PRICE, VALUE AND SOCIAL EQUILIBRIUM IN ETHICO-ECONOMICS*

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Introduction

This paper addresses the topic of social price formation as the basis of value theory under conditions of consumption and production of what is termed in this paper as social goods in the economy. The necessary elements in this context are shown to be social consensus formation in a framework of pricing and delivery of social goods. The critical deficiencies of mainstream economics compared to the principle of value theory in ethico-economics are pointed out here as: (1) the inadequacy of market price in mainstream economics to reflect social preferences emanating from ethical considerations in the ethico-economic system; (2) the neo-classical failure in recognizing the need for a much fuller knowlege of the society being studied; (3) the exogenous (non-systemic) treatment of ethics and values in mainstream economic system, leaving no scope for interaction between economic institutions and social value formation.

Explanation of Some Introductory Concepts

Before the mainframe of the paper a few essential concepts will be explained. First, what is the idea of ethico-economics? It is ingrained in its most important principle, stating that the social economy endowed by its targets and policies of ethics and values, given either by assumptions or by institutions, must be capable of evolving along the path of mutual interdependence between these targets and policies. That is, institutions

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endow good ethical standards on society through the social policies enacted. In turn, the market interactions among consumers, producers and institutions improve, and bestow better market equilibrium, in the ethical sense now. The cycle is then completed by feedback to polity and continues on in this way. This principle is explained later in detail in this paper as the principle of ethical endogeneity, wherein the endogenous nature of ethics in this social transformation process is brought out.

The second concept to explain is the concept of value related to price in the ethico-economic system. In the history of economic thought, value theory has been associated with profits as value in the Ricardian theory; with demand side of price formation in neo-classical marginalist analysis; and with the labour theory of value in the Marxist idea of organic composition of capital, which alone is made to represent the true value of labour time as opposed to the variable capital, which is argued to yield the economic surplus. In none of these paradigms are ethics and values found to play their role in socially administered production, consumption and distribution. Consequently, the prices that emanate thereby, and reflect preferences, unit cost and resource allocation / distribution, cannot signify the ethically desired types of economic activities. In ethico-economics, administered prices set by polity also respond to the market transformation process. In the first place, they help transform the production, consumption and distribution melieu through the principle of ethical endogeneity (briefly explained above and to be elaborated later). Thus value, which conventionally reflected the demand side of price formation in neo-classical economics, now incorporates the demand side of social price formation. Following this, improving ethical values of the market place in these economic activities helps to generate higher standards of ethical policies.

Social Pricing, Value and Equilibrium in Ethico-Economic Theory

The other important aspect of value theory in ethico-economics based on social pricing mechanism is to establish the related concept of economic equilibrium / disequilibrium. In the Boulding type total social system the economy cannot evolve ceteris paribus; it must evolve within the context and influences of the grand whole (Boulding, 1972; Choudhury, 1987). In this system it is seen that a social economic equilibrium is established only as a simulated state under the force of a dynamically evolving labyrinth of

appropriate social policies. Because these simulated equilibrium states are ever changing corresponding to given social policies, therefore this social economic system is also characterized by "expectational" equilibrium states[1]. The concept of economic equilibrium is thus detached from the classical and neo-classical long run equilibrium concepts.

The important characteristic of the social economic equilibrium is its evolution out of the ethical nature of consumption, production and distribution sets. The ethico-economic argument in this respect is that in such a system all goods produced and consumed must be social goods. These are goods that satisfy the given ethical norms and values. On the side of ethical consumption preferences, one can think of consumption without waste, greater weight to the consumption of basic needs, consumer durables, etc. On the side of social control of production, one can think of non-polluting production systems, production of basic needs, institutional control over the production of belligerency, formation of social cooperatives between workers and owners of capital, etc. On the side of distributive equity arising out of the above two, one can think of sharing of profits under cooperation, and indexing of wages by the demands of equity. These are matters of polity and are therefore administered. But they are also matters of the market system in ethico-economics, because the principle of ethical endogeneity develops feedbacks between polity and the market place. These are set by public consensus and are promoted by governments.

Social goods are goods having the above characteristics. They may be produced by the private sector or the public sector. Thus, the social goods system produces and consumes goods that not merely maximize individual utilities and economic growth but also altruistic preferences (interdependent utilities) and social growth (Arrow, 1976). Examples of social goods are basic needs, education with core ethical elements, appropriate technology, etc. Examples of the social goods system are the ILO-World Employment Programme, international economic cooperation, the cooperative economic system, etc.

