

DISCUSSION PAPERS

UNITED NATIONS CONFERENCE ON TRADE AND DEVELOPMENT

**WHO IS THE MASTER?
WHO IS THE SERVANT?
MARKET OR GOVERNMENT?**

**An alternative approach:
Towards a coordination system**

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*S.M. Shafaeddin**

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WHO IS THE MASTER? WHO IS THE SERVANT? MARKET OR GOVERNMENT? An alternative approach: Towards a coordination system

S.M. Shafaeddin

(United Nations Conference on Trade and Development)

Abstract

The main purpose of this paper is to discuss the limitations of the market and the risks of government failure, and to present an alternative approach on coordination of economic activities by introducing the concept of "coordination system". In such a system, economic activities are coordinated by market, firms and government requiring the availability of "non-price factors" such as infrastructure, institutions and organizations. This approach is practical, country specific and dynamic. It is practical because it is based on the realities of the world economy and the situations of developing countries. It is country specific because the relative role of each coordination mechanism – market, government and enterprises – changes from one country to another, depending on their level of development and other socio-economic characteristics. It is dynamic because in each country the relative role of each mechanism changes over time during the course of economic development of the country.

INTRODUCTION

*The market is a very good servant,
but a very bad master.
Sukhamoy Chakravarty*

According to the traditional economic theory firms are passive agents and there is no role, or at most a minimum role for the government. On the other hand, the argument that markets fail has traditionally been used in favour of government intervention particularly in the economy of developing countries. This was especially so in the post-Second World War period up to the early 1970s. Traditionalists have responded by arguing that government may also fail.

The opponents of government intervention comprise a spectrum of views. Some believe in no government intervention at all, whether in the flow of trade, in the process of industrialization (Haberler 1950 and Krueger 1978) or in macroeconomic management. Such a belief is based on the assumption that markets are perfectly competitive and spontaneously punish and correct mistakes in the allocation of resources. Others oppose government intervention in trade but do justify other types of intervention. They argue for laissez-passer, but not necessarily laissez-faire (see Corden 1974, Chapter 1).

We shall argue in this paper that the key issue in the trade policy and industrialization of a developing country at any particular period which aims at the expansion of exports of manufactured goods is one, or a combination of the following: (i) To *accelerate* development of the supply capacity in the manufacturing sector; (ii) to make the existing industries efficient and competitive in the internal and international markets; or (iii) to sustain the competitiveness of its manufacturing sector over time through upgrading. The market on its own is inadequate, or fails to attain any of these objectives. The nature and the degree of market failure may vary from country to country, depending on the level of development, industrial base and other socio-economic characteristics of individual countries.

The lower the level of development, *inter alia*, the higher the risk of both market failure and government failure. We shall, however, maintain that the risk of government failure is not an argument against government intervention in trade and industry since the existence of such a risk is not sufficient to prove the certainty of market efficiency. Even when distortionary government intervention has ceased, the market mechanism will fail to produce optimum amount of goods and services over time from a social point of view. On the other hand, the risk of market failure is not an argument in favour of unnecessary, excessive, rigid and prolonged government intervention. Introducing the concept of “coordinating system” we shall argue that the coordination of economic activities takes place through a combination of three coordination mechanisms: market, firm and government. To function efficiently, however, such a combination has to be complemented with institutional, organizational and physical infrastructure. The relative importance of each mechanism changes over time with changes in the level of development, but at each point in time the efficiency of the system is influenced largely by the efficiency of the government.

In the rest of the paper we shall first refer to the key issues in trade and industrialization of developing countries as a background before reviewing the literature on market mechanism, market inadequacy, market failure and government failure. Subsequently, we shall conclude the paper by presenting an alternative approach to co-ordination of economic activities

A. KEY PROBLEMS OF DEVELOPING COUNTRIES

For the purpose of analysis in this study, we may classify developing countries wishing to expand exports of industrial products into three main groups according to their level of development and industrial capacity. The first group are countries with little or no industrial base and with low level of development in terms of per capita income, and of physical, institutional and organizational infrastructure. This group includes almost all sub-Saharan African countries, as well as a number of low-income Asian and a few Latin American countries. The second consist of those with some industrial base built up through previous import substitution and infrastructural capacities, but with little experience in industrial exports. Most countries in Latin America, the Middle East and North Africa are in this group. In the third group are countries which already figure among the main developing country exporters of manufactured goods among developing countries. These are mainly the NIEs and next-tier NIEs.

Establishing supply capacity requires, *inter alia*, investment, incentives, institutional build-up, organizational development, infrastructural framework, and skilled labour and technological adaptation. At any point in time the burning issue in trade and industrialization of the first group of countries mentioned above is not only to create but also to *accelerate* the development of the production capacity so as to lay the foundation for export development. As a result of low production and infrastructural capacity, *large and fast* changes are the two most significant aspirations and needs of these countries. For this group, in particular, the assumption of small (marginal) changes made by the neoclassical economists does not hold. For the second group of countries, the key issue is to make their industries efficient and competitive in both domestic and international markets. The third group should give priority to a process of structural change, industrial deepening and upgrading and productivity growth through technological development and innovation, in order to take up new opportunities in the international market.

Does the market function well to attain the objectives outlined above automatically in the country groups concerned?

B. FUNCTIONS AND LIMITATIONS OF THE MARKET

For the purpose of the analysis, one may distinguish “market failure” from “market inadequacy”. Market failure refers to a situation where the market is in theory supposed to function but may fail to do so in practice. By contrast, market inadequacy refers to a situation where the market mechanism cannot, by design, function to tackle a problem. To explain these terminologies we first would need to outline the functions of the market and define a few terms.

