
Markets as a system of social contracts

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Economic theory has traditionally and pedagogically viewed the market as a system of exchange in goods and services. Between the classical definition of perfect competition and the micro-economics of imperfect perfection, this concept of exchange of transactions is looked on in terms of a growing degree of price distortions caused by limited numbers of buyers and sellers. Such orientations in the concept of markets still provoke a consistent pursuit of price mechanism as the basis of exchange. Besides, price mechanisms in the sense of perfect and imperfect competition give rise to some notion of market equilibrium and optimality in the allocation of resources. Thus, when market equilibrium, optimality of resource allocation and price mechanism join sides together in the midst of the transactional exchange nature of the market system, the end result is inconsistency within the methodology used to address such issues once in perfect and then in imperfect market models.

For instance, the objective function of profit maximizing oligopolistic firms is based on the same kind of first order conditions and marginal substitution principle of neoclassical economics as are found for profit maximizing firms in perfect competition. Consequently, although collusive price-setting and output-setting reaction functions characterize the decision making of oligopolists most importantly, yet the presence of optimization techniques using marginal substitution principle wipes out the robustness of essential decision-making features. On the other hand, any departure from the first and second order optimization conditions premissed in marginal substitution principle renders a neoclassical treatment of profit maximization and market equilibrium for oligopolies, methodologically flawed (Choudhury, 1994a).

Objective

In this paper we will develop a concept of the market that explicitly brings out interactive decision-making processes while affecting pricing and output setting and resource allocation. In this sense of interactions and endogenizing of agent-specific preferences and production menus that go with it, we will explain the market in yet another way. The market is treated here as an explicit system of social contracts.

Questions on the methodology of oligopolistic decision making

We start by a critical examination of the methodology of pricing and resource allocation provided by neoclassical analysis for oligopolistic markets. Here two

possible models of oligopoly behaviour are invoked in contrast to an alternative model that can explicitly invoke decision-making features (Martin, 1988).

Critique of the neoclassical treatment of a profit-maximizing oligopoly

In neoclassical parlance, the i th profit-maximizing oligopolist's objective criterion is to maximize its share, s_i , of monopoly profit, π_m , in each period (dynamic cartel stability problem). These variables are shown to be functions of the price variable, P , and the output variable, Q . $PV(s_i \pi_m)$ is then the present value of the time-period flows of shares as shown, with a suitable discount rate. The objective criterion for the i th oligopolist is then,

$$\text{Max } PV(s_i(P, Q) \pi_m(P, Q)),$$

subject to,

$$s_i = [(P - MC_i)/P] \epsilon_{QP} \text{ the Lerner's Index,}$$

$$\pi_m = (P - AC_i)Q.$$

Here MC_i denotes the marginal cost of production for the oligopolist (monopolist); AC_i denotes the average cost of production for the same; ϵ_{QP} denotes the price elasticity of output. Each of the variables in the above criterion function is time-dependent.

In this form, the objective criterion for the oligopolist is purely a classical optimization problem. In it, optimal or limiting price condition is sought for determining the optimal profit level. The share of profit is then obtained by solving the system of first order conditions in P and Q (output-setting and price-setting oligopolist) that yield optimal values of s_i , π_m .

Hence, the optimal results from the above dynamic profit-maximizing problem of the oligopolist and the determination of optimal-equilibrium positions in terms of P and Q , thereby the determinations of MC_i , AC_i , ϵ_{QP} , must together suggest that collusive behaviour is subsumed in these optimal output- and price-setting conditions. Now because of the marginalist conditions invoked in the classical optimization problem, all effects of collusive behaviour in price and output determinations are marginalized while well-determining these quantities in market setting. The definition of markets as exchange of transactions of the oligopolist is thus maintained. But this concept of the market fails to bring out the contractarian outlook behind collusive decision making.

Critical examination of pricing on the kinked demand curve of the oligopolist

As another example showing the methodological inadequacy of the exchange concept of markets underlying oligopolist behaviour, let us recall the kinked demand curve of the oligopolists' output (Mansfield, 1985). Here too we note that collusive price level, P , is given by, $P = f(Q) = f[\{U_i MC_i\} \cap MR]$, since Q remains put at the intersections of a series of MC_i denoted by $U_i MC_i$, with the vertical MR curve to yield the determinate collusive price at the point of the kinked demand (AR) curve of the oligopolists' output. i denotes the i th oligopolist in a cartel.

With many output, Q and hence, P , $MR(Q)$ and say, $MC_i(Q)$, are vector variables/functions. Hence, for a monotonic positive and continuous relationship between various $MC_i(Q)$, $MR(Q)$ as a constant value, say a , we obtain, $P = af(MC_i(Q))$. But since P is collusively fixed at the kinked point of the AR-curve, therefore there exists a tradeoff among the $MC_i(Q)$'s of various oligopolists. In other words, more efficient producers can assume some of the costs of less efficient ones in the cartel.

The mutual contract among the oligopolists is once again shown simply by the nature of the tradeoff, $df(MC_i(Q)) = 0$. This defines a marginalist tradeoff in terms of Q among the market shares available to various colluding members in the cartel. But the contractarian nature of the collusion is washed away in the midst of determining such optimal tradeoffs. Thus, market consideration, i.e. determination of (P, Q) values, is once again assumed to allocate the resources among the oligopolists in order to establish optimal shares and marginal costs.