Now, if the boundary problem of consumption and production is a social one, it must be characterised by a large set of state (target) variables and decision (policy) variables, some of which are purely economic and some

non-economic in nature (ethical imponderables). The choice of social goods is coterminous with such variables.

The Meaning of Endogeneity in the Ethico-Economic System

The interrelationship between the sets of target or state variables and policy or decision variables in loops of feedback between themselves is the essence of treating ethical considerations as endogenous in the ethico-economic system. This means that society must be capable of evolving in loops of feedback between social state variables and social policy variables. Starting with initial feasible social policies and targets, society evolves on an optimal path of perfecting its ethico-economic goals. Each phase of this optimal evolutionary path is characterized by interrelationships between the target variables and the policy variables. An ethico-economic system, therefore, shows optimal production frontiers for social goods, optimal allocation of resources in the production of social goods and optimal policies for attaining these with a force of innovativeness akin to the pure market economy.

The above characteristics of an ethico-economic system point out that social consensus formation and the endogenous treatment of ethical elements are consistent conditions. Furthermore, because such conditions affect the consumption, production and distributional activities of the economic system, they are necessary ones for the existence of an ethico-economic general equilibrium (Choudhury, 1986c). Thus, the development of an ethico-economic theory is to be based on the following two internally consistent goals, rather than on the postulates of economic rationality, conflict and competition, equity-efficiency "trade-off" :

(1) social consensus formation through institutional goals and appropriate social policies that move the ethico-economic system along its optimal trajectories;

(2) treatment of ethical values as endogenous in the system. These goals define the principle of ethical endogeneity. To an elaboration of this principle we now turn[2].

The Principle of Ethical Endogeneity

In ethico-economic theory, appropriate social policies would progressively transform individual consumption preferences to make them conform

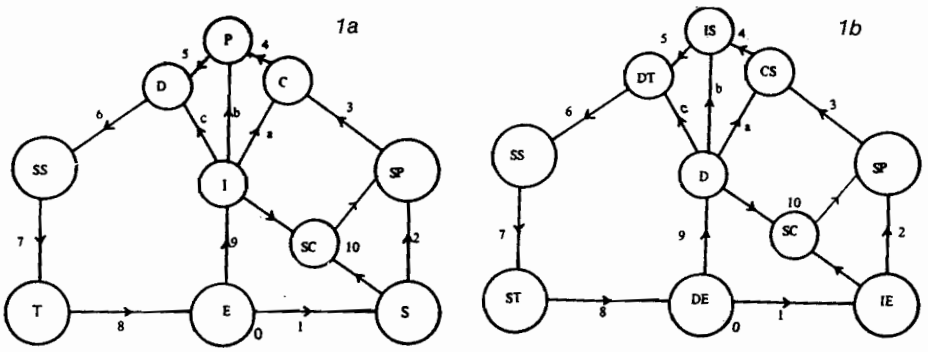
with social preferences. The progressive conformity between individual and social preferences would establish "social consensus". In this transformation process the endogenous nature of ethical preferences is shown by the fact that with greater social consensus comes the capacity of society and individuals to evolve into higher levels of ethical perfection. Each attained social state through ethical transformation creates higher ethical states and in turn better social policies. The individual evolves ethically thereby, and becomes the new "ethical individual". The evolution of society to higher social states thus proceeds in cycles, from individual preferences to social preferences, forming social consensus through appropriate policy formulation and recreating the ethical individual.

How are these transformations brought about through social consensus? The problem is explained mathematically below. Here we undertake a non-mathematical explanation of the same. Because the principle of ethical endogeneity develops continuous feedback of interrelationships between polity and the market place, it is the set of ethical policies (such as laws), set by consensus among decision makers representing decentralised and democratic segments of the population, that initially mould the preferences of the market place. Following this, the market place comprising the consumers and producers respond to these policies. On the one hand, when conflicts occur between the policies set by polity and the preferences of the market place, no social equilibrium is attained. The deficiency reflects itself in the total efficiency and equity losses of the production and distribution processes. The ethico-economic idea of value is distorted. Consequently, prices that reflect the efficiency and equity states of this value also now point to a state of social disequilibrium. On the other hand, the opposite of social conflict is social consensus. Here social policies mould the desired social preferences of the population at large and are progressively evolved thereafter. The result is the opposite of social disequilibrium. Thus, social consensus formation generates social equilibrium and social value, and is related to the principle of ethical endogeneity.