One may distinguish two functions of the market: “allocative” and “creative” (Kaldor 1972 and Arndt 1988): (i) The allocative functions of the market are concerned with allocation of resources between consumer goods and investment goods and among various products in each sector or industry, and among various producers; and (ii) the creative function of the market is concerned with growth of economic activities over time. “Productivity – raising market forces which cumulatively promote investment and innovation through increasing return” as well as “cumulative interaction between income and investment” are among the creative functions of the market (Arndt 1988:220, based on Kaldor 1972). In other words, while the allocative function of the market is a “static” concept, its creative function is a dynamic one which deals with the process of production over time. In practice, there is some interrelation between the two functions of the market. For example, allocation between investment and consumption affects growth of output and the pace of growth in turn may affect the structure of output, and hence the allocation of resources.

The market consists of the price mechanism as well as non-price factors. The price mechanism operates through signalling, responding, mobility and competition components (Arndt 1988) all of which play a role, although to a varying degree, in both the allocative and creative function of the market. The signalling function conveys information on the balance, or imbalances, between supply and demand and incentive to suppliers. Responding is the vehicle through which supply responds to changes in the price signal. Mobility is related to the relocation of factors of production and or shift in production from one sector/industry to another. The competition function concerns the rivalry of different producers and factors of production for the sale of goods and services. Further, price mechanism plays the role of clearing and coordination. The clearing function of the market, in the neoclassical theory, is supposed to complete the signalling and responding function of the price mechanism by bringing the supply and demand to equilibrium in all markets. The coordinating component of the market includes not only its clearing role, but also acts to coordinate different economic activities among various enterprises through “linkages inducement effect” in response to price signals.

Price mechanism is, however, only a part of market mechanism. Non-price factors are another, and they play the complementary role without which the price mechanism cannot efficiently function. Depending on the context, the term non-price factors is usually employed in two distinctive senses. First, it is sometimes referred to as the infrastructure within which price mechanism operates, and the production and distribution of goods and services take place. Such an infrastructure, in the case of international trade and industrialization, consists of physical infrastructures such as the transport system, communications, telecommunications, etc.; institutional and organizational factors such as credit facilities, marketing network and channels, training and educational facilities, information, R&D, technological and innovative facilities, predictable and stable ownership institutions; and last but not least, the organizational capacity of the government for administrative and fiscal purposes.

In the second sense, non-price factors refer to product attributes such as quality, appropriateness, after-sales services, in-time delivery, etc. Non-price factors in the first sense of the term influence to some

extent non-price factors in the second. For example, the availability of technological and innovative facilities affects product attributes, as does availability of marketing channels which facilitate after-sales services. Nevertheless, for the sake of clarity, a distinction is useful; and to avoid confusion, we shall henceforth refer to the term in its first sense as non-price factors and in its second sense as non-price attributes or product attributes.

C. MARKET INADEQUACY

Market is inadequate in three respects: Managing *fast and large changes*; the creation of market and non-price factors; and, income distribution. It is often argued that the market is “inadequate” to deal with the question of a socially desirable distribution of income (Arndt 1988), and that free trade affects distribution of income adversely, both between the trading partners as well as among various factors of production and social groups within a developing country (Prebisch 1950, Singer 1950 and Myrdal 1956). This view is challenged by some neoclassical economists and the debate is inconclusive. Our purpose here is not to enter into the controversy on the distributional issues despite its importance. Instead, we shall concentrate on issues directly related to our argument.

1. *Fast and large (non-marginal) changes*

The market mechanism is inadequate to deal with fast and large changes such as acceleration of development and shocks. According to Marshall (1920:6), “nature does not willingly make a jump: *Natura abhorret saltum*” and “*Natura non facit saltum*”, i.e. economic evolution is gradual and continuous on each of its innumerable routes. “Economics is concerned mainly with general conditions and tendencies, and these as a rule change but slowly, and by small steps” (ibid.:5). The market mechanism can deal with gradual and marginal changes, but it is unable in itself to tackle fast and large changes. Similarly, the equilibrium theory is concerned with marginal, divisible changes. To analyze economic development problems, the consideration of disequilibrium caused by big changes, whether external or internal to the economy is required. “We are ... concerned not only with the question of the existence of equilibrium, but the possibilities of non-existence of equilibrium” (Rosenstein-Rodan 1984:208). When significant disequilibrium exists, or caused by some external or internal factors, the price mechanism is inadequate to deal with it. The price mechanism fails to function in its signalling and responding component when large changes are involved.¹ For example, where there is a significant imbalance between supply and demand due to excessive demand, a very high price is required to clear the market in the short run. Such a price, however, will be significantly higher than the long-run equilibrium price which corresponds to the cost of production. The short-run equilibrium price “will be too high to be useful in stimulating additional production” (ibid.: 473). In fact, a high price may reduce output and divert resources to speculative activities because of the development of rentier mentality and increases in the uncertainty and risks of investment. In other words, short-run equilibrium prices will not be “right” for resource allocation; “allocation must be dealt with by other means” such as direct government control (ibid.:474).

Fast and large changes, or shocks, may be also caused by such external factors as a drastic change in the terms of trade. Recent examples of such shocks are the oil price rises of the 1970s and 1980s, the fall in commodity prices due to the world recession in the early 1980s, and the drastic increase in the real interest rate on foreign debts of developing countries over the same period. Drought, war, etc., are other examples. Large changes and shocks could also be policy induced. Such is fast liberalization

¹ “In the time of large-scale maladjustment, is there really such a thing as a price for any commodity or factors of production ...” (Henderson 1948:469).

undertaken by a government under the influence of SAPs or Washington Consensus or large and lumpy investment.

We shall refer to the question of indivisibility and lumpiness of investment shortly. Here, we shall briefly discuss two main examples of large and fast changes that are directly related to our discussion. One is acceleration of development. The other is shocks given to an economy through sudden and drastic trade liberalization and devaluation in order to render the manufacturing sector efficient and competitive as advocated by the proponents of “trade liberalisation hypothesis”. Rapid development, beyond a point, is not feasible through the market forces and cannot take place automatically. Even if there were no market failure, in its standard sense, the market would still be inadequate to accelerate development (Arndt 1985). It is true that the development of the market and “non-price factors” may help its smooth operation, thus facilitating to some extent the growth process. Nevertheless, market is inadequate in creating and developing market and non-price factors on its own. Beyond a point allowed by the market, acceleration of development and industrialization requires government intervention. The question then is not whether government intervention is required or not, but the extent of that intervention, in what form and how the efficiency of government intervention could be improved to minimize “government failure”.

