

THE DIMENSIONS OF AN ISLAMIC ECONOMIC MODEL

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The paper answers in the affirmative the question about the need for an Islamic economic model, and then proceeds to delineate its dimensions. The distinguishing characteristic of such a model is to highlight the ethical dimension of the economic calculus - i.e., that without ethical moorings individual economic behaviour remains unpredictable. It shows that rational utility-maximizing behaviour will be helped by an ethically-oriented reorganization of present-day economic systems in Muslim countries. Formally, the Islamic economic system is presented as an 'optimum regime'. On the methodological plane, such a regime gives due prominence to both value judgments and positive judgments in making generalizations about an idealized Islamic economy. At the theoretical level, it is a way of transforming their refutable ethical principles into refutable statements about the behaviour of economic agents in a typical real-life Muslim society. In practice, for such a regime to reflect Islam's overarching ethical vision of economic processes, it would take assigning top priority to the needs of the least-privileged people in a growing economy. This implies giving greater weight to the wage-goods in total output, minimizing the production and consumption of wasteful luxuries, and redistributing income and wealth from the rich to the poor.

1. INTRODUCTION

Anyone trying to spell out the *defining* features of the Islamic view of economic processes must answer inevitable question: Is there a meaningful Islamic economic model? Another way of putting the same question is to ask: Is there such a thing as Islamic economics which can successfully, and somewhat differently, describe man's economic behaviour? If the answer is in the affirmative, then we should be able to show that such a model shares many things with other economic systems to be able to

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interact with them, while possessing certain characteristics which set it apart from the others. Certainly, a demonstration of inter-systemic similarities does *not* disqualify an Islamic economic system from having its own distinctive niche in the realm of economic knowledge. Likewise, to show that in many ways it has a different outlook on human behaviour is not a proof of its insularity.

The present paper shows that an Islamic economic system ‘exists’ in the sense of having its own ethical values, a set of economic objectives, as well as policy instruments. In other words, it can be seen as an “optimum regime” -- which optimally combines the concerns of social *justice* with those of economic *growth*.¹ And, as in any other economic system, the problem is to maximize social welfare subject to well-defined constraints and ‘initial conditions’. The presumption is that such an ethically-motivated regime, on *a priori* grounds, has as high a probability of success as any other economic system in solving man’s known economic problem, even at a *lower* cost; and that it can stand its ground as it “opens up, interacts, and competes with other (economic) systems.” [Sirageldin (1995)].

From this vantage, the analysis presented in this paper is divided into six sections. The first section clarifies certain methodological issues, while the second section spells out the relevant Islamic ethical (categorical) imperatives. The third section recounts, in general terms, the elements of the Islamic economic system; which then directly leads, in the fourth section, to a formal discussion of an Islamic ‘optimum regime’, meant to display its value premises and their logical consequences with respect to its growth potentialities and its capacity to ensure social justice in *all* states of the economy. The fifth and sixth sections then add a few policy implications of such a model.

2. METHODOLOGICAL ISSUES

To discuss an Islamic economic model (or system), we should be doing two things. First, we should be able to spell out the basic characteristics of an *Islamic* economy -- which should then serve as a benchmark for making valid economic statements about it. In this frame of thought there is no place for a strictly amoral economics, according to which only *positive* statements can claim objective validity. Instead, here we have to reckon with a combination of positive judgments *and* value judgments based on the Islamic religion [Naqvi (1994); Chapra (1992)]. Such a combination makes economic calculus richer in content, and analytically more adequate, to understand the nature of human societies. As Harsanyi (1991) puts it, value judgments are not necessarily irrefutable statements, because such judgments can be refuted if “they are contrary to the facts or because they are based on the wrong value perspective”(p.702).

¹ This way of looking at the matter is more general than the one which would consider the “most fundamental” characteristic of an Islamic model to be “the prohibition of interest”. For this latter view, see Kuran (1995). Many others have expressed a similar view.

Second, we should show that a representative Muslim individual, with no special claims to piety and living in a typical Muslim society, has something distinctive about his/her economic behaviour, which needs a ‘separate’ study. There is nothing odd about such a point of view because, as is now widely understood, economic laws are not a collection of *absolute* truths; in fact, they are *relative* to the state of the society in which we live.² A moment’s reflection should show that, without being able to make such a statement, it would not be possible for us to *transform the essentially irrefutable ethical and economic propositions into falsifiable refutable ones* [Popper (1980)]. Such an assertion does not mean that each and every statement of this kind will *in fact* be falsified; but only that there should be a possibility, however remote, of its being falsified one day [Blaug (1985)].

Indeed, only if a real-world Muslim society is taken to be a laboratory in which such a transformation can occur will there be a chance of *implementing* the basic tenets of Islamic ethics and economics and of comparing the Islamic economic system with other real-world economic systems like capitalism, socialism, or the welfare state [Naqvi (1994)]. And it is only when we take such a methodological position will it make sense to conceptualize an idealized Islamic economy, which essentially provides a sense of purpose and direction to Muslim societies.

3. THE ETHICAL FOUNDATIONS

The following fundamental points should be noted to clarify the bases of Islamic *value* judgments:

- i) Islam’s is a philosophy of the ‘right’ -- i.e., it first specifies what is ‘right’ and then allows human beings to work out the most profitable course of action open to them within the given institutional constraints, which too must gradually change to reflect Islamic ideals.³ There is nothing authoritarian about such a vision, because the choice between the ‘right’ courses of action and the ‘wrong’ ones is essentially voluntaristic: “O men, the truth has come to you from your Lord, so he who follows the right path does so for himself, and he who goes astray errs against himself, and I am not a guardian over you.” (10:108).