The principle of ethical endogeneity is depicted in Figure 1a, and an application of this principle to the case of the domestic and world economies is shown in Figure 1b.

Figure 1a and 1b

The Principle of Ethical Endogeneity



Symbols (those in brackets refer to Figure 1b):

E(DE) : ethical goals/levels first endowed and then cyclically evolved in the ethico-economic system (distributive equity as ethical goals)

S(IE) : state preferences (social preferences) based on given ethical goals and norms (international economic programmes of development finance institutions influenced by goals of distributive equity)

I(D) : individual preferences made to conform with social preferences (domestic economy of a nation state)

SP : social policy formulation based on ethical goals and norms (appropriate social policy oriented toward attainment of the goal of distributive equity)

C(CS) : consumption preferences associated with individual preferences (consumer goods sector in the domestic economy)

P(IS) : production menus influenced by individual consumption preferences and economic cooperation (investment goods sector in the domestic economy)

D(DT) : distribution of incomes and resources influenced by individual and societal preferences on consumption and production (distribution in the national economy)

SS : first stage (repeated by subsequent stages) of attained social states (attained social states)

T(ST) : social transformation carrying social states to higher levels of ethical perfection/goals and recreating the 'ethical man' and the ethico-economic order (social transformation commences in cycles, e.g. better economic security, lower budget deficit, greater expenditure in the social goods sector)

SC : complete social consensus formation between decision makers (between development finance institutions and their member countries in respect to appropriate choice of social projects and consequent changes in development planning)

A Mathematical Formulation of the Principle of Ethical Endogeneity

In order to investigate the analytical validity of the stated principle of ethical endogeneity and to show the role of social consensus formation in establishing social equilibrium, a mathematical formalization is made as follows:

Let a decision-set in the ethico-economic system be defined by the following :

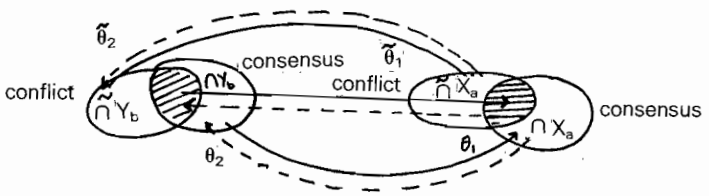
$$D = ((x, y) : x\varepsilon \cap X_a, y\varepsilon \cap Y_b),$$

where, $x = (x_1, x_2, \ldots, x_n)$; $y = (y_1, y_2, \ldots y_n)$, 'a' denotes the number of decision-makers involved in consensus formation in the x-state (target) variables and the y-policy (decision) variables (Intrilligator, 1971 : 292-319). Thus, X_a denotes a set of state-variables for the ath. decision making group; Y_b denotes a set of decision variables for the bth. decision making group. The correspondences between the social consensus state and decision variables are shown in Figure 2.

The above formalization of the decision set shows that, at any given situation of the social economy moving along its optimal trajectories of state variables and decision variables, these variables must be determined through social consensus. Subsequent to this, as the social economy evolves into higher stages of organization, ethical perfection and greater consensus on wider ranging issues and policy matters, the set D expands,

Figure 2

Correspondences Between Social Consensus Sets and Between Social Conflict Sets



with $\cap X_a$ and $\cap Y_b$ becoming larger. For these to happen we need, a ε A and b ε B, the sets of decision makers and policies, respectively.

The social transformation surface attained by the selection of state

variables and policy variables under consensus formation is given by:

$T = T(x, y)$, where all notations appear in vectorial form.

It can be shown that the ethical target set, $\cap X_a$, and the ethical policy set, $\cap Y_b$, are both compact (closed and bounded) (Choudhury, 1986c; 1986a : 191-216). This makes the ethical social transformation, T(x, y), well-defined on the decision set. The principle of ethical endogeneity is thus shown to give rise to the following mappings [3] :

$$\theta_1 : \cap Y_b \rightarrow \cap X_a, \text{ i.e. } \theta_1 (\cap Y_b) \subseteq \cap X_a,$$

$$\theta_2 : (\cap X_a)^{-1} \rightarrow \cap Y_b, \text{ i.e. } \theta_2 (\cap X_a)^{-1} \subseteq \cap Y_b$$

Here the Jacobian, $J(X_a) \neq O$. Thus, the differentiability properties of the function, θ_2, on the set, $\cap X_a$ establishes non-zero partial differentials of θ_2. However, the mappings are 'onto', $\theta_2 \cdot \theta_1 \neq 1$ (identity mapping). The significance of the 'onto' mappings is that the decision set can be augmented by a larger set of state variables and policy variables as society moves up into higher levels of ethical perfection. Besides, there are interactive relations between these two sets along the optimal trajectories towards optimal social transformation.