With respect to shock therapy, one may refer to the example of large devaluation to make the manufacturing sector efficient and competitive by providing incentives to exports, or to remedy persistent deficit in the balance of payments. The signalling and responding function of the price mechanism is inadequate to deal with the situation (Henderson op. cit.). Similarly, sudden and drastic trade liberalization fails to make inefficient industries which had been developed through import substitution competitive, developing a competitive industry, or transferring an inefficient one to a competitive one is a slow process. Faced prematurely with liberalization, industries that are at the infancy stage will not survive. Nevertheless, even those which are near the maturity stage cannot stand sudden and significant competitive pressure caused by import liberalization even if they have the prospect to become competitive. If the pace of liberalization is faster than the pace at which new skill can be developed and non-price factors – including information and marketing channels for exports – can be provided the result will be closure of many industries rather than attaining efficiency. This explains the closure of thousands of enterprises in Latin America, or Africa, following trade liberalization (see Shafaeddin 2005).

2. Market development and fast creation of capacity in non-price factors

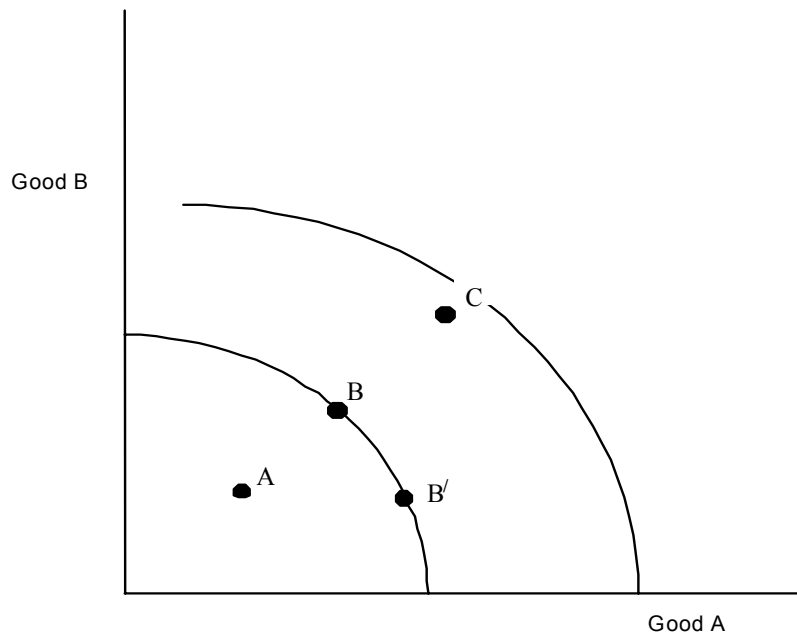
When markets are missing or undeveloped, one cannot expect the market mechanism to create or develop them. In the neoclassical theory, the responding and mobility elements of the market function well, because it is assumed that the market system and the complementary non-price factors are freely available. Moreover, it is assumed that non-price factors as a whole respond to price signals if changes are required, but changes will take place marginally and slowly.

In practice, developing countries are characterized by underdeveloped organizational and institutional framework, and other non-price factors, particularly for production and exports of manufactured goods. The market mechanism would not function well if non-price constraints prevail. And the non-price factors will not develop on their own.

The organizational and institutional factors affect performance of an economy both at the macro- and micro- levels. Economic growth at the macro-level and profit of a firm at micro-level both depend on

the availability and efficient use of resources once allocated, i.e., X-efficiency. Institutional and organizational deficiencies result in X-inefficiency. In technical terms an economy/firm is X-efficient if it produces on a production possibility curve (B in Figure 1) rather than inside it (e.g. point A). While efficient allocation of resources is accompanied by a move on the production possibility curve, an improvement in X-efficiency leads to growth through movement from A towards points on curve

Figure 1: Production possibility curves



B; technical progress or expansion of resources will lead to growth through movement from curve B to curve C.

The utilization of existing inputs by a firm takes place outside market mechanism, i.e. within firms, and is affected, *inter alia* by both organizational factors within the firm and institutional factors outside the firm (Leibenstein 1980 and 1989). Moreover, an improvement in X-efficiency may involve dynamic externalities. We shall refer to externalities involved in learning effects of entrepreneurship in the following pages. There is, however, another source of externality which requires explanation here. According to Arndt (1955), dynamic externalities related to increasing return and complementarity of various lumpy activities may be due to the construction of new equipment (investment), or due to the fuller utilization of existing equipment (which is a type of X-efficiency). X-efficiency may not only spill over to other firms (through the learning effect), but if it takes place in a number of firms/industries, it would involve dynamic pecuniary externalities (see below). Institutional factors also act similarly to infrastructure; in a sense one may refer to them as socio-economic infrastructure. Hence, they involve similar externalities.

In Figure 1, to move rapidly from point A to curve B to improve competitiveness, or from curve B to curve C to expand production capacity, or to upgrade the production structure, the development of capacity in non-price factors of the economy is required. If such development is left to the private sector, it would take a long time. Moreover, since this development involves externalities, and is often

lumpy, underinvestment would prevail. Hence, the government ought to intervene in institutional build up, organizational development and provision of other non-price factors²

D. MARKET FAILURE

In discussing market failure, here we do not specifically consider issues of capacity creation, competitiveness and upgrading. Rather, we shall discuss market failure in general terms which is relevant in varying degrees to all such issues.

If complete set of markets existed and functioned well, the allocation of resources and production of goods and services by individual firms would be socially optimum over time. Market failure refers to a situation in which the socially optimum amount of goods or services is not produced by the market. In other words, it refers to a situation in which there is a divergence between net marginal private benefits and net marginal social benefits (henceforth divergence).

