remain anchored in the tradition. Hence the requirements as stated here.
10. Fritz Machlup, *Methodology of Economics and Other Social Sciences* (London: Academic Press, 1978), 217, 236, 246.
11. Ibid., 292.
12. Ibid., 399.
13. See A. Koutsoyiannis, *Modern Microeconomics* (Hong Kong: Macmillan ELBS, 1987), chapter 18. *Behaviorism* shuns all presumptions and assumptions in theory formulation: it relies only on overt behavior. For example, it rejects the profit maximization assumption of the marginal analysis, and we are directed to *observe* how business firms really act, and by what processes

they reach decisions. (Machlup, *Methodology,* 394). But as this insistence does not conform to the accepted goals of dominant methodological positions, mainstream economics pays little heed to the advice.

14. This started with the Frank H. Knight's distinction between risk and uncertainty during the 1920s and remained frequent in the literature until the 1960s. A brief review of its impact on profit theory is available in Zubair Hasan, *Theory of Profit* (New Delhi: Vikas, 1975), 33-36, 54-56.
15. See Zubair Hasan, review of *Teaching Economics in Islamic Perspective,* by M.N. Siddiqi, *Islamic Economic Studies* (Jeddah) 6, no. 1 (1998): 123 for some examples.
16. Henry Landreth and David C. Colander, *History of Economic Thought,* 3d ed. (Boston: Houghton Mifflin, 1994), 247.
17. Zubair Hasan, "Profit Maximization," in Tahir et al., eds., *Readings,* 246.
18. Higher-level microeconomics textbooks usually provide useful insights into the matter. For ready reference one may mention P.R.G. Layards and A.A. Walters, *Microeconomic Theory* (London: McGraw Hill, 1988), 63-68.
19. For relevant proofs one may look into Koutsoyiannis, *Microeconomics,* 451-68 under varying market situation combinations.
20. Under increasing returns to scale, if factors of production were paid the value of their marginal product (VMP_L) they would be paid, as Euler's theorem shows, more than the income of the firm. So they would *necessarily* be paid their marginal physical product times the marginal revenue per unit of output which is less than the product price, i.e. the wage rate W will be no more than MRP_L (Layard and Walters, *History,* 65). It is, therefore, a bit queer to find M.N. Siddiqi observe that under increasing returns, "total revenue product being more than the sum of marginal products would enable the producer to pay higher than the revenue product of labor" (see Tahir et al., eds., *Readings,* 12). What he means by "revenue product" is not explained. But the conditions are just the reverse under diminishing returns to scale. This has prompted some writers like A.H.M. Sadiq to imagine that there would be available a range (MRP_L - VMP_L) to the firm and the Islamic fair wages could be set by the producer anywhere within this range. (Ibid., 278) Siddiqi as well entertains similar notions (Ibid., 173). Both clearly take 65 the positions outside the methodological reference frame of mainstream economics. That apart, how is fair wage defined? Where will it exactly be located in the indicated range? Can different firms have different fair wage rates? If not, what will unify them? If yes, what will happen to the "price taker" position of the firms under perfect competition in the labor market? The answers to these questions are clearly indeterminate, and lead one nowhere.
21. Notice that under perfect competition in the product market, in Figure 3.1.1 the curve VMP_L would be identical with the curve MRP_L. In Figure 3.1.2 the curve Σ VMP_L will be the same as the curve $\Sigma \leq MRP_L$, and wage rates W_M and W_V for the industry would coincide.

22. This view of exploitation is quite different from that of Karl Marx, who regarded labor alone as the source of value and as such whatever went to capital as profit was unjustified. Here, capital is recognized as being productive and what goes to it as profit, if equal to the value of its marginal product, is regarded as legitimate. Only when capital gets under the PEP more than this from the value of labor's marginal product, the phenomenon of exploitation takes place. The revenue curves of the firm express the sum of the values of the separate products of each of the two factors – labor and capital.
23. Layard and Walters, *Microeconomic Theory,* 65.
24. For example, see Sadiq, "Factor Pricing and Income Distribution From an Islamic Perspective," in Tahir et al., eds., *Readings,* 277-79. He produces an awfully dubious diagram (figure 22.2, p. 279). To begin with, in explaining wage determination from Islamic viewpoint he takes what he calls the value of marginal contribution of labor (VMCL) and value of average contribution of labor (VACL) curves. The "conversion to money value" process of arriving at the two schedules is not explained. In case one obtains them, for example, by multiplying the marginal and average physical products of labor respectively by the corresponding prices of the commodity, the results would not be what one requires. Let us grant that his procedure and curves correspond to ours. However, for his illustration Sadiq explicitly assumes constant returns to scale (p. 277). Why the two schedules should then be different, and sloping downward, is not clear. Again, we find that on the two curves for the individual firm he imposes the supply of labor curve S_L of the industry to indicate the wage range, and as an example of how an Islamic fair wage could be more than the market wage inserts a dotted line as we show in Figure 3.1.1! The obfuscation in his formulation is evident.
25. See for some alternative models see Koutsoyannis, *Microeconomics*, chapters 15-17.
26. See Zubair Hasan, 1992, op.cit., 245-46.
27. Ibid., 246.
28. We know that price elasticity of demand $\eta = (dQ / dP). P / Q$, and total revenue $TR = PQ$. So,

$$MR = d(TR) / dQ) = P + Q (DP / dQ)$$
$$P - [P + Q (d P / d Q] = P - MR$$
$$(dP / dQ) Q / P = (P - MR) / P$$
$$(dQ / dP) (P / Q) = P / (P - MR)$$
$$\text{Thus, } \eta = P / (P - MR) \qquad \text{Q.E.D.}$$

29. For example, a change in price P would cause a change in elasticity ? as well. Likewise, a variation in capital intensity β in technique of production may affect λ the value of marginal product of labor ratio to profit rate.
30. For theory see M.L. Weitzman, *Share Economy: Conquering Stagflation* (Cambridge: Harvard University Press, 1984). An abstract from reviews on the book's back blurb regards profit sharing with labor as the most important

idea of the present century. On the practical side it is well to mention that in Japan one-third of the wage bill tends to vary with the results of business operations, and the schemes are becoming popular with corporations in the US.

31. In many cases payment of one-month salary as bonus to the staff tends to become a norm. It is *de facto* the payment of thirteen months' remuneration for twelve months' work without regard to performance or results. The scheme would no longer allow such arbitrariness.
32. Machlup, *Methodology,* 272.
33. Mark Blaug, *The Methodology of Economics* (New York: Cambridge University Press, 1980), 165.
34. Ibid., 166.
35. Ibid., 166-67.
36. Joan Robinson and John Eatwell, *An Introduction to Modern Economics* (London: McGraw Hill, 1973), 36. To them utility is a metaphysical concept.
37. Ibid., 202.
38. Blaug, *Methodology of Economics,* 164.
39. For such sort of suggestions see, for example, Siddiqi, *Teaching Economics,* 39-40, 57-58.
40. Khan, for example, presumes that the rise in β (i.e., reduction in *israf)* due to fear of God T will be large enough to reduce C_U the consumption level of a secular consumer to overcome the adverse effects of zakah payments, including voluntary *infaq* on savings. See M. Fahim Khan, "Macro Consumption Function in an Islamic Framework," *Journal of Research in Islamic Economics* (Jeddah) 1, no. 2 (1984), 10-11. Iqbal also argues in a similar way substituting β with f in his model. See Munawar Iqbal, "Zakah Moderation and Aggregate Consumption in Islamic Economy."