In light of the interactive relations among the state variables and policy variables, say, of the form :

$$y_i = h_i (x_1, x_2, \ldots, x_n),$$

with, $\frac{\partial h_i}{\partial x_j} > 0$, $i = 1,2, \ldots, m$; $j = 1,2, \ldots, n$.

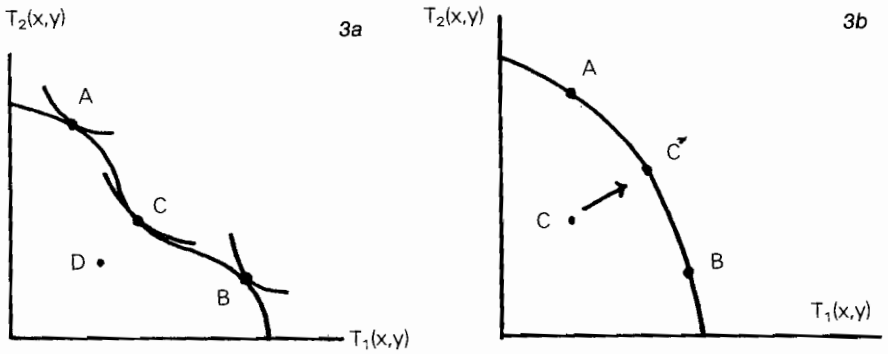
the shape of the social transformation, T(x, y), can be well-defined. This is established with the help of Figure 3a and 3b.

Points like C and D are not feasible when we have interactive functions like, θ_1 and θ_2, for if A (likewise B) is the point of social choice, then the state variables and policy variables being interrelated, any move away from B and toward A must contribute towards higher values of the function, $T_2(x, y)$. Points C and D contradict this. Hence, the ethical social welfare function is finally of the form shown in Figure 3b. The elimination of a point like C in Figure 3a also implies that there is no scope for a trade-off between equity

and efficiency, and the point B gains in equity. Then by moving from A to B we do not reduce the total social transformation of society, which potentially is at a point C′, not C. The form of the ethical social transformation surface is shown in Figure 3b. This is the static version of decision variables in the ethico-economy.

Figure 3a and 3b

Shape of the Social Transformation Surface in Ethico-Economics



Conclusion

The theory of value, price and equilibrium explained by the principle of ethical endogeneity in this paper can be summarily explained in Shackle's words as "a theory of the origin, nature and effects of conduct and policy in a class of human affairs". To Shackle, the concept of value is more than a mere reflection of prices, wages and interest rates. Value to him "suggests something intrinsic to physical objects or performances, subsisting in its own right, capable of being stored up in vessels of guaranteed security, and poured from one such vessel to another" (Shackle, 1972 : 112-113). In this concept of value the economic price must likewise be conceived in a wider context of reflecting its capacity to satisy social, ethical, spiritual and physical needs in the market system and through similar considerations being imputed in the production relations. In this way, the ethical concept of economic value addresses both the aspects of value: value in exchange or use value, and the imputed labour theory of value emanating from the

relationships of production (Lichtenstein, 1983 : 1-56).

In this paper we have also shown that the theory of value in ethico-economics comprehends the wider area of the dynamics of social change, past and prsent, and provides options for the future in terms of a comprehensive socio-economic plan with ethical goals and instruments being central to it. Here the social philosophers, educationalists, religionists and others would play a key role along with economists, employers, labour and policy makers in delineating the process and direction of social change.

Notes

1) For reference to the concept of expectational equilibrium, see Boulding (1955). The following formalization of the concept of expectational equilibrium is by the author using the idea introduced by Boulding :

Let, Aij denote a social choice set of society at a given point of time,

i = 1, 2, . . .,m individuals
j = 1, 2, . . .,n social states;
W = W (Aij) denote the total social welfare function based on Aij variables.

As a specific example, when Aij = Cij/Iij, the consumption/saving ratio, where Cij denotes consumption variable for ith-individual given jth social state, Iij denotes corresponding saving (investment) variable.