To explain the concept, a divergence may be caused either by market failure or because of government intervention. In the latter case a divergence is also a distortion, in the former case it is not. Therefore, although according to Corden (1974) distortion is a kind of divergence, we shall henceforth refer to divergence only when it is caused by market failure, and distortion only when it is caused by government. If a distortion is the by-product of a government policy aimed at correcting or remedying a divergence, it is called the by-product distortion. However, a distortion may not necessarily be the result of *corrective* intervention; it may be caused by other types of government intervention (Corden 1974:14).

To further clarify the meaning of divergence, the terms *private* and *social* should be given geographical and time dimension. As far as the geographical dimension is concerned, one should distinguish the international community from a nation. While there may not be, for a specific activity, a divergence between private and social net benefit of an economic activity at the global level, such divergence may exist between national and international net benefits (see Shafaeddin 1998). Similarly, the results of the comparison of cost and benefits over time may be different from that at any particular point in time. In other words, a market outcome may involve static efficiency and not necessarily dynamic efficiency.

E. MAIN CAUSES OF MARKET FAILURE

The market fails to allocate resources efficiently and produce socially optimum amounts of goods and services over time when at least one of its components, i.e. signalling, responding, mobility or competition, does not function well. It may not do so when the market is imperfect, incomplete, fragmented or missing, or when interdependence of economic activities prevails at any particular period, or over time, creating externalities.

² While government might be able to improve some of the institutional and organization deficiencies, it will not be able to improve all market deficiencies, since some of the problems facing the government are similar to those facing the market. Such are imperfect knowledge, information, and insight (Stiglitz 1989).

1. *Imperfect and incomplete markets*

(i) *Product market and irrelevance of international prices*

The neoliberals argue that the structure of domestic prices in a developing country would be “right” when it is brought as close as possible to international prices through trade liberalization and exchange-rate devaluation. Accordingly, the “right” price would be sufficient for entry into the international market, since it is assumed that prices are determined in a perfectly competitive market, that there is no barrier to entry and that there is no uncertainty about the market opportunities. In practice, international prices are influenced by the power of firms, the power of governments and the taste of consumers in developed countries. The pricing decisions made by the firms in developed countries affect international prices of outputs and inputs. International prices are influenced by economies of scale, economies of scope and economies of agglomeration in the purchase of inputs, in production, distribution and marketing and in R&D and logistic services. Furthermore, the TNCs have the power to manipulate prices through transfer pricing. The power of governments in developed countries influences international prices through dumping, internal taxes and subsidies on their exports and through imposition of tariffs and non-tariff measures, variable levies, etc., on imports, particularly on products of export interest to developing countries.

International prices influenced in this way might well be below the prices which would allow socially optimum allocation of resources from the national point of view of a developing country. In other words, even if the domestic market structure were perfectly competitive, the existence of market imperfection, monopoly and oligopoly power at the international level would not be socially optimum from national point of view. Furthermore, their lack of access to technology, marketing channels and distribution network create barriers to entry to international market and renders them high risks in entering new markets or supplying new goods (Stiglitz 1989:200 and Lall 1991).

(ii) *Labour market*

Downward rigidity in wages and salaries, influenced by power of trade unions and/or labour laws, are regarded as one imperfection in the labour market. Nevertheless, this is not the only one. In developing countries, particularly at the early stages of development, there is another, and important, reason for severe labour market imperfections – dualism in the quality of labour in the modern and traditional sectors (Myint 1985:32–33). Such qualitative differences, according to Myint, contribute to wage differentials through higher information costs of selecting and recruiting the right type of person and through payment of appropriate quality premium. In other words, in a developing country (LDC), labour is less mobile from one industry, or activity, to another than in a developed country.³ Such extra immobility is related to the lack of necessary institutions for labour training. Moreover, training of labour involves costs.

The imperfection in the capital market is an obstacle to the financing of training costs of skill-seekers (Stigler 1967). In addition, external economies in learning influence underinvestment in training by firms as will be seen later on. As a result, even if the labour market does signal excess demand for skilled labour, the mobility and the responding functions of the market fail to provide socially optimum skill formation.

³ Here mobility does not necessarily refer to migration from the rural to urban areas, but mobility from a raw labour to a skilled labour or from one skill to another

(iii) *Capital market*

Capital markets are imperfect even in developed countries due to problems of adverse selection, moral hazard and contract enforcement. Nevertheless, imperfection in the capital market prevails more significantly in developing countries because of institutional and organizational weaknesses in these countries (Stiglitz 1989, Myint 1985). The capital market failure prevails on both the supply and demand sides. The lack of perfect information and foresight and the lack of market for insuring against risk are the two main common causes of imperfection in the capital market on both supply and demand sides. Moreover, each involves further specific imperfections.

On the supply side, efficient functioning of the market requires availability of funds and readiness on the part of financial institutions to finance requests made for all socially desirable investment at an interest rate which appropriately represents the social discount rate. The sources of financing any new investment are, in theory, the equity market, the credit market, and internal financing (*reserves*) available to a firm. In practice, in many developing countries the equity market is non-existent or underdeveloped. This is also the case for the credit market because of underdevelopment in the organized financial market, i.e. the banking system and other financial institutions. Moreover, the existence of lender's risk may cause a bias against new enterprises, particularly small ones, and against socially desirable long-run investment. As a result, underinvestment would prevail. According to Keynes, the borrower's risk would arise because of the borrower's perception of the uncertainties involved in investment on account of lack of perfect information and perfect foresight. The lender's risk may arise from moral hazard or possible margin of uncertainty (Keynes 1936:144). Such margins are related to the lack of creditworthiness of a new and unknown investor, and/or a new line of investment and the difference between the perception of the lender and the borrower regarding the present value of the net benefits of the investment over time.