² Arrow (1985) asks the question: “Is economics a subject like Physics, true for all times, or are its laws historically conditioned”? -- and suggests that probably the latter is the case.

³ Note that this philosophy is the exact opposite of the Benthamite philosophy which asserts that whatever maximizes ‘happiness’ is also right. A brief account of the Benthamite ideas is given in Bertrand Russel (1964). The Islamic philosophy would also deny the Nozickian non-consequentialism, whereby a given state of the economy is justified on procedural grounds and without regard to its consequences for the society. See Nozick (1974).

- ii) This philosophy of the 'right' is best spelt out by four ethical axioms: (a) *Tawheed* (Unity); (b) *Al'adl wal ihsan* (Equilibrium); (c) *Ikhtiar* ('Free Will'); and (d) *Fardh* (Social Responsibility).⁴ According to the Unity axiom, an individual's economic activity must be guided by an ethical vision. In a broader sense, it acts as a unifier (in a 'vertical' dimension, so to speak) of all aspects of human life into a consistent and mutually supportive totality. To enhance the beauty of life, men/women should also obey the Divine Law of *al'adl wal ihsan* -- the 'horizontal' dimension of Islam -- which requires promoting social harmony and maintaining a just balance in the basic structure of the society. It is from Free Will (*Ikhtiar*) that a full flowering of individual freedom draws its sustenance. It allows maximum space for economic and social activity, and raises mankind above the rest of Allah's creation. However, the potentiality of this virtual freedom is best realized if man/woman makes the 'right' choice -- i.e., that which is based on justice. This happens when he/she discharges his/her Responsibility (*Fardh*) to the society, and especially towards the least privileged. Indeed, social irresponsibility -- and especially an insensitivity to the misery of extreme poverty -- is unequivocally condemned in the Holy Qur'an: "what has come upon you that you fight not in the cause of Allah and for the oppressed, men, women, and children who pray..." (4:75). It follows that if any harm is being done to the society -- either through our own doings or by those of others -- then we *must* be moved to remedial action within the bounds of law.

These axioms can also be viewed as synthetic truths about a Muslim society, where their validity can be directly verified.⁵ Thus, certain very powerful ideals -- e.g., the equality of all men/women before Allah, about the poor having a share in the wealth of the rich *because* all wealth belongs to Allah, about the obligations of the rich to the poor *because* the rich person is a trustee not an owner of the wealth, about man/woman being essentially a free agent with definite social responsibilities to discharge, etc. -- can be seen to be *practiced* in a typical Muslim society. And even though the practice is sometimes quite different from the ideals -- and which practice ever strictly conforms to the ideal? -- so that

⁴ These axioms are explained at length in Naqvi (1978; 1981a; 1994). One or the other of these four axioms has been referred to by different authors. For example, see Ahmad (1976; 1994); Sadr (1982); Schuon (1963); Nasr (1979); Iqbal (1988); Chapra (1992); Nomani and Rahnema (1994); Choudhry (1959); and many others. For an historical evolution of these axioms, see Boer (1970); and Naqvi (1994), pp. 35-36.

⁵ However, verifying such truths in a real-life Muslim society does *not* necessarily involve looking *around* to check out these as facts. Indeed, by this test -- of a sensory confirmation of the basic ethical postulates -- *all* economic systems can be proved wrong. Who has ever *seen* the world being run by an atomistic utility-maximizing individual guided *only* by his own selfishness and greed? The claims of neo-classical economics would then be just as fragile.

what we see practiced may appear to be a pale shadow of the real thing, yet a Muslim society, even in its present fallen state, can justifiably claim to have more of this shadow than the other societies.⁶

- iii) The Islamic concept of freedom is quite different from the Kantian concept of the absolute autonomy of Man, which is secured by obeying the laws that Man makes for himself.⁷ It basically differs from the latter in two respects. First, in the Islamic perspective, Man's autonomy is not 'absolute' but only relative to Allah's Will. The Holy Qur'an is clear on this point: "Verily Man is rebellious that he thinketh himself independent" (96:6). Second, the freedom-giving law is not entirely Man-made, in the sense that it is Divinely inspired, which makes it universally acceptable to the Muslims, without diminishing in any way its reach or generality. The reason for this is that while the preferences of all individuals carry equal 'weight' in the Benthamite utilitarian philosophy, the least-privileged people should carry more 'weight' than the rich in the Islamic perspective. And, in contrast to the Nozickian philosophy, the needs of the poor in such a society *must* be met irrespective of the stage of economic development [Ahmed (1991)]. Indeed, Man can truly secure his freedom only by helping his least-privileged brethren. A failure to do so is declared as a denial of faith: "has thou observed him who belieth religion? that is he who repelleth the orphan, and urgeth not the feeding of the needy"(107:1-3). Thus, the obligation to discharge one's responsibility to the society in general, and to the poor in particular, does not diminish individual freedom; rather it enlarges its scope and gives it new meaning.⁸
- iv) Islam rejects the concept of 'absolute' ownership, either of the individual or of the state. Only Allah is the absolute owner of all wealth: "Allah's is the heritage

⁶ For instance, it has been observed that the influence of religious beliefs is more pervasive in a typical Muslim society than in any other society, in the sense that such beliefs determine the Muslim's "individual actions and, consequently, the social life of the community". See Boisard (1987; p.31). Bell (1953) is very explicit on this: "No book has exercised a deeper influence upon the spirit of man than Qur'an It is the basis of [Muslims] religious beliefs, their ritual, and their law; *the guide of their conduct, both public and private*. It moulds their thought and its phrases enter into their literature and their daily speech." (p.1).