Acts of austerity may signify lower Aij and higher W. With appropriate social states in place, $\frac{dW}{dAij} = 0$ for all i and j.

This yields :

$$\frac{\frac{\partial W}{\partial Cir} \cdot \frac{dCir}{dAir}}{\frac{\partial W}{\partial Cis} \cdot \frac{dCis}{dAis}} = \frac{\frac{\partial W}{\partial Iir} \cdot \frac{dIir}{dAir}}{\frac{\partial W}{\partial Iis} \cdot \frac{dIis}{dAis}}$$

After some mathematical simplification, this expression yields to,

$$\frac{\frac{\partial W}{\partial Cir}}{\frac{\partial W}{\partial Iir}} \frac{dCir}{dIir} = \frac{\frac{\partial W}{\partial Cis}}{\frac{\partial W}{\partial Iis}} \frac{dCis}{dIis}, \quad \text{for each i, r and s.}$$

As it so stands, the expression is too disaggregate over individuals and may not be a condition conducive of social consensus formation on policies. The above expression is, therefore, replaced by its aggregative equivalent (developed from original statement of problem),

$$\frac{\frac{\partial W}{\partial Cr}}{\frac{\partial W}{\partial Ir}} \frac{dCr}{dIr} = \frac{\frac{\partial W}{\partial Cs}}{\frac{\partial W}{\partial Is}} \frac{dCs}{dIs}$$

This expression can be rewritten as: $\frac{g_{Cr}}{g_{Ir}} = \frac{g_{Cs}}{g_{Is}}$, by assuming a social welfare function of the form, $W = Aj^{\alpha}$, $\alpha > 0$, where $g_{Cr} = \frac{dCr}{Cr}$ is the average rate of growth of consumption in the population at large, $g_{Ir} = \frac{dIr}{Ir}$ is the average rate of savings (investment) in the population at large. The condition for expectational equilibrium to exist is given by the above expression, because we can interpret,

$$g_{Cr} = \underset{i \to \infty}{\text{p lim}}\ g_{Cir}$$

and

$$g_{Ir} = \underset{i \to \infty}{\text{p lim}}\ g_{Iir}$$

Likewise for g_{Cs} and g_{Is}

2) The principle of ethical endogeneity was first introduced by the author in Choudhury (1986b).

3) Refer to the sections on topological mappings in any standard book on functional analysis, for example, Maddox (1970).

References

Arrow, K.J.

1976 "Gifts and Exchanges." pp. 13 - 28 in E. Phelps (Ed.), Altruism, Morality and Economic Theory. New York: Russell Sage Foundation.

Boulding, K.E.

1955 Economic Analysis. New York: Harper & Brothers.

1972 "Economics as a Moral Science." pp. 151 - 164 in F. Glass & J. Staude (Eds.), Humanistic Society. Pacific Palisades, CA: Goodyear Publishing.

Choudhury, M.A.

1986a Contributions to Islamic Economic Theory: A Study in Social Economics. London: Macmillan.

1986b "Editorial". Humanomics 2 (3): 1 - 7.

1986c "A Study of Ethico-Economics in the General Equilibrium Field." International Journal of Social Economics 14 (3/4/5): 207 - 218.

1987 "Microeconomic Foundations of Islamic Economic Theory as a Study in Social Economics." American Journal of Islamic Social Sciences 3 (2): 231 - 245.

Intrilligator, M.D.

1971 Mathematical Optimization and Economic Theory. New York: Prentice Hall.

Lichenstein, P.M.
1983 An Introduction to the Post-Keynesian and Marxian Theories of Value and Price. London: Macmillan.

Maddox, I.J.
1970 Elements of Functional Analysis. Cambridge: Cambridge University Press.

Shackle, G.L.S.
1972 Epistemics and Economics. Cambridge: Cambridge University Press.

Price, Value and Social Equilibrium in Ethico-Economics

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The challenge of endogenously treating ethics and values in economic theory has remained an outstanding challenge to mainstream economics. This paper aims at showing the relevance and structural relationship that can exist between ethical policy variables and state variables within a social decision making framework. A mathematical mapping is conceptualised to establish a well-definition between ethical values and socio-economic variables. Ethics and values are thus shown to impact endogenously on social prices. Social prices are shown to play their role in an efficiency-distributive equity resource allocational system where social decisions are continuously simulated through feedback loops in order to form a final state of social consensus. Social consensus formation in such a framework is given the meaning of social equilibrium.