For an existing and particularly large enterprise in a developed country, internal financing provides a significant source of investment, thus eliminating the differences between the borrower's and lender's risk. In a developing country, such a possibility is non-existent for a new firm or limited for an existing firm, where the firm's size is usually small as compared with those of large firms in developed countries.

Hence, a LDC firm wishing to invest is at a double disadvantage in obtaining finance: "... not only are there information imperfections in general", but also these "imperfections are likely to be more important within LDCs ... more importantly the institutional framework for dealing with these capital market imperfections is probably less effective ..." (Stiglitz 1989:200). Such institutional imperfections lead to financial dualism which is not caused by policy-induced distortions. They manifest themselves in the wide gap in the rate of interest in the organized and unorganized capital markets, the gap between the rates available to existing large firms and new and particularly small firms (Myint 1958).

On the demand side, underinvestment may prevail because of market imperfection and externalities. An important source of market imperfection is the borrower's risk. Such a risk is once again higher for a developing country firm than a developed one and within a developing country it is higher for a new firm, particularly if it is to initiate a new activity. The underdevelopment of the infrastructures, public utilities, institutions and the market for input makes obtaining the necessary input on a regular basis more risky in a developing country. More importantly, the aforementioned risks will have detrimental effects on the decision to invest. In fact, the subjective (estimated) risk may exceed the objective one

(Scitovsky 1954). Moreover, the instability in international markets, the chance of intensification of protectionism, all add further to such a risk. If a private firm is also risk-averse, it would discount for risk on a long-run investment in such a way that its net private benefits fall short of net social benefit.

In other words, the combination of high borrower's risk and higher lender's risk would lead to high interest rate charges and high discount rate, leading to a divergence between social and private benefits of investment. As a result, underinvestment in socially desirable economic activities would prevail.

2. *External economies*

In the neoclassical theory, firms are independent of each other in their costs/benefits of production at any period and over time. Moreover, within a firm future costs/benefits do not depend on current costs/benefits. In practice they do. And when there is interdependence of cost and benefits among firms, complementarities and externalities exist. In order to analyse externalities, a few distinctions should be made here. The first is between internal and external economies. Internal economies are confined to a firm. Externalities to an economic *unit* prevail when its activities influence others – producers or consumers – either positively or negatively. The economic unit here may be a plant, a firm, an industry, a sector or the whole national economy vis-à-vis the global economy. One example is internal economies of scale, i.e. size of the plant or the firm. The second distinction is between static economies and dynamic economies. Static economies result when increasing return (decreasing cost) prevails at any point in time. Dynamic economies prevail when there is a negative relation between the unit cost of production and time, or between the unit cost and cumulative production over time, even if the scale of production remains unchanged. This is often referred to in the literature as dynamic economies of learning and experience. Such an inter-temporal relationship between present and future cost (benefit) is ignored in the neoclassical theory.

Accordingly, one can distinguish the terms of static internal economies, dynamic internal economies, static external economies and dynamic external economies. To avoid confusion in the use of the term externality, one should distinguish four economic units: firm, industry, sector, and national economy. For example, certain economies may be external to a firm but internal to an industry, or external to an industry/sector and internal to the sector/national economy. Unless specified, our economic unit would be a firm throughout this study. The sources of external economies include investment decisions, dynamic externalities of learning, attitude towards work and atmosphere creation, economies of reputation and the social user cost of production and exports of exhaustible resources or products based on exhaustible resources.

(i) *Investment coordination*

The price mechanism fails to stimulate the socially optimum level of investment mainly because of existence of externalities related to investment coordination. These include pecuniary external economies and technological external economies. Pecuniary externalities are the result of influences of activities of an economic agent on (an) other agent(s) through prices. Technological externalities influence other agents directly.

According to Scitovsky (1954), *pecuniary external economies* may exist for a number of reasons and include both static and dynamic economies. One reason is related to the lumpiness of large investments. In the neoclassical economics, investments made by firms are marginal, perfectly divisible and reversible. In reality, interdependence of profit opportunities may exist among various

firms or industries undertaking lumpy investment. As a result, the social net benefits of investment may exceed its private net benefits. An important source of such interdependence is enlargement of the market in general due to the complementarities of demand. Achieving benefits of increasing return to scale in a plant or firm is feasible if availability of demand (size of the market) would allow the growth of its size (Young 1928). Investment in a firm, or industry A, would create demand for products of firms/industry B, and the investment by B adds demand for products of A. As a consequence, the average cost of production will decline in both industries. The extent of demand creation in each case would depend on the income elasticity of demand. Hence, if a number of investments take place simultaneously, the risk of finding markets would be reduced.

One may argue that foreign markets also provide markets for a country's products; hence the limitation of domestic market should not pose a serious obstacle. Nevertheless, during the early stages of industrialization, penetration into the foreign market is not easy (Shafaeddin 2005). At any rate, domestic markets usually constitute the main market in any country. Moreover, even if exportation were easily possible simultaneous development of a number of export activities would help to sustain any one of them since they require development of common institutions and infrastructure (Murphy et al. 1989). It also reduces the possibility of underinvestment. Nevertheless, the market mechanism fails to coordinate investment decisions. Hence, another coordination mechanism might be necessary. When the number of agents involved is small, the coordination may take place through negotiation or integration of agents into a single unit in order to internalize externalities (Stewart and Ghani 1991:571). Otherwise, state intervention is required to coordinate investment decisions.

Market failure in coordination may also arise due to the existence of strategic dependence among oligopolistic firms leading to the risk of underinvestment or overinvestment. When large fixed investment in specific assets is required in an industry characterized by significant scale economies under certain conditions, there is a risk of a price war (Felner 1949 and Chang 1994:65–67). These conditions are related to the unfavourable demand situation or shortfall in demand beyond expectations due to external shocks, etc. The rigidity of the fixed asset structure, i.e. the installed equipment, thus the inability of the entrepreneurs to recover fixed costs, may tempt firms to engage in a price war. If entry is not restricted, i.e. contestability prevails; the fear of a price war may result in underinvestment. If entry is restricted, or there is expectation of a limited number of entries, overinvestment may result because firms may attempt to `install as much capacity as possible to reduce their unit cost (Chang 1994:66). In these situations the market mechanism is incapable of the necessary coordination.