⁷ For an explanation of the Kantian view, see J.G. Murphy (1974).

⁸ In this respect, the Rawlsian contractarian philosophy is nearer the Islamic point of view though not identical with it in all respects. The most attractive part of the Rawlsian analysis is that, like Islam, it too aims to maximize the welfare of the worst-off individuals of the society, and seeks to *choose between social institutions so that the worst-off is made the best-off*. See Rawls (1971). However, it may be noted that the Rawlsian principle is 'incomplete' because it contains no instruction to reduce the *number* of poor people, nor does it put a limit on how much the rich can consume. *Islam would seek to reduce the number of people in the worst-off income group*. For details of this line of argument, see Naqvi (1993); esp. ch. 5.

of the heaven and the earth” (3:180). Man is essentially a trustee of Allah’s wealth and he must “spend of that whereof He hath made you trustees” (57:7). But Allah’s ‘heritage’ is bestowed on mankind as a collectivity. It is *not* bestowed on a privileged few; nor is it conferred on the state. The principle of trusteeship -- which is nevertheless ownership, according to the Islamic law -- minimizes the consequence-insensitivity of the capitalistic conception of a relatively freer exercise of the right to private property; it also redresses its complete denial under socialism. It is for this reason that the Holy Quran enjoins that while exercising their (relative) ownership right of private property, those who have, must give to the have-nots: “And what aileth you that ye spend not in the way of Allah, when unto Allah belongeth the inheritance of the heavens and the earth” (57:10). To avoid any confusion, the “way of Allah” has also been identified in the Holy Qur’an: “Ah, what will convey unto thee what the Ascent is! (It is) to free a slave, and to feed in the day of hunger an orphan, near of kin, or some poor wretch in misery.....” (90:12-16). The beauty of Allah’s way is that it leaves enough room for man’s soaring idealism as well as for his mundane concerns.

4. ELEMENTS OF THE ISLAMIC ECONOMIC PHILOSOPHY

Having described the bases of the Islamic ethical philosophy, the next logical step is to show that it can generate all the basic (and authentic) statements about an Islamic economy.⁹ The following points are noteworthy in this context:

- i) In contrast to neo-classical economics, which accepts egoism and selfishness as rational, *and* all else as irrational, economic behaviour in an Islamic economy is guided by *commitment*. Whence follows that an economic agent is most likely to choose a course of action that also enhances the welfare of others, *even though doing so may mean accepting a cut in his own material welfare*: “You will not attain unto piety until ye spend of that which you love” (3:92).¹⁰ Thus voluntaristic motivation in man is sought to be enhanced -- by directly linking economic acts of giving to spiritual ascension. This goal is not accomplished by imposing a ‘dictatorship solution’ -- i.e., by denying the individuals their fundamental rights. Acting according to the dictates of Islamic ethics is also *rational* because “the likeness of those who spend their wealth in Allah’s way is the likeness of a grain which grows seven ears, in every ear a hundred grains” (2:261). Indeed, according to the Holy Qur’an, it is *irrational* for men/women to be content with *only* this-worldly (material) affluence. “Whoso desireth the harvest of the Hereafter, we give him increase in its harvest. And

⁹ For a detailed demonstration of the many assertions in the text, see Naqvi (1981a; 1981b; 1994); Siddiqi (1988); Chapra (1992); Khan (1995).

¹⁰ Myrdal (1989) points out, “when politicians and experts become timid about giving due importance to moral commitments, realism is absent” (p.11).

whoso desireth the harvest of the world, We give him thereof, and he hath no portion in the Hereafter” (42:20).¹¹ With rational behaviour thus broadened, the act of giving will be seen as enhancing the individual’s expected welfare: “Who giveth his wealth that he may grow in goodness” (92:18).

- ii) That commitment is the ideal economic behaviour in an Islamic society establishes one distinctive feature of the Islamic economy: in it the economically rational actions are consistent with a morally motivated conduct. This is because commitment -- doing good to others even when it takes sacrificing one’s own material welfare -- effectively breaks the link between the individual’s choice and his/her material welfare.¹² Thus, it takes no intuition to see that a system based *primarily* -- which is not to say, exclusively -- on commitment will be much less expensive to run than the one in which egoism puts a price tag on every inch of the territory ceded to altruism. Such a motivational reorientation will greatly reduce the relevance of much of the standard (neo-classical) economic theory -- the first principle of which, in the words of Edgeworth, “is that every agent is actuated only by self-interest”.¹³ It will happen because an individual whose behaviour is actuated by *sympathy* for others in society can still make do with the existing economic models -- e.g. by admitting into them the “externalities in consumption”, while the one raised on commitment can’t.¹⁴

However, to assert that commitment will be its guiding principle is not to claim that egoistic sentiments will somehow die out once an economic system has been established. Indeed, any such claim will put the economy ‘beyond justice’: if all men/women *actually* acted out of pure altruism, then there would be no need for justice in such a society! And, there would be no economic

¹¹ See, Zarqa (1976).

¹² Indeed, the term ‘welfare’ will be re-defined in the Islamic context. It is not only ‘materialistic’ welfare that economic agents maximize. Their well-being also depends on spiritual satisfaction that flows from altruistic work done to gain Allah’s approval: “We feed you for the sake of Allah only. We wish for no reward nor thanks from you” (76:9).