The contractarian nature of oligopolistic decision making

It is now time to define the contractarian nature of the collusive process involved in oligopoly behaviour in a market setting. Non-pricing transactions in the form of information asymmetry, moral hazards, political perks, sub-regional contracts with perks or penalties, transportation cost differentials, preferred access to or isolation from markets, etc. are major factors found to influence a gamut of decision-making factors for oligopolists. Examples in international trade studies are trade diversions and trade solidarity that exist in regional economic blocs; preferential tariff treatment; tariff retaliation; development contracts between multinationals and national governments over specified ways of directing foreign direct investments. Political decisions influence economic ones as in the case of production decisions by OPEC as a cartel. Such non-pricing contracts are not merely overwhelming in creating disturbances in observed market prices but also require a different methodology for explaining the nature and effects of bargaining in economic decision making. Game theoretic approach is yet another method besides the one presented in this paper (Osborne and Rubinstein, 1994).

We refer to the underlying politico-economic dynamics of preference formation, agent-agent specific interactions, institutional and policy cause and effect generated between non-pricing factors and the market transactions, as the contractarian aspect of interactive decision making. The market as a system of social contracts is now defined in the midst of interactions that evolve in the midst of non-pricing conditions that are found to have profound cause-effect relations with economic decisions and environment.

Alternative concept of market contract

In the alternative concept of market as a system of social contract, we are faced with endogenizing a distinctly powerful bundle of non-pricing variables. Included in this are agent-specific preference formation determined by information flows, transaction costs, policy and politico-cultural variables

(Bowles, 1991). These factors appear in any decision-making process between conflicting and consensual agents. Hence, in an oligopoly, trade diversion and political pricing of goods can take predominance over sheer self-interest in production menus and consumer preferences. Such impacts make economic preferences and menus dynamic and everchanging by means of interactions and information flows.

Information flows and interactions are processes that appear cyclically. These occur first by interactions among the members of the cartel; second, between the non-pricing factors and the socio-economic variables; and third, between the agents and the socio-economic impacts. Information flows, as knowledge formation in the system that addresses a wider spectrum of politico-economic relationships, establish the cyclical evolution between the non-pricing factors, dynamic changes in agent-specific menus and preferences, and the socio-economic variables. Such evolutionary and cyclical cause-effect relationships define the nature of the dynamic process embodying endogeneity of preferences in market relations. Thus, social contracts are defined by such an evolutionary process interrelating information flows, changes in agent-specific preference and menu, and the cause-effect relationship between non-pricing variables and socio-economic variables. The system of such social contracts is intermeshed in itself. Hence the market becomes a system of social contracts.

Obviously prices and outputs in such a concept of the market as a system of social contracts fail to be market prices. Indeed, now the question is whether the classical idea of supply prices and the neoclassical idea of demand prices at all prevail in markets. Are market equilibria merely instantaneous occurrences having no empirical significance? In the politico-economic sense of markets, are prices then merely notional values of a good/services delivered by evolutionary and ever-changing menus and preferences impacted on by information flows? Answers to these questions are imminently in the affirmative in the concept of markets as systems of social contracts. Such contracts appear endogenously in their cause and effect relations with socio-economic variables, preferences and menus.

Social contractarianism of markets in the literature: Hayek, Buchanan

Hayek's market catallaxy process

In his ideas on individualism and the neoliberal economic paradigm, Hayek defends the market process as one that is evolving under a mix of underlying social, political, institutional and pure market orientations (Hayek, 1967). But the sensitivity of markets to micro-economic decision making is seen to be so spontaneous that all institutional changes, notwithstanding their civil libertarian roles and behaviour, are seen to be imitative of hedonic preferences premised in the exchange mechanism of a liberal concept of market. Thus such a market catalyses the socio-political process of change in neoliberalism. Laws, legislation, statutes on constitutional liberty and social justice are all rendered to market determinations in the first place.

Hayek finds no place for market interventions by policy measures even when social justice is the goal at point. He calls this spontaneous effect of markets on the socio-political factors as market catallaxy. With this concept Hayek defends the philosophy of liberalism against all alternative economic orders (Ferry and Renault, 1992; Hayek, 1976).

The problematique of Hayek in reference to markets as systems of social contracts arises as follows: if markets are primally catalytic to socio-political change, then what is the nature of goods and services that are delivered in the marketplace in the first place? If such goods and services are determined by classical and neoclassical markets, then the corresponding types of prices determine value in exchange. Such a concept of value reverts us to the usual picture of the market as an exchange system. Contrarily, if markets are robust in determining socio-political interactions in preference formation and production menus, then there must exist protracted periods of interrelations that must be externalized clearly in and through the market process. The idea of market catallaxy now loses its meaning. The end result is that prices perturbed by a host of socio-political factors in decision making become notional in nature. Market prices lose their conception of value even in an incomplete market setting.

Furthermore, if markets primally convey changes to institutions then such institutions must be guided by the same types of production menus and preferences as pure markets embody. In a liberal economic order, it is known that markets are premised in self-interest and are ethically benign. Consequently, the constitutional elements of morality and ethics have no relevance in Hayek's socio-political order. The consequence of this moral and ethical benignity is a historical process that is perpetually conflicting between the moral and economic forces. When this happens as a global perspective of market-institution contractarianism in Hayek, no cause-effect interrelationship is possible. The concept of markets as systems of social contracts then loses meaning in Hayek's idea of market catallaxy.

In the history of economic thought, this conflict and differentiation between the moral/ethical and economic sides of human society are shown to be grounded epistemologically in occidental thought. Examples here are the utilitarian philosophy of civil libertarianism, the neoclassical marginalist substitution principle, the Smithian invisible hand and the Eurocentric development theorizing and market transformation. This has recently been taken up in the literature on global capitalism, conflict and convergence (Bentham, 1789; Mehmet, 1990; Quinton, 1989).