Overhead capital is one example of lumpy investment involving externality because it provides opportunities in investment in other economic activities (Rosenstein-Rodan 1984). It involves the crowd-in effect. The market mechanism alone does not lead, or it does not lead sufficiently, to investment in social overhead because the private net benefit of such investment diverges from its social net benefit. The failure of the private sector to invest in infrastructure in Brazil and some other Latin American countries is mainly due to this issue (Shafaeddin 2005, Chapter 3).

There are also other pecuniary external economies related to a lumpy investment: provision of inputs for other industries; provision of demand for intermediate products produced by other industries; provision of demand for products which are complementary to, or substitute for, products produced by it (Scitovsky 1954). In all these cases, investment in one industry creates opportunities for investment and profit in other industries. Such interdependence among various industries provides a form of

production and consumption linkages (Hirschman 1958). To the extent that the entire benefits of an investment cannot be appropriated by an investor it would involve externality.

(ii) *Dynamic external economies of learning*

Investment in human capital involves dynamic external economies in many respects because, even when it is firm-specific, the benefits of learning go beyond the individual or the firm which undertakes such an investment. Moreover, as learning accumulates over time, the unit cost of production declines. Learning improves the skill not only of the labour engaged in the process of production, marketing and distribution, but also the quality of entrepreneurship and the capacity for innovation. Learning consists of the acquisition and diffusion of knowledge (know-why), technology (know-how). It takes place through education, formal training, learning-by-doing, learning by accumulating experience, learning to learn, learning by trial and error and learning by adapting and imitating.

The market for knowledge and know-how, like the market for information, is imperfect. In fact, knowledge/know-how is a public good, the return to which cannot be appropriated by a firm which invests in it, except in cases where the result can be patented. When appropriability is incomplete, there will be underinvestment. When patenting is possible, the diffusion of knowledge will be imperfect, hence underutilization will result, i.e. the social benefits of the investment will not materialize entirely (Stiglitz 1989).

Technological learning is the most important example of learning in the LDCs. And it is particularly important for upgrading of the product structure. During the early stages of development, technological learning takes the form of learning to apply existing technology for the first time, even if it has been used before elsewhere. It would require the ability to install, operate, and maintain machines. It involves borrowing, adapting and improving upon foreign design to make it appropriate for the local situation (Stiglitz 1988 and Amsden 1989). In other words, to a large extent at early stages of development, technological learning in most developing countries involves imitation rather than innovation which requires, in its pure sense of the term, heavy expenditure on R&D. Nevertheless, in any imitation there is also an element of learning and innovation.

Technological learning requires learning by doing and training which involves costs. The results of learning by a firm may be transferred to other firms through mobility of labour, specialized journals or interaction between a firm and its suppliers of input or purchasers of its output (Lall 1993a, and Stewart and Ghani 1991:574).

Innovation in its pure sense of the term is essential for upgrading of the product structure, but it requires R&D which is costly and involves high risks. In Schumpeter's words, it is a creative function of entrepreneurs; it includes the use of new sources of supply, the introduction of new products or new methods of production, application or invention of new technology and introduction of a new type of organization.⁴

In short, market often fail in skill formation necessary for industrialization and development.

⁴ Note that once again in a LDC imitation of entrepreneurship, practised elsewhere, can be regarded as "new".

(iii) *Attitude to work and atmosphere creation*

Corden (1974:264) regards creation of attitudes to work and “atmosphere”, discipline, sense of collective responsibility and teamwork as important sources of dynamic externality. Such attitudes, resulting from training of workers in a firm, may leap from workers to workers not only within the same firm but may also spill over to other firms even if workers do not move from one firm to another. Corden considers this externality as a strong infant-economy argument for a generalized protection of the manufacturing sector at an early stage of industrialization. In such countries, the rural workers have to adapt to new working conditions and gain confidence in the new way of life and new attitudes.

Atmosphere creation is not, however, confined to workers. It is also, and in our view more importantly, relevant to entrepreneurship. Entrepreneurship has two vital components: the cooperative and creative components. We have already referred to the creative component. According to Hirschman (1958:17):

... the cooperative components ... involve the ability to engineer agreement among all interested parties, such as the inventor of the process, the partners, the capitalists, the supplier of parts and services, the distributors, etc., etc.; the ability ... to enlist cooperation of official agencies in such matters as customs duties, permits, exchange control regulation, etc.; the ability to bring and hold together able staff, to delegate authority, to inspire loyalty, to handle successfully relations with labour and the public, and a host of other managerial talents.

Hence, the cooperative components of entrepreneurship contribute to the destruction of an “ego-focused image of change” and to the creation of a “group-focused image of change” within a firm which will also spread to the industry or the economy as a whole. The group-focused image of change is essential for the process of economic change and development. The Japanese long-life employment (Odagiri 1992) is a good example of atmosphere creation among workers. The attempt by the Republic of Korea to link incentive to performance (Amsden 1989) is an example of atmosphere creation in entrepreneurship.

(iv) *External economies of reputation*

For a developing country wishing to enter international markets for manufactured products, marketing barriers to entry are an important obstacle. Such barriers to entry are related to the lack of marketing channels, and the lack of information about consumers’ taste and requirements for quality. Nevertheless, even if a firm can produce high quality goods, consumers in the importing countries may lack information or confidence in the quality of goods produced. The supply of high quality goods and provision of information to consumers (as well as collection of market information) or other marketing activities, are all costly and involve dynamic externalities because it cannot be perfectly appropriated by a firm (Lall 1991). If a reputation has been acquired by a firm, consumers may lump goods produced by other firms together in terms of quality of goods (Stiglitz 1989), reliability of after-sales services, etc. As a result, other firms may benefit from external economies of reputation, reduction in the cost of establishing themselves in the new market or in a market for a new product.