¹³ See F. Y. Edgeworth (1981, p.16). The same position has been re-stated forcefully in the highly influential modern text on economic theory by Arrow and Hahn (1971). True it is recognized that there are instances in economic theory, like the one represented by the “Prisoner’s Dilemma”, when acting rationally out of one’s own selfish interest leads to the diminution of social welfare. However, these are exceptions to the general rule, which was first enunciated by Adam Smith in the classic statement: “He [the individual] neither intends to promote the public interest, nor knows how much he is promoting it.... he intends only his own gain, and he is in this, as in many other cases, led by an invisible hand to promote an end which was no part of his intention (1776, p.11, footnote 12).

¹⁴ The mere statement that commitment is better than egoism, and that it *may* improve social welfare, is, largely speaking, a triviality. A lot of theoretical work will have to be done to demonstrate the superiority of such a system to other economic systems *based on any arbitrarily chosen definition of social welfare*.

problem left to be solved since social conflicts will have been fully resolved in this spiritual Utopia! Islam is too realistic a religion to ignore that Man is basically egoistic: "And lo! in the love of wealth he is violent" (100:8). But *it does not justify such behavior; much less glorify it!*

- iii) The requirements of *efficiency* and *growth* must be consistent with the dictates of *equity*; so that while grossly inequitable states of the economy are excluded from the choice set in an Islamic economy, it still remains essentially efficient and dynamic. This implies that a distributionally neutral and efficiency-oriented choice rule, like Pareto-optimality, will be replaced, or at least supplemented, by one which explicitly takes into account Islam's egalitarian concerns. The reason why Pareto-optimality -- according to which a state of economy is 'unimprovable' if it is in competitive equilibrium -- is not adequate to comprehend Islam's concern to create an egalitarian society is that the former makes no difference between states of the economy that are very unjust and those which are less so. Thus, for instance, it would be indifferent to feudalism, which clearly violates the Responsibility axiom [See Naqvi (1981a: Sadr (1992); and Taleghani (1982)].
- iv) Interpreted broadly as an economic principle, the Divine Law of *al'adl wal ihsan* defines the first-best configuration of consumption, production, and distribution relations -- though not necessarily in a strictly neo-classical sense of the term. An important implication of this principle is a recognition of the *prior* right of the underclass in society. "In whose wealth", according to the Holy Qur'an, "a due share is included for the needy and the dispossessed" (70:24-25).¹⁵ Thus, the "dispossessed" of the society can claim their "due share" as a matter of "right" (*haq*), and not as charity; which implies that more should be given to those who have less, to begin with -- so that, eventually, a regime of inequality and charity is replaced by one in which different individuals relate to one another in a situation of greater, though not absolute, equality. This socio-economic aspect follows the principle as a logical necessity because the Islamic position is that every individual's happiness has the same social value, so that -- given the diminishing marginal utility of income -- the marginal value of additional income is more for the poor than for the rich.
- v) The relevant choice rule will, therefore, be some sort of a lexicographic ordering of individual preferences to reflect the priority of the needs of the poor in society over those of the rich.¹⁶ Whence follows that the proportion of wage-

¹⁵ Mawdudi (1976) points out that the purport of this verse is not confined to Muslims alone, but to all those who ask for help, irrespective of their religion, race, or color.

¹⁶ Myrdal (1989) points out that it is rational and perfectly in the individual's own self-interest to adopt "a much more frugal life style so far as growth in consumption and production for home consumption is concerned." (p.13).

goods in the 'commodity basket', normally consumed by the poor, will have to rise over time, and the consumption and production of wasteful luxuries will be minimized according to the Quranic commandment: "Don't squander your possessions on nullity." (2:188).¹⁷

- vi) A basic economic and philosophical question concerns the 'possibility' of making social choice in an Islamic economy. The question looks deceptively simple but is not. This is so because, as Arrow's well-known Impossibility Theorem (1964) conclusively demonstrates, if all its assumptions (viz., "unrestricted domain", Pareto optimality, independence of irrelevant alternatives, and non-dictatorship) hold, then to construct a social choice rule out of individual choices is an impossibility. The only way to resolve the impossibility of social choice is to demonstrate the irrelevancy in an Islamic economy of one or more of the basic Arrowian postulates.¹⁸ An obvious solution is for the government to impose its own preferences on the society; but Islam rules out a 'dictatorship solution' of the problem. And, fortunately, there is a way out.

Firstly, the domain of choice is *not* unrestricted because all the individual preferences do not carry equal "weight" in the Islamic economy, as they do in the Benthamite utilitarian world; indeed, some of them must be assigned a zero weight.¹⁹ And this 'weighting' is not done arbitrarily but according to a clearly laid down ethical norm -- i.e., *al'adl wal ihsan*. Hence, only those individual preferences which conform to this "norm" can be taken into consideration in deriving an appropriate social choice rule. Furthermore, since individual preferences are not independent of the economic processes, an "exogenous" ethical norm like *al'adl wal ihsan* is required to escape the logical circularity involved in treating individual preferences as determinants of the economic process. Such a procedure of 'discriminatory' (but not arbitrary) weighting reduces Arrow's "unrestricted domain" -- i.e., the individual preference set over which "aggregation" has to be performed -- to yield a meaningful social choice.²⁰ That such a procedure leads to a 'just' (Islamic) solution

¹⁷ The entitlements of the poor may be of two kinds: (a) They may define the endowment, or the asset of ownership, position of the individual; (b) or they may indicate the 'exchange entitlement mapping', telling us about the alternative assets that the individual commands. The point is that a person may not have access to wage-goods, *even though they are produced in abundance*, if his endowment position and his/her exchange entitlements are not adequate to procure them. This distinction is clearly brought out in Sen (1971).