Buchanan's public choice and contractarianism

Buchanan's resource allocation is based on two kinds of goods, purely private goods and purely public goods (Buchanan, 1975). Purely private goods appear in the "state of nature". In this state, inequality in the holding of initial bundles is legitimated on the basis of competition and private ownership. Thus, the space of goods is partitioned in this state of resource allocation by virtue of the

axioms of self-interest and natural liberty premised in pure market exchange. This primacy of resource allocation called the state of “natural distribution” is a pre-constitutional one in Buchanan’s public choice theory. Private goods nonetheless are assumed to generate external diseconomies, for which market failures occur. But a compensation principle is assumed to exist to compensate for this market distortion. By itself the compensation principle is known to be compounded by a host of non-pricing factors causing global instabilities in prices and resource reallocation (Coase, 1993).

In the post-constitutional state of purely public goods, collective consumption exists and a social contract is instituted to bring this about. Between perfect unanimity and anarchy exist less-than-unanimous agreements. The implications of these different states are first, that when purely private goods are allocated through markets, competition and conflict develop individuated contracts. Second, when unanimity exists in the post-constitutional stage, a market generated surplus is assumed that can be shared by many members brought into a social contract by some contravention. A large number of sharers provide the possibility of consensus to exist; and the market-generated surplus causes sharing to be possible.

The total framework of resource allocation in Buchanan’s social contractarianism is thus a combination of two orders. First, there is a pre-constitutional order of purely private goods generated through market exchange in the way we understand this in traditional economic theory. Second, there is a post-constitutional order, where markets bring about surpluses to be shared by means of social contravention. The resulting socio-economic framework is then obvious. The market order is primal in generating institutional ones and not vice versa. There are no feedbacks from the side of institutions to markets. Hence, individual consumer preferences of purely market goods being the result of competition over partitioned output space, have no knowledge embodiment in them as earlier found to be the case with the dynamic nature of endogenous preference fields.

Besides, there are methodological problems with Buchanan’s approach to pre- and post-constitutional stages of social contracts. If the total output space is divided into purely private and purely public ones with different sets of preferences, then this implies that an embedded conflict must prevail between the purely economic and the purely social balances in political economy. We would then revert to the neoclassical type marginalist substitution tradeoff between economic efficiency and distributive (social) equity (Phelps, 1989).

Now the convergence of the market order to Hayek’s concept of market catallaxy and to the utilitarian nature of liberal institutions is once again repeated. There is indeed a close resemblance between Nozick’s entitlement bundles found in the state of nature and his concept of distributive justice under the framework of minimal intervention by the state and both Hayek’s and Buchanan’s social contractarianism germinating in the pure market order and then defining the possibility of post-constitutional contracts (Kirzner, 1983).

Yet other kinds of methodological problems occur in Buchanan's theory of markets by virtue of the fact that in the pre- and post-constitutional phases, stable utility functions are assumed to exist for the contracting partners. Hence, the social welfare function made up of the collective of such agent-specific utility functions must be a well-defined one although not a unique one. The assumption of stability in the face of a multitude of decisions by interacting agents is once again based on assumptions of optimality and equilibrium. One of the consequences of such a result is that hegemony is allowed for in less-than-unanimous social contracts. An example of such social contracts in the literature is the study of Eurocentricity in both economic and political fronts in a capitalistic globalizing age. The result of stability in social welfare function and agent-specific utility indexes cannot fit the otherwise globally interacting and knowledge-induced nature of a market as a system of social contracts.

The conclusion to be derived from the above treatment of some social contractarian approaches to market exchange is that primacy of markets in the presence of individuated preferences, despite embedded civil libertarianism in them, entrenches the neoclassical marginalist substitution notion as the defining tool of resource allocation in both the market and the institutional orders. In the midst of the marginalist substitution principle, stability, optimality and equilibrium are the logical results. Social contracts, in spite of their viscous nature, are then treated as stable attributes of human behaviour. This is a contradiction to reality. Besides, sheer primacy to market exchange leaves out the epistemological roots that must in the first instance explain the essence of freedom, responsibility and global complementarity among purposeful ends.

Formalizing a model of the market as a system of social contract

A necessary cause-effect requirement of the concept of market as a system of social contract is the existence of interlinkages among diverse activities in and within the economic, political and social orders. Besides, interlinkages are methodologically explained and generated by the principle of universal complementarity among all these various ends. The principle of universal complementarity means that global interactions, forward and backward feedbacks, causes and effects, temporary integration as social contracts followed by evolutionary ones are made possible by itself (Choudhury, 1994b).

The principle of universal complementarity versus the neoclassical marginalist substitution principle

Here we will take up a simple production function with various categories of labour and capital as are found to be distributed across different occupations and sectors. The principle of universal complementarity means that there are interlinkages among all these factors and joint outputs of various sectors. The consequences of these complementarities are sectorial interlinkages established through product markets, labour markets, technological change and transferability of social contracts that make the interlinkages possible by

means of information flows and institutional policies. To formalize we proceed as follows.

Let the production function in the i th sector be given by,

$$Q_i = f_i(L_i, K_i), \quad i = 1, 2, \dots, n.$$

where Q_i denotes i th sectorial output;

L_i denotes demand for labour in the i th sector;

K_i denotes demand for capital in the i th sector;

$f_i(\dots)$ denotes the production function (menu) in the i th sector.

Next we must establish the nature of the above quantities in terms of sectorial interlinkages and the methodology whereby resource allocation, pricing and growth take place in such a globally interlinked system.