Japan has built up its reputation for electronic products with Sony and for its automobile industry with Toyota. By contrast, exports of low quality goods by some Indian firms, at the early stages of their attempts to expand exports of manufactured goods in the 1960s, did not create a favourable reputation not only for those firms involved, but also for the whole manufacturing sector of the country.

3. *The social user cost of exports of exhaustible resources*

Another area where market fails is the allocation of environmental and exhaustible resources basically because of missing or incomplete markets. The literature is vast on this issue. The specific issue of trade in exhaustible resources, irreproducible or reproducible, or trade in resource-based products, is not of our special interest in this study. Nevertheless, it is worth mentioning a few points. Exports of manufactured products based on exhaustible mineral resource, and of reproducible resources, such as forestry products and fisheries, beyond the rate allowed by their rate of reproduction involve social user costs. So does over- exploitation of land for production and exports of some agricultural products or agricultural based products.

The social user cost involves a kind of dynamic (intertemporal) external economy. User cost is essentially a micro-concept first introduced by Keynes in the industrial sector: it is a sacrifice which the entrepreneur makes by utilizing the equipment instead of leaving it idle. In other words, it is the sacrifice of the expected future benefit, or net benefit, involved in present use (Keynes 1936:23 and 70). Applying it to exhaustible resources, Keynes postulated that the equilibrium of production would be reached, both in perfect competition and monopoly, when marginal revenue equals marginal prime cost. Prime cost would consist of factor costs and user cost. In this context, the user cost of production is the increase in the cost and decline in the benefits to the future generation as a result of production, and export of an exhaustible resource by the present generation. Here, contrary to the external economies of scale, cumulative production has a negative influence on future cost, i.e. the unit cost of production at any point depends positively on the cumulative volume of production in the past (Hotelling 1931). It also has a negative influence on future benefits not only to the producer but also to the society as a whole. This is the case if it is expected that the social benefit of domestic use of resources in the future will exceed the benefits of its current exportation. The market mechanism fails to allow for such social-user cost which, were it so allowed, would lead to a lower rate of depletion.⁵

F. GOVERNMENT FAILURE

The proponents of the structuralist school, among others, have used the existence of market failure as an argument for government intervention in the economy in general, and in foreign trade and the industrialization process in particular. This argument, however, suffers from a few weaknesses. First, in the 1950s and 1960s, government intervention was most often considered synonymous with overall planning and did not explore sufficiently how and how much the government should intervene in the economy. Second, the importance of price as an allocative mechanism, and the need to build up and strengthen the market was understated (Colclough 1991). Third, the active role of the firm was not sufficiently appreciated. Fourth, the structuralist school overestimated the goodwill and the capacity of the State for intervention. Little was done on the nature of State and the political economy of government intervention. Hence, the possibility of government failure was underestimated. Myrdal (1971), however, attributed government failure to the “softness” of States in his famous study of South Asian countries – the *Asian Drama*.

⁵ Note that the social user cost is only partially allowed for in the neoclassical theory by allowing for a lower government discount rate than private discount rate.

There is no general theory of government failure and the definition of the term is not clear (Krueger 1990). Nevertheless, a number of arguments have been used in this respect. One argument is that externalities as a cause of market failure are not significant in practice; market failure is “an essentially normative judgment”; even when significant externalities do exist: “it cannot be shown that markets do not handle externalities: any such assertion necessitates an assumption that the government can do better. That this assumption is valid cannot be proven analytically” (Dahlman 1979:143).

Extending this argument to market failure in general, Wolf (1979) emphasizes that the possible existence of market failure is not sufficient to prove the certainty of government success. According to Wolf, government may also fail because of internalities and private goals, redundant and rising costs, derived (negative) externalities and distributional inequity due to influence and power of the interest group. Hence, any policy formulation should compare the cost of market failure with the cost and benefits of government failure. In other words, market failure provides a necessary but not sufficient justification for government intervention. Moreover, it is also argued that the cost of intervention, losses due to rent-seeking, corruption and directly unproductive activities (DUP) should also be added to the cost of government failure which exceeds the cost of market failure (Krueger 1990 and Bhagwati 1982).

Tables 1 and 2 provide a list of possible reasons for government failure and market failure. These tables indicate that the number of reasons given for government failure exceeds that of market failure. Nevertheless, this should not necessarily imply that the net cost of government failure exceeds that of market failure. The tables also imply that most reasons for government failure are related to the lack of government “will” and “capacity”.

Table 1: Reasons for market failure

(i)	Markets may be monopolized or oligopolistic.
(ii)	There may be externalities.
(iii)	There may be increasing returns to scale.
(iv)	Some markets, particularly insurance and futures markets cannot be perfect and, indeed, may not exist.
(v)	Markets may adjust slowly or imprecisely because information may move slowly or marketing institutions may be inflexible.
(vi)	Individuals or enterprises may adjust slowly.
(vii)	Individuals may not act so as to maximize anything, either implicitly or explicitly.
(viii)	Government taxation is unavoidable and will not, or cannot, take a form which allows efficiency.

Source: Stern (1989:616).

Table 2: Some problems of State intervention

(i)	Individuals may know more about their own preferences and circumstances than the government.
(ii)	Government planning may increase risk by pointing everyone in the same direction - governments may make bigger mistakes than markets.
(iii)	Government planning may be more rigid and inflexible than private decision-making since complex decision-making machinery may be involved in government.
(iv)	Governments may be incapable of administering detailed plans.
(v)	Government controls may prevent private sector individual initiative if there are many bureaucratic obstacles.
(vi)	Organizations and individuals require incentives to work, innovate, control costs and allocate efficiently and the discipline and rewards of the market cannot easily be replicated within public enterprises and organizations.
(vii)	Different levels and parts of government may be poorly coordinated in the absence of the equilibrating signals provided by the market, particularly where groups or regions with different interests are involved.
(viii)	Markets place constraints on what can be achieved by government. For example, resale of commodities on the black market and activities in the informal sector can disrupt rationing or other non-linear pricing or taxation schemes. This is the general problem of “incentive compatibility”.
(ix)	Controls create resource-using activities to influence those controls through lobbying and corruption – often called rent-seeking or directly unproductive activities in the literature.
(x)	Planning may be manipulated by privileged and powerful groups which act in their own interests and further, planning creates groups with a vested interest in planning, for example bureaucrats or industrialists who obtain protected positions.
(xi)	Governments may be dominated by narrow interest groups interested in their own welfare and sometimes actively hostile to large sections of the population. Planning may intensify their power.