¹⁸ That Arrow's Impossibility Theorem will not remain relevant when one or more of its four basic assumptions are not satisfied is clearly brought out in Sen (1970, ch. 9).

¹⁹ The Benthamite principle does not "grade" happiness: "quality of pleasure being equal, pushpin is as poetry". See Russell (1964).

²⁰ See Simon (1957). He argues that the task of deriving social choice from the individual choices should be done more meaningfully with respect to a subset of alternatives which

should be obvious when it is remembered that *social action must be geared directly to the amelioration of the conditions of the poor in society*. Secondly, as noted above, in the Islamic system -- in violation of the Pareto optimality assumption -- the weighted preferences of the individual will be ordered in a way that reflects its equity concerns.

It follows from these considerations that since two of the four conditions postulated by Arrow are violated, social choice in an Islamic economy, which seeks to maximize individual and social welfares simultaneously, will be 'possible'. Thus, it is possible to run an ethically-oriented Islamic economic system in the light of individual preferences. In other words, it would be wrong to assert that the existence of such economy must, of necessity, imply a dictatorial imposition.

- vii) A vital issue concerns the growth possibilities of the Islamic economic system. As noted above, the ethical constraints on economic behaviour need not lead to sub-optimal economic growth; but it is a fact that observing them does narrow down the choice to those growth paths which satisfy Islam's ethical concerns most efficiently.²¹ To deal with this issue, the ethical requirement of *al'adl wal ihsan* can be seen as one of maintaining justice *between generations*: of keeping a 'just' balance between the rival consumption claims of the present generation and those of posterity -- which would determine the size of intertemporal (saving) investment. Exactly how this balance will be struck in practice is an empirical question; but a few *a priori* observations can be offered.
- a) Economic growth -- which, among other factors, is determined by the rate of physical and human capital formation -- constrains the freedom of the present generation to consume all the wealth 'today'. It is not only an economic necessity but also a moral responsibility of the present generation that it curtails present consumption to maximize the flow of consumption (investment) intertemporally -- even if doing so implies tolerating some inequality of income. There is an element of sacrifice here because posterity cannot reciprocate the

are influenced by social and psychological -- and, I may add, ethical -- factors. This definition makes more sense than worrying, as Arrow does, about a "complete" preference ordering of the individuals. Also, see Hahn and Hollis (1979) pp. 7-11.

²¹ In a dynamic setting, the 'optimal' growth path is not unique; it is determined in relation to the "initial conditions" specified [Dorfman (1969)]. Thus, as explained in the next section, the optimal growth path corresponding to more egalitarian initial conditions will be differently inclined from the one which begins with an unequal initial distribution of income and wealth. The concept of "human development", which the UNDP's annual reports have emphasized, also requires "modifying the growth strategies to reduce poverty" [Haq (1995, p.27)].

kindness of their forefathers, the flow of favors being unidirectional between generations. This fact does not imply intergenerational injustice, because justice can be done only within the possibilities of natural limitations; it can't transcend them. However, the inapplicability of the reciprocity principle intergenerationally does not imply that the magnitude of 'unrequited' transfers from the present generation to posterity can be made arbitrarily large. In other words, the principle of *al'adl wal ihsan* does require some sort of an 'optimal' rate of saving done by the present generation.

- b) It follows from these considerations that a 'maximal' rate of economic growth must be maintained to satisfy the requirement of intergenerational equity. By the same token, from the many growth paths available, the choice will be restricted to those which satisfy the Islamic ethical constraints -- especially to those in which the consumption needs of the least-privileged people have a priority over those of the rich. This restriction will require that the composition of investment be such as will maximize the flow of wage goods over time, and also raise the proportion of public goods to private goods.

5. OUTLINE OF AN ISLAMIC "OPTIMUM REGIME"

We are now in a position to put together the above-mentioned considerations into a dynamic model of an *Islamic* "optimum regime",²² which also includes those basic characteristics that *any* growing economy must display.²³ It also shows that an Islamic economy -- where economic actions must be consistent with the rules of ethical behaviour -- is *at least* as efficient as any that advertises its value-free positivistic origins. In particular, the production structure in it remains *efficient* and the scarce factors of production priced optimally, even as it is reorganized to accord top priority to an adequate flow of wage goods. And it will "imply greater equality and increased productivity at the same time" [Myrdal (1989), p.16].

A novel feature of the model is that *it explicitly requires a redistribution of income and wealth from the rich to the poor as an integral part of the welfare-maximizing calculus, as that without fulfilling such a condition the social optimum will not be achieved*. Thus, unlike many growth models, the optimal growth here is not consistent with widening inequalities of income and wealth.

²² The concept of an optimum regime is presented at length in Tinbergen (1959; 1985). The model, presented here, recasts Tinbergen's welfare function to recognize explicitly the *prior right of the poor and the deprived in the wealth of the rich*. A rough sketch of the model presented in the text is presented in Naqvi (1984b). Unfortunately, there were innumerable typographical errors in the printed version so as to render the model valueless.

²³ For an application of optimal control theory to economics see, Dorfman (1969).

5.1 The Model

We specify a social welfare function Ω , which depends on the (average) individual utility function (η); and an average commodity basket (G), which is assumed to contain more of the wage goods. It is further assumed that at each point of time (η) depends on the rate of per capita consumption ($\chi(t)$); while the commodity basket, (G), is a function of per capita consumption, per capita capital stock ($v(t)$), and time (t). We thus have a social welfare functional:

$$\int_0^{\infty} e^{-\rho t} \Omega(\eta(\chi(t)), G(\chi(t), v(t), t)) dt \text{ Error! Switch argument not specified.}$$

which is to be maximized.