Let the joint output be denoted by q_i for the i th sector, $i = 1, 2, \dots, n$. The existence of joint production implies that the set of $\{Q_{sj}\}$ values is generated by interactions among the output of all the sectors, s with i ($s, i = 1, 2, \dots, n$). That is,

$$q_i = \left\{ \bigcap_{s=1}^n Q_{sj} \right\}, \quad i = 1, 2, \dots, n.$$

A specified form of this expression is,

$$q_i = \bigcap_{s=1}^n Q_{sj}^{\alpha_{sj}},$$

where α_{sj} sectorial output elasticity coefficients in the joint output of i th sector with the s sectors.

In terms of factor inputs the joint production implies that joint use of these factors, say (l_i, k_i) in the production of q_i must mean (Friedman, 1982).

$$(l_i, k_i) = \left\{ \bigcap_{s=1}^n (A_{sj} \times B_{sj}) \right\},$$

where, $A_{sj} = \{L_{sj}\}$, $B_{sj} = \{K_{sj}\}$, and $A_{sj} \times B_{sj}$ is a Cartesian product set. The subscripts here are similarly defined as above. We can furthermore write,

$$(l_i, k_i) = \bigcap_{s=1}^n (A_{sj} \times B_{sj}) = \left(\bigcap_{s=1}^n A_{sj} \right) \times \left(\bigcap_{s=1}^n B_{sj} \right) = \left(\bigcap_{s=1}^n L_{sj} \right) \times \left(\bigcap_{s=1}^n K_{sj} \right).$$

$$q_i = \prod_{s=1}^n f_{sj} \left[\left(\bigcap_{s=1}^n L_{sj} \right) \times \left(\bigcap_{s=1}^n K_{sj} \right) \right].$$

A specified form of this joint production function is

$$q_i = \prod_{s=1}^n L_{sj}^{\alpha'_{sj}} K_{sj}^{\beta_{sj}},$$

where, α'_{sj} are labour elasticity coefficients of joint output; β_{sj} are capital elasticity coefficients of joint output.

Global interactions must also mean that interlinkages exist both among and between the L s and K s. The forward and backward linkages implied here mean that a learning process exists in the entire interactive order. Let this learning variable be denoted by $\{\theta_t\}$, which takes up continuous values over interactions denoted by t . The number of interactions is incessant; only given phases of

consensus evolve on to other ones. Hence, for each of these phases, there are temporary convergences into consensus, followed by evolutions. This implies that, $\text{Lim}(t \rightarrow T)[\theta_t] = \theta_T$.

Finally, the dependence of all the variables on θ_f -values implies that there is a monotonic relationship between θ_f -values and the socio-economic variables as shown. Hence, as θ_f -values converge over interactions in polity through constitutional accord on specific matters and between polity and the market order, then a global system of interlinkages is formed, premised in the movements of the θ_f -values. These knowledge parameters thereby provide the epistemological grounding to markets as a system of social contracts (Choudhury, 1993).

The complete system of such contractarian evolution of knowledge-based socio-economic variables is now shown as follows:

$$q_{it}(\theta_t) = \prod_{s=1}^n Q_{sit} \alpha_{sit} \theta_t,$$

subject to,

$$Q_{sit}(\theta_t) = f_{sit} \left[\left(\prod_{s=1}^1 L_{sit} \right) \times \left(\prod_{s=1}^1 K_{sit} \right) \right] (\theta_t),$$

$$\theta_{t+j} = F_1(\theta_t, \mathbf{L}_{sit}, \mathbf{K}_{sit}, \mathbf{Q}_{sit}),$$

$$\mathbf{L}_{sit} = F_2(\mathbf{K}_{sit}, \mathbf{Q}_{sit}, \theta_{t+j}),$$

$$\mathbf{K}_{sit} = F_3(\mathbf{L}_{sit}, \mathbf{Q}_{sit}, \theta_{t+j}),$$

$$\text{Lim}(t \rightarrow T)[\theta_t] = \theta_T,$$

for which,

$$\mathbf{L}_{sit}(\theta_t) \rightarrow \mathbf{L}_{sit}(\theta_T), \mathbf{K}_{sit}(\theta_t) \rightarrow \mathbf{K}_{sit}(\theta_T), \mathbf{Q}_{sit}(\theta_t) \rightarrow \mathbf{Q}_{sit}(\theta_T).$$

(Bold values denote vectors)

$$j = 0, 1, 2, \dots, T; t = 1, 2, \dots, T; i = 1, 2, \dots, n, T \in \mathbb{N} \text{ (or } \mathbb{R}\text{)};$$

α_{sit} are sectorial output elasticities in the joint product. This technical nature of the problem is clearly not based in any optimization method. An acceptable method is simulation by first starting with a given value of θ in an initial interactive phase followed by regeneration of these values by means of interlinkages among the various variables as shown generating extended interactions. Such a methodology implies that the entire system of market interactions shown here, must be grounded in an epistemology – embodied in the initial θ -value. Such an epistemology starts as an axiom. It is then regenerated in the system by cause and effect of the learning process throughout the polity-market interactive-integrative and evolutionary order.

Now while a methodological case can be made for the enumeration of the θ_f values in simulative or heuristic models of decision making, yet the more interesting case is to look on the iterations of θ_f -values as a humanly participated process of interactions with actual institutions, contracts and constitutional arrangements playing the role inherent in these knowledge parameters. Thus, while socio-economic variables are simulated in this system

by means of such knowledge values so also the social contracts are formed and evolved by cause and effect of the same parameters. Market as a system of social contract now transforms into a globally knowledge-induced interactive-integrative and evolutionary process governed by actual human presence rather than by hypothesized models.