However, the maximization of this welfare functional is subject to two constraints. The first constraint is the equation of motion, which has been incorporated into our optimization problem by forming a Hamiltonian, which is then extended to a Lagrangian to include the second constraint.* With no loss of generality, but for simplicity, we assume that the size of population is constant over time and the rate of capital depreciation is zero. Thus, we can write the constraint in per capita terms as

$$\dot{v}(t) = G[\chi(t), v(t), t] - \chi(t)$$

The second constraint requires that the square of the difference of wealth holding in the society, θ^2 , which depends on per capita consumption ($\chi(t)$), capital stock ($v(t)$), and time (t), does not exceed $B(\chi(t))$. This constraint reflects the fact that the tolerance for inequality is not independent of the level of per capita income: it is expected to be higher in countries with a higher per capita income. The constraint can be written as:

$$\theta^2[\chi(t), v(t), t] \leq B(\chi(t))$$

Here, we have a typical constraint maximization problem which can be readily solved by applying Pontryagin's Maximum Principle (to simplify the notation, t as an argument of the variables is suppressed in the following derivations).

Maximize: $\int_0^{\infty} e^{-\rho t} \Omega[\eta(\chi), G(\chi, v, t)] dt \text{ Error! Switch argument not specified.}$

Subject to $\dot{v}(t) = G[(\chi, v, t)] - \chi$

* For a similar formulation see Arrow *et al* (1971), esp. ch. 2.

and

$$\theta^2 (\chi, v, t) \leq B (\chi),$$

We form the Lagrangian:

$$L (\chi, v, \lambda, \phi, t) = H (\chi, v, \lambda, t) + \phi [B (\chi) - \theta^2 (\chi, v, t)]$$

where L is the Lagrangian and H is the current period Hamiltonian:

$$H (\chi, v, \lambda, t) = \Omega [\eta (\chi), G (\chi, v, t)] + \lambda [G (\chi, v, t) - \chi]$$

where λ is the rental on capital, while ϕ denotes the opportunity cost of inequality.

Assuming that the objective function satisfies the usual concavity conditions, the necessary conditions for maximization are:

$$\frac{\partial L}{\partial \chi} : \frac{\partial \Omega}{\partial \eta} \frac{\partial \eta}{\partial \chi} + \frac{\partial \Omega}{\partial G} \frac{\partial G}{\partial \chi} + \lambda \left[\frac{\partial G}{\partial \chi} - 1 \right] + \phi \left[\frac{\partial B}{\partial \chi} - \frac{\partial \theta^2}{\partial \chi} \right] = 0 \quad (1)$$

or

$$\frac{\partial \Omega}{\partial \chi} + \lambda \frac{\partial G}{\partial \chi} = \lambda + \phi \left[\frac{\partial \theta^2}{\partial \chi} - \frac{\partial B}{\partial \chi} \right]. \quad (1')$$

and

$$\begin{aligned} \dot{\lambda} (t) &= \rho \lambda (t) - \frac{\partial}{\partial v} L (\dots) \\ &= \rho \lambda (t) - \left[\frac{\partial \Omega}{\partial G} \frac{\partial G}{\partial v} + \lambda \frac{\partial G}{\partial v} - \phi \frac{\partial \theta^2}{\partial v} \right] \end{aligned} \quad (2)$$

or

$$\frac{\partial G}{\partial v} + \frac{\dot{\lambda}}{\lambda(t)} + \frac{1}{\lambda} \frac{\partial \Omega}{\partial v} = \rho + \frac{\phi}{\lambda} \frac{\partial \theta^2}{\partial v} \quad (2')$$

Now assume:

$$G = G_0 (\chi, v, t) e^{\beta t}$$

where β is growth rate of the average commodity basket from an initial position G_0 and

$$\theta^2 = \theta_1^2 (\chi, v) e^{\beta t} + \theta_2^2 (\chi) \quad (3)$$

(Here, θ^2 is split into θ_1^2 and θ_2^2).

Note that $\theta_1^2(\chi, v)e^{\beta t}$ is the time-varying part of the inequality of wealth and is measured by the standard deviation of wealth distribution. It also depends on the per capita consumption and the capital stock. However, $\theta_2^2(\chi)$ depends only on per capita consumption.

Now assume that Ω is separable in η and G .

We then have:

$$\text{Eqs. (i) and (4)} \Rightarrow \frac{\partial \Omega}{\partial \eta} \frac{\partial \eta}{\partial \chi} = \lambda \left[1 - \frac{\partial G}{\partial \chi} \right] + \phi \frac{\partial \theta_1^2}{\partial \chi} e^{\beta t} \quad (5)$$

and

$$\frac{\partial \Omega}{\partial G} \frac{\partial G}{\partial \chi} = \phi \left[\frac{\partial \theta_2^2}{\partial \theta} - \frac{\partial B(\chi)}{\partial \chi} \right] \quad (6)$$

Also,

$$\text{Eqs. (2') and (5)} \Rightarrow \frac{\partial G}{\partial v} + \frac{\dot{\lambda}(t)}{\lambda(t)} + \frac{1}{\lambda} \frac{\partial \Omega}{\partial v} = \rho + \frac{\phi}{\lambda} \frac{\partial \theta_2^2}{\partial v} \quad (7)$$

$$\text{Eq. (4)} = \frac{\theta_1^2}{\theta_2^2} = B \quad (8)$$

and

$$\frac{\dot{\theta}_2^2}{\theta_2^2} = 0 \quad (9)$$

These conditions in effect say that in order to maximize aggregate social welfare and the growth in the size of the commodity basket containing the wage goods *in a growing economy*, the inequality of wealth must be held at a minimum, while capital priced efficiently. To this end, the following conditions must be satisfied.

- a) Eq. (i) in effect says that an increase in the production of wage-goods to satisfy the increase in per capita consumption is linked with a reduction in the inequality of wealth. This result comes out by an increase in per capita consumption.

tion, $\partial\Omega / \partial\chi$, and due to an enhanced production of wage goods, $\lambda(\partial G / \partial\chi)$. Furthermore, as the right-hand side of the equation shows, it would require making appropriate changes in the opportunity cost of consumption, λ , in terms of foregone investment; and also in the opportunity cost of inequality, ϕ , associated with an increase in per capita consumption, $\phi (\partial\theta^2 / \partial\chi)$.

- b) Eq. (2') determines the optimal time path for the price of capital. The right hand side of the equation recognizes that greater capital accumulation tends to contribute to greater inequality. Thus to make Eq (2) hold, the opportunity cost of capital accumulation (i.e., a greater inequality of income and wealth) must be reduced by a more egalitarian redistribution of income and wealth from the rich to the poor.
- c) Equation (2') also implies that the share of wages must be rising as the opportunity cost of capital accumulation is reduced. When this happens the supply of wage goods must rise to balance the incremental demand for wage goods.
- d) Social welfare will be maximized if the wealth differential is at a minimum to begin with; and the production of the wage goods will be maximized if the growth in wealth differential does not exceed the pre-assigned level (Eqs., 8 and 9).

It may be noted that our model is essentially a closed-economy model, which, however, suffices for our purposes -- that is, to highlight the central features of an Islamic economy based on *al'adl wal ihsan*. It spells out the necessary conditions for optimizing social welfare in a dynamic setting and specifies these for the growth rate of the desired commodity basket, as well as the conditions for its distribution and consumption. Then there is the shadow price of capital (and by implication, of labor) to ensure efficiency in the use of scarce capital resources. It may be noted that the introduction of the ethical constraint in an Islamic optimum regime in no way alters the usual rule for capital accumulation. Indeed, our model goes a step further than the typical positivistic neo-classical growth model and shows that an economy in which wealth is more equitably distributed, and where the production (consumption) structure reflects a greater concern for the needs of the poor, is in no way inferior -- indeed, it may be *superior* -- to any other economic system which may be 'optimal' in the neo-classical sense but unjust otherwise.²⁴

6. IMPLEMENTING THE OPTIMUM REGIME

²⁴ The Gini Coefficient of land distribution is as high as 0.64 in Yemen, and 0.54 in Pakistan. In many Muslim countries -- especially Ghana, Mali, and Tanzania -- more than half the population lives below the poverty-line, and in Bangladesh 86 percent of the population is so situated. See Haq (1995).

Even a cursory look at the Muslim societies would show that they are far from being an optimum regime. They are mostly in a low stage of this state of affairs, a majority of the populations -- especially the female population -- is illiterate and lags far behind the non-Muslim nations in scientific accomplishments. Within and across the Muslim countries, most people do not have access to the basic necessities of life; and the incidence of poverty is very high -- in violation of *al ihsan*. Much worse, "the overall Human Development Index (HDI) for 49 Muslim countries is only 0.39, placing the Islamic world in the low human development categories" [Haq (1995), p.106]. Although significant progress has been made by many of them -- especially by Saudi Arabia, Algeria, Jordan, and Syria, where the HDI has sharply increased in the last thirty to thirty-five years -- to reduce economic imbalances and to lessen the incidence of absolute poverty; yet, the differentials between the rich and the poor within the Muslim nations, and between them and the non-Muslim nations, remain shamefully large. The situation requires correction without delay. The Muslim societies need to evolve certain measures so as to be able to compete on an equal footing (and possibly from a position of strength) with other countries -- and thus to move closer to an *Islamic* economy. These can be stated as follows:

- i) As noted earlier in this paper, the need to meet the entitlements of the "poor" in society should figure prominently in the policies followed by the Muslim societies. Some mechanism will have to be devised -- e.g., a redistributive policy *plus* unrequited cash (or kind) transfers -- to divert a fair share of the income and wealth from the rich to the poor. The Holy Qur'an emphatically prohibits the concentration of wealth in the hands of the rich": "[Let] it (wealth) not become a commodity between the rich among you" (59:7); and a failure to follow this command is condemned as a denial of "Allah's beneficence".²⁵

It may be noted in this connection that even if the income of the poor is rising faster than the income of the rich, the absolute gap between them will not begin to narrow until the ratio of their wealth holding is equal to the inverse ratio of the growth rates of their relative incomes (see Appendix 1). To satisfy this equality, the absolute gap between the initial wealth holding must be minimized at the same time as the incomes of the poor are made to rise faster than the incomes of the rich.

- ii) The state has a definite role in bringing about a change in the structure of asset (especially land) ownership -- e.g., as it is in feudalism, which accords priority to the rights of non-cultivators over the rights of cultivators [Sadr

²⁵ The Holy Qur'an says: "Those who have more do not give of their means to their captives [and thralls] so that they [may not] become their equals. Will they deny their Allah's beneficence?" (16:71).

(1982); Taleghani (1982); Naqvi *et al.* (1984a)]. This task cannot be left entirely to the ‘invisible hand’ of the market, which reflects and perpetuates the existing distribution of economic power in society. However, the greater role of the state in a Muslim society does *not* imply dictatorship, because, according to Islam, the state has no right of its own; only individuals have rights, which implies that Islam permits a very large measure of individual economic freedom. And yet, when required, an Islamic state must help the individual break the chains of innate greed and secure true freedom and success: “And whoso is saved from his avarice -- such are they who are successful” (59:9).