It is instructive to note the difference that this above system makes from the Hayekian and Buchananian market orders. The constitutional contract in this alternative system has no initially pure private or natural distribution phases as are to be found in Buchanan's market order with constitutional arrangements. The interactive polity-market order is premised in an epistemology that regulates the evolution of the socio-economic variables by cause and effect, thus making preferences endogenous. This in turn replaces every semblance of neoclassical marginalist substitution principle by global interlinkages.

Thus Buchanan's pre- and post-constitutional phases are irrelevant in this knowledge-induced interactive market order. As for Hayek's concept of market catallaxy in the light of the knowledge-based perspective, we note that markets are not primal but induced in the latter system. Hence, institutions are neither marginalized nor are they imitative of the type of liberalism embedded in competition and individualism. Individual or group preferences and production menus are not ignored in the knowledge-based system. Rather they are transformed in the midst of a learning process without making distinction between market behaviour and political behaviour, without separation of a pre- and post-constitutional regimes, when all of these emanate from a unique epistemology – the initially prescribed θ -value.

Examining oligopolistic behaviour in the light of knowledge-induced markets

The concept of oligopolistic production in neoclassical economics is now replaced by co-operative agents in the sense of interlinked markets. Hence, profits and market shares in such an order cannot cause price distortions from the production side. Distortions appear when unreal kinds of classical and neoclassical notions of stability, optimality, equilibrium and market exchange are used to explain real situations of agent-agent interactions. The extension of interlinkages also builds up risk and product diversifications. Consequently, inter-agent and inter-systemic interactions increase knowledge although this process never optimizes to full knowledge due to the nature of the ever-evolving social contracts. In fact, one of the functions of knowledge in this system is to generate ways and means for reducing uncertainty. Consequently, policies developed to attain this economic goal must be dynamic by interactions.

Among the kinds of policy instruments replaced in such an economy with knowledge-induced markets are interest rates and deficit financing by means of taxation and floating of bonds. The policies instruments chosen instead are profit-sharing rates or expected profit rates. The goal to attain from the exercise of these instruments is establishing of efficacy in global interlinkages in the

political economy; the sharing of costs for joint ventures to reduce investment risks. Profit sharing also induces holding of private ownerships by capitalists and workers and the sharing of production costs between themselves (Ellerman, 1991; Siddiqi, 1985).

An objective criterion of a co-operative economic enterprise

We can now note how the objective criterion for the neoclassical oligopolist changes in distinct ways as follows:

$$\begin{aligned} & \text{Max } PV(s_i \pi_m) \text{ (neoclassical) is replaced by} \\ & (q_i \in q) [p q_i - a_i C(L_i, K_i)](\theta) \text{ (interactive market order)} \\ & = [p_i (s_i q_i) - a_i s_i C(L_i, K_i)](\theta), [a_i \text{ being a proportion}] \\ & = \text{revenue on the share of joint production } (= p_i s_i q_i) - \\ & \quad \text{a proportion of shared cost of production } (= a_i s_i C(L_i, K_i)). \end{aligned}$$

The presence of θ -parameters is indispensable in the system as they alone are instrumental in generating and regulating the sharing mechanism. Thus, as $\theta \rightarrow \theta^*$, over subsequent iterations of agent-agent interactions, sharing increases. This causes members in the joint ventures to increase in number. Hence, the share of cost to the i th producer decreases. Now $\text{Lim } (\theta \rightarrow \theta^*) [a_i s_i C(L_i, K_i)](\theta)$ declines. Consequently, $p_i s_i q_i$ increases. Thereby, the share of profit to the producer increases. Feedbacks between θ -values and the economic variables appear during the process of convergence of θ to θ^* . In this process, prices p are themselves evolving by the same order of interactions premissed in θ -values.

Since θ -values never cease to evolve and θ^* is one of many values attained during different phases of social contracts in the midst of interactions, therefore there is no long-run optimum to the above sharing of profit. Only multiple possibilities emerge (Grandmont, 1989).

An example of a market with co-operative contracts

Today a vibrant innovation in co-operative financial instruments is taking place in Malaysia. Malaysia's principal social investment outlet known as Tabung Haji transacts the financial holdings of savers towards social ends while avoiding interest-based financing. Commercial banks in Malaysia have overwhelmingly established an extensive market of co-operative financial instruments called *Mudarabah* (profit-sharing financial issues) and *bumiputera* bonds (*Amanah Saham Nasional Scheme*) (Government of Malaysia, 1991a,b). These are profit-sharing shares, with the exception that the latter ones are provided to needy target groups only in Malaysia called *bumiputeras*. *Amanah Saham Nasional* held a total share value of M\$5,200 million with an accumulated investment of M\$11,000 million by the end of 1990. The number of *bumiputera* shareholders stood at 2.5 million, which comprised 46 per cent of the total number, 5.4 million of eligible (underprivileged) *bumiputeras*. *Amanah Saham Nasional* shares are floated on the Kuala Lumpur Stock Exchange.

There is also the Islamic insurance scheme (*Syarikat Takaful Malaysia*) in Malaysia, which has increased its funds from M\$1.9 million in 1986 to M\$38.2 million in 1990. Contributions collected in 1990 amounted to M\$28.4 million compared to M\$2.3 million in 1986.