- iii) The pattern of the ownership of economic resources *per se* is not a matter of doctrinaire rigidity in Islam. The state is not pitted against the individual; instead, both the entities, the state and the individual, are mere trustees, not absolute owners, of what they have. They must together establish, and sustain, a beneficial social contract so that an institutional shape is given to the Divine law of *al ‘adl wal ihsan*. To be *stable*, such a social contract will involve a sharp reduction of ill-distributed income and wealth, and a rearrangement of the loci of economic power, so that the existing economic systems in the Muslim societies are made more efficient, equitable, and responsive to the needs of their least-privileged populations.²⁶

7. CONCLUDING REMARKS

To summarize, the broad contours of an Islamic economy are shaped by Islam’s ethical philosophy of the ‘right’. This philosophy is based on four axioms: Unity, Equilibrium, Free Will, and Social Responsibility. While Unity lets morality ‘warm up’ the cold economic calculus, the quality of Equilibrium entails nothing less than restructuring of the entire production, consumption, and distribution relations to satisfy the entitlements (*haq*), not just the needs, of the under-privileged. To this end -- observing the dictates of Free Will and Social Responsibility -- a social contract, which is voluntarily accepted by ‘rational’ men/women, will have to be formalized.²⁷ Creating a ‘unified’ framework of thought and action thus, public policy must create the necessary preconditions for social harmony and economic progress. These preconditions will be created by bridging the wide gap between the Islamic ethical principles and the reality in the Muslim societies.

²⁶ Indeed, without such an operational social contract, the Divine Will cannot be implemented.

²⁷ That rational men/women will, in fact, voluntarily assent to such a social contract becomes self-evident when it is remembered that ‘rationality’ in Islam is defined as engaging in the acts of giving: Whose bringeth a good deed will receive tenfold the like thereof, while whoso bringeth an evil deed will be awarded but the like thereof....” (6:161). See Naqvi (1981b).

To implement such a program, “ethics, policies and development (must) form a dynamic interactive system” [Sirageldin (1995)]. The motive force for such a system is the acceptance of *commitment*, rather than egoism, as an *ideal* form of social and economic behaviour; and a recognition of the need to blend growth and efficiency with equity in all states of the economy. Doing so will entail a well-defined role for (a democratically elected) government (state) to improve economic matters -- especially to change the basic structure of the society and to minimize social exploitation. In fact, the specification of the optimal size of government is an integral part of the Islamic economic system.

Islam offers a consequence-sensitive scenario in which Man must exercise his discretionary faculties to discover the truth through intellection and by observation: “We shall show them Our portents on the horizons and within themselves until it will become manifest unto them that it is the truth.” (41:53). The Muslim societies must establish an equitable social order within the framework of a democratic polity. The success of such a mission will, however, require the creation of an environment where human freedom flowers and finds new avenues of creative fulfillment. And this will happen if reason is buttressed by knowledge; faith fortified by habits of observation and contemplation. Equipped with faith and reason, we will have to demonstrate that “bringing ethical considerations in no way fetters the spirit of enquiry” [Naqvi, (1994)]. This is both an opportunity and a challenge to the Muslim societies. It is an opportunity because modern societies have traded moral excellence for material prosperity, which too is the monopoly of a few; and Islam can lead the way by showing that we gain in morality *and* rationality by giving to those who do not have. It is also a challenge because it requires intellectual skills and implementational effort to establish the competitiveness, even superiority, of an efficient system informed with a deep sense of moral values -- with the assurance that altruism is not a scarce resource to be economized but which increases with more use. If we fail to respond in time to the great challenges facing us in this fast-moving world, the danger is also clear enough: we might be relegated to the backwaters of history.

APPENDIX - A

We make the following statement in the main text of the paper: “even if the income of the poor is rising faster than the income of the rich, the absolute gap between them will not begin to narrow until the ratio of their wealth holdings is equal to the inverse ratio of the growth rates of their relative incomes.” To prove this proposition, assume that initial wealth holdings of the rich and the poor are given by A and B respectively; and let the growth rates of their income, from the initial wealth holdings, be given by:

$$W_1(t) = Ae^{at} \quad (1)$$

$$W_2(t) = Be^{bt} \quad (2)$$

The difference between $W_1(t)$ and $W_2(t)$ is

$$\omega(t) = W_1(t) - W_2(t) = (Ae^{at} - Be^{bt}) \quad (3)$$

Differentiate $\omega(t)$ with respect to time (t)

$$\frac{d\omega}{dt} = Aae^{at} - Bbe^{bt} \quad (4)$$

It follows that for the gap to decrease, $d\omega/dt < 0$

$$Aae^{at} - Bbe^{bt} < 0$$

or,

$$Bbe^{bt} > Aae^{at}$$

where $b > a$ indicates that the income of the poor is rising at a higher rate than that of the rich.

It follows that:

$$e^{(b-a)t} > Aa/Bb$$

Now take the log of both sides, whence $(b-a)t > \ln(Aa/Bb)$

* The derivation in the text is given in Naqvi (1984); and set out in more detail in Naqvi and Qadir [1985].

$$\text{or } t > \frac{\ln(Aa/Bb)}{b-a}.$$

If we require that the gap starts to decrease from the present, i.e., $t = \theta$, then we stipulate that

$$\theta \geq \ln a(Aa/Bb)$$

$$\text{i.e., } Aa \leq Bb \quad \text{or} \quad A/B \leq b/a$$

Thus, the requirement for the gap to close is that $A/B = b/a$.

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