Islamic banks constitute another new outlet in Muslim countries that transact in shares based on profit-loss transactions. The Islamic Bank Malaysia has shares that are transacted aggressively in Kuala Lumpur Stock Markets. Much of the savings of Islamic banks are held at present in long-term investments. This provides good opportunity for these banks to engage in investment in real goods.

In the presence of various profit-loss co-operative financial instruments found to exist in Malaysia at this time, it has been found that the savings in these assets have increased phenomenally. The result has been a rapid mobilization of productive assets and a fast utilization of savings available for such productive investments. In recent years growth in the Malaysian economy has caused domestic investments to outstrip the supply of savings, even though the volume of savings has increased phenomenally with real growth of GDP.

Between 1984 and 1985 alone, a picture that has improved considerably in recent times as evidenced from information provided above, Islamic Bank Malaysia showed the following financial standing, noting that year 1985 was a singular year of deep recession for Malaysia: in 1985 Islamic Bank Malaysia as a group had "current savings, investment and other deposits of customers" of M\$410,224,204. This comprised 4.18 per cent of total national savings. Shareholders' funds stood at M\$422,650,150 (Ismail, 1990).

To further substantiate the catalytic role played by profit-loss co-operative instruments in the increasing demand for capital mobilization into productive investments, we note that interest rate policy is not an active policy instrument of Bank Negara (Malaysian Central Bank). While interest rates are set independently by commercial banks, these have remained low historically compared to world interest rate levels, and fluctuations in interest rates have also remained low. Interest rates hovered between 6 per cent and 3.5 per cent annually, between 1985 and 1990, respectively. As opposed to these rates, Islamic Bank Malaysia paid monthly rates of profits to depositors amounting to 9.43 per cent on 60 months deposits and 7.25 per cent on 12 months deposits. The demand driven characteristic of the Malaysian economy has overall neutralized the effect of interest rates on domestic savings and replaced this by growth in real incomes. The excess of investment demand over savings, as real assets have grown, is yet another indicator of the demand driven aspect of the Malaysian economy (Choudhury, 1994c). This in turn has generated the pattern of growth in real GDP, at present standing at 8 per cent real rate annually.

The co-operative nature of Malaysian economy in financial instruments is found to be linked with the general Islamic motivations of Malaysian Muslims. This provides the initial condition for much of savings to be directed away from interest-bearing transactions and into profit-loss sharing ones. But while this is an initial provided motivation for the growth and direction of investible funds,

it is reinforced by the strong performance of the instruments and its consequence in Malaysian economic growth.

The net results of the Islamic decisions are found to be several-fold. First, the Islamic preferences are caused by material as well as social gains emanating from these instruments. Second, the co-operative nature of the financial instruments becomes the basis of profitability of these instruments. Third, the profitability of the instruments arise from their direct link with the real goods sector. Fourth, a circular cause-effect relationship is engendered between the Islamic motivations and the economic forces of Malays. Thereby, financial resources are seen to be mobilized on the basis of yields that the real goods sector can promise in the presence of the interlinkages between Islamic preferences and a diversity of saving and investment outlets. Consequently, the speculation and uncertainties associated with the presence of an excess supply of promissory notes and money supply in the economy are reduced. As a result, inflation has not been a problem with Malaysia historically speaking.

These Islamic preferences and their socio-economic linkages define the endogenous nature of θ -values in such co-operative financial markets. The overall linkages as well as the continuing dynamics of the θ -values are in turn premised on the efficacy of the interlinkages. Malaysia today is experiencing a resurgence in Islamic thought and institutions not seen in any country in recent history. Malaysian Fifth and Sixth development plans, particularly the New Economic Policy followed by the New Development Policy in these plans incorporate social equity and economic growth as complementary targets of development (Government of Malaysia, 1991a,b).

With regard to the central importance and dynamics of the θ -values in market processes and development, I am tempted to quote an author who writes the following with regard to Malaysian development planning (Daud, 1994). "[I]f development refers primarily to the development of human intellect and conduct from ignorance to knowledge, and from foolishness to wisdom, from injustice in all its ontological, distributive and retributive aspects, to justice, then it is the spiritual aspect of man that must be understood and developed as a life-long struggle for perfection and happiness". As we have pointed out in this paper, the knowledge parameters are the θ -values, and the knowledge-based world view simply simulates knowledge to regenerate creative forms of the cognitive reality.

Our study in this paper points out that the goal of attaining complementarity between distributive justice and economic growth along with economic stabilization in the Sixth Malaysian Plan and the Outline of Perspective Plan, cannot be attained in the presence of any neoclassical type marginalist substitution for reason of the alienating nature given to the multiple goals in such an order. Thus, the principle of universal complementarity becomes the alternative within which the development plan for achieving these goals can be carried out. Just as this requires the strength of consumer preferences to emanate and reinforce interactions between Islamic premiss and market realities, so also there must exist extensive sectorial interlinkages for sustaining

distribution, growth and self-reliant development in the Malaysian economy (Alias and Choudhury, 1994).

Political economy of markets in the globalization process

Globalization as a concept in political economy addresses systems of interdependencies between markets, producers, development and political institutions. Such interrelationships are studied with regards to issues of consumption, production, ownership and distribution, marketing and the underlying technological implications in these relations. In the global order, such interdependencies assume forms that entrench power, resource control, ownership and wealth in the midst of conflicts. Interdependencies also then address the issues of either conflict resolution or conflict explosion in the midst of interactions embedded in such interrelationships.

In this regard, the world-system theory would view these conflicts as a perpetuating convergence to western capitalism as a process of history. Political philosophies of the contemporary occidental schools, such as the end-of-history perspective (Fukuyama, 1992); entitlement theories of Nozick (1974) and Sen (1986); disparate approaches to the concept of social justice by Hayek (1976) and Rawls (1971) all entrench an order of institutional power, individuation or self-seeking egoism in the modes of generation and distribution of wealth.

From these contending scenarios addressing the conflict resolution question, we note that globalization does not lead to conflict resolution necessarily. The only way where conflict resolution can be made effectual at the terminal point of a manifestation, though not the spirit, of social interactions, is by the power of Eurocentricity. The Eurocentric model of global control and economic growth has thus emerged as a part and parcel of the capitalist transformation process in the world economy.

The concept of structural change is premised in the study of interrelationships that comprise the causes and effects of globalization as a process in interdependencies. In this purview, we note that the structure of economic growth by a study of the appropriateness of sectorial interlinkages, assumes a content that is quite different from the sheer measurement of economic growth as a principal economic indicator.

Financial markets premised in resource mobilization by means of interest-bearing transactions lose sight of the question of ownership and resource-control by micro-enterprises. Nations subject to dollar-denominated currency controls are squeezed in by the exchange-rate alignments made in western capitals by virtue of their trade liberalization and subsidy policies that take place in NAFTA and EC. The consequent effects of world markets in commodities with plummeting prices, drive out such enterprises from economic activity. The surge for volumes of expanded exports of primary goods by agricultural and commodity intensive economies causes problems of sustainability.

Thus a sheer macro-economic address to financial markets, economic growth, the associated policies and institutional arrangements cannot fully

treat the issue of the structure of globalization. While macro-economic coordination issues continue to hold importance in an environment of interdependencies in the world economy, the study of its micro-economic structure is indispensable for examining the sectorial and systemic linkages that together explain the globalization process.

The topic of political economy of globalization and structural change is then the study of micro-economic foundations of structural shifts that underlie an examination of institutional and policy regimes prevailing in the global socio-economic environment. The underlying issues sometimes centre around marketization processes, diplomacy influencing socio-economic relations, sustainable development, international trade and economic integration.

However, there are other market orders that can prove to be viable alternatives. The concept of market in Islamic political economy is essentially ethically endogenous (Choudhury and Malik, 1992). The nature of goods, preference regimes based on these goods, choice of technologies pertaining to the goods and the systems of rule-directed transformation of the market venue for the attaining of the well being of the exchanging agents, all determine markets as extended systems of social contracts. Processes of social interactions and integrations now take up central milieu for defining endogenous market preferences rather than the process-benign types of exogenous preferences in neoclassical models. Even in the context of embedded markets and the informal sectors provided by Polanyi (1944) and Holton (1972), one finds a transformation of the concept of market from the ethically benign order of neoclassicism into contractarian systems. Bowles (1991) recently has advocated such endogenous contracts as the real reflection coming out of a system of growing socioeconomic interdependencies. Such interdependencies in a truly interactive and integrative order with views on ethical endogeneity, can ground the foundation of objective globalization and structural change.

Even the history of the structure of growth as opposed to the secular trend on persistent economic growth rates for Malaysia, has shown that there remain both inherent marginalization and shifts between the agricultural and manufacturing sectors and between the human capital development, asset ownership of target indigenous people (*bumiputeras*) and the privileged ones. In the midst of these contending factors of industrialization, the concepts of competitiveness in true midst of private and public sector relationship should be taken up within a picture of socio-economic development based on Malaysia's very own and innovative perspectives rather than be premised in imitative capitalism of the global economy known to be punctuated by purely occidental alienating models of growth.

Some empirical inferences on markets and globalization

In view of the interrelationships explained respecting the institutional structure of market transformation in today's globalization process, we undertake the following empirical analysis to explain some of the relationships embodied among the following variables respecting globalization: GDP, foreign direct

investments, debts, exchange rate and interest rate movements. Subsequently, we make an intuitive analysis respecting fiscal and monetary policies with ethical connotation of the type mentioned in the case of Malaysia respecting mobilization of financial resources (Table I).

Malaysia's experience with globalization in the midst of trade liberalization, foreign direct investment, economic growth and susceptibility to monetary policies enacted in the G7 can be read off in an indicative manner by reading Table I. Monetary policy in industrialized nations is characterized by attempts to stabilize their inflationary trends and attain steady economic growth with requisite variations in interest rates and exchange rate mechanism. In Table I we note that declining interest rate in the USA, which happens to predominate in the G7 scene, is not adequately synchronized with a similar interest rate trend in Malaysia. Sustained high Malaysian interest rates would have served to maintain steady levels of the exchange rate. Yet the expected results of this in increasing foreign direct investment and inflation rate are not found to have been attained. Inflation rate remained between 13.6 per cent in 1991 and 8.5 per cent in 1994. Foreign direct investment declined as is seen in Table I.

The result of a declining foreign direct investment could have been because of portfolio diversification by foreign investors across the South-East Asia region. It could also have been by a deliberate policy of the Malaysian

Year	GDP	GDP(%)	FDI	Db/GNP(%)	ER	INTR(M)	INTR (US)	KLSE
1989	72,409	9.2	8,653	43.58	2.70	7.00	10.50	174.2
1990	79,463	9.7	17,629	37.46	2.70	7.50	10.00	59.3
1991	86,345	8.7	17,055	35.67	2.73	9.00	6.50	1.9
1992	93,072	7.8	17,772	30.61	2.61	9.50	6.50	71.0
1993	100,838	8.3	6,287	33.41	2.70	8.50	6.00	625.5
1994	109,368	8.5	6,972	37.08	2.66 ^a	8.00 ^b	6.63 ^c	36.5

Key:

GDP: millions of ringgit (Malaysian dollar) in constant prices;

FDI: foreign direct investment in millions of ringgit;

Db/GNP: debt/GNP ratio;

ER: annual average exchange rate of ringgit to US dollar; ^a denotes estimate based on data for the months January to October 1994;

INTR(M): commercial bank lending rate in Malaysia; ^b denotes estimated based on data for the months January to October 1994;

INTR(US): commercial bank lending rate in USA; ^c denotes estimate based on data for the months January to October 1994;

KLSE: Kuala Lumpur stock exchange market turnover.

Source: Ministry of Finance, Economic Report 1944/45, Kuala Lumpur, Malaysia

Table I.
Movements in some
principal external sector
indicators for Malaysia

Government to limit reliance in foreign direct investments. Whatever the cause, the result of declining direct foreign investments does not seem to have favoured Malaysia's external debt problem. This can be read off the large debt/GNP ratio in Table I. The implication of such trends in external debt, economic growth and foreign direct investments is that much of the economic growth, signified by the high real rates of change in GDP, is reliant on imports of technology and capital inputs, which in turn worsens the balance of payments situation.

It is also well-known that during the 1989-94 period, the US dollar remained appreciated against most currencies. This caused other countries to hold their foreign reserves in US denominated assets. Thus, when it is possible for the US monetary authorities to lower its interest rates in the face of appreciated exchange rates, then the changes in reserve situation of other countries are governed by the exchange rate mechanism. On the other hand, when US interest rates increase, these changes in reserves are determined by US interest rates. Hence, in both cases, the globalization scene for developing countries remain predominated by the interest rate and exchange rate mechanisms of the US monetary authorities in particular and of the G7 in general. The more volatile these movements are the more serious are the external sector uncertainties of countries that hold their assets in the US dollar denominated assets (IMF Survey, 1994).

Indeed, the SDR of the IMF, which happens to be another kind of weighted monetary asset in which all countries hold part of their reserves, is weighted as 40 per cent for the US dollar; 21 per cent for the German mark; 17 per cent for the Japanese yen; 11 per cent for the French franc; and 11 per cent for the British pound. Consequently, this also gives 19.1 per cent of the voting rights to the US (Brown and Hogendorn, 1994). One, therefore, recognizes the overflow of G7 presence in general and the US influence in particular in all foreign reserve managements of developing countries. The situation intensifies with the globalization impact of international trade, liberalization and their resulting effects on external sector debt and imbalance. These inferences are indicative of the fact that for Malaysia the marginal effectiveness of her own monetary policy to stabilize the economy appears to be limited by the exchange rate and interest rate mechanisms of the US and G7 countries.

Yet it would appear that in recent years, although this remains an indicative inference at present, the KLSE turnover rates suggest a good mobilization of capital internally ever since 1992. This is also the time when the Malaysian Government stepped up its programme to mobilize Bumiputera shares through various types of financial instruments. Some of these were mentioned earlier. It is thereby seen from the above inferences that, in a global scene, free movements of foreign direct investments and the impact of interest rates and exchange rates at home by responding to stabilization pressures of monetary consequences in industrial nations, cause hardships to the external sector adjustment. The way out of this is to turn to productive self-reliance at home.

This in turn can be realized by effective mobilization of indigenous capital in a diversity of ways by means of innovative financial instruments.

The lesson then is clear. The consequences of globalization in the midst of pure market transformation remain essentially unstable in the external sector of national economies. Only productive self-reliant mobilization of indigenous resources by national economies can generate stability and sustained economic growth.

In the context of market response to innovative induction, as presented earlier, the secondary financial instruments to mobilize capital and the resurgence of popularity of such instruments among the masses, can go far in adducing productive growth. Capital market and its relationship to economic growth are thus seen to be greatly influenced by so called non-economic factors, which generate profound economic consequences. Such factors arise from motivations and institutional arrangements aimed at making the masses participate. Thus, markets cease to be governed by the invisible hand principle. Instead, they are found to be governed distinctly by motivational forces amid institutional presence. These in turn generate the social contracts between governments, individuals and markets. In the present case, such contracts become the necessary cause and effect of the external sector disequilibrium in a globalizing scene.

Conclusion

Real world situations exemplified by cases of policy and institutional influences in international economic transactions, sustainable development issues, economic integrations governed by non-economic preferences to guide mutuality of interests along with economic considerations, and alternative menus of production sharing in a globalizing world, all point to the need to understand market transactions in a substantively different context. This is to replace the traditional concept of markets either as contracts or exchanges among buyers and sellers with invisible processes to explain those other factors which influence fundamentally the nature of market transactions. Thus endogenous phenomena enter markets as cause and effect in determining social contracts. These feedback flows of relationships between polity and the market place via endogenous preferences and menus with extensive complementarities and interlinkages, define the concept of the market as a system of social contracts.

We have tried to explain various treatments of markets as systems of exchange in comparative perspectives. The end result was that globally extensive agent-agent interactions that form social contracts are possible only when such a system becomes knowledge induced. The concept of a knowledge-based market transformation is thus substantively different from the traditional ones, for now agent-specific preferences and production menus become endogenized by the evolving nature of knowledge premissed fundamentally in a given primal epistemology. Such an epistemology generates the social

contracts and moves them forward. The creative and regulative attributes of the epistemology has thus the power to unify the system under the system of social contracts. The market as a system of social contracts is thus an interactive-integrative evolutionary order. It provides a concept of market distinct from that found in liberal economic concepts.

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