Source: As for Table 1.

Some go further and believe that in fact the risk of government failure usually tends to be greater than the risk of market failure, hence the price system is a lesser evil than government bureaucracy (Johnson 1975); that intervention causes and does not cure market imperfection. Therefore, even when market fails, government intervention should be avoided (Bauer 1984), or it should be minimized and confined to functional and uniform intervention across-the-board; it should not include selective intervention in trade and industrialization (Lal 1983). The risk of government failure is most often attributed to the low capacity of the government machinery (World Bank 1994, Chapter 6).

Referring specifically to trade and industrialization, the neoliberals emphasize, in particular, that direct government controls to promote import substitution would lead to rent-seeking which would involve economic losses caused by deadweight loss. They would further lead to competition for rents; thus to “directly unproductive profit seeking” (DUP) (Krueger 1974, Bhagwati 1982 and Buchanan 1980). Hence, the cost of direct government control in international trade would exceed the welfare cost of its tariff equivalent by the additional cost of rent-seeking activities.⁶ Therefore, the failure of traditional

⁶ For a short survey of the argument on government failure see (Shapiro and Taylor 1990, Streeten 1993 and Colclough 1991).

import substitution (IS) strategy has led to the argument by the neoliberals against government intervention and in favour of universal and uniform trade liberalization.

Yet another argument is that the interest of bureaucracy and vested interest groups may diverge from the interest of the public at large (Kalecki 1967 and Krueger 1990). Under the import substitution regime, producers have a vested interest in government intervention, and the risk of rent seeking may prevail at the loss of consumers when provision of incentives is not linked with performance of the firms, and protection is prolonged. Therefore it is argued that since export promotion involves less government intervention, it would be superior to IS; free trade reduces rent seeking and increases pressure for competition. Elimination of government intervention will enhance efficiency and lead to faster GDP growth. In this context, the East Asian countries – Hong Kong (China), the Republic of Korea, Singapore, and Taiwan Province of China – were often given as examples of successful export promotion and economic growth with little government intervention.

G. THE COUNTER-ARGUMENT

To some extent the critique made by the neoliberals is justified, particularly where government causes obstacles to market operation by unnecessary intervention. Their conclusion and policy recommendations that government should not intervene in the economy for industrialization and export expansion are, however, unfounded both at the theoretical and empirical levels for a number of reasons. First, there is strong empirical evidence that industrial firms and the industrial sector in general generate dynamic externalities to other firms/sectors of the economy. The literature on linkages effects is rich in this respect, as is the literature on “strategic trade”. For example, Stewart and Ghani (1991), studying the case of Punjab in India, have shown that, while precise estimation of externalities were not possible, there were broad indicators of the existence of a range of externalities between the industrial and agricultural sector (see also Williams and Laumas 1984). More importantly, Stewart and Ghani concluded that significant externalities exist, both within the industry and between industries in their case study of the semi-conductor industry in the United States. Therefore, externalities do not necessarily involve diminishing return as industrialization proceeds (Khan and Bilginsoy 1994).

Second, whether the cost of government intervention is greater than the cost of market failure or not is not measurable. Thus, the generalization that market failure is less of an evil than government failure cannot be established empirically. It is a theoretical proposition (Colclough 1991:8).

Third, it is true that state intervention may lead to rent-seeking and DUP. Nevertheless, rent-seeking is not caused by government intervention alone. Adam Smith points out that “rent-seeking is just as common in the private sector” (cited in Streeten 1993:1292).⁷ The recent case of corruption and rent-seeking in the financial derivatives market in the United States and other industrial countries is only one significant example. Widespread corruption, rent-seeking and expansion of DUP in the Russian Federation, in the informal sector, are another. Significant cases of corruption in companies such as Enron, Ahold, Worldcome, Tyco and Palamat are a few other recent examples.

Furthermore, as far as industrialization and capital accumulation is concerned the existence of rent may, under certain conditions, lead to productive rather than unproductive activities despite a slight transaction cost related to rent seeking (Chang 1993). These conditions are related to provision of

⁷ See the same source for a number of other comments against the rent-seeking argument.

guidelines, imposition of discipline and pressure, demand for performance and withdraw of support (rent) in case of non-performance in exchange for providing incentives (ibid.:27–31 and 117–123).

Establishing a new industry in a developing country involves high risks because it involves a period of learning. Learning is costly and its return is uncertain. Hence, the entrepreneurs who set up new industries should be provided with some sort of protection against imports. The resulting rent would act as an incentive for the entrepreneur. The barrier may be created through trade and industrial policies. Such incentive is necessary, not only for establishing a new industry, but also, for upgrading and technological deepening. To have a positive impact on industrial development, such rent creation opportunity should, however, be combined with the state policy to discipline firms to attain efficiency. In other words, provision of rent, or any incentive, should be tied to the firm's performance (Amsden 1989, Grabowski 1944 and Wade 1990). Pressure should be put on firms first by the government and later on through market (see Shafaeddin 2005 for details). For example, the Republic of Korea, while providing chabols with incentive, has been “willing and able to withdraw support whenever performance lagged” (Chang 1993:148 and references herein).

Fourth, while it is true that IS has failed in many developing countries, it has succeeded in a number of cases, particularly in East Asia. In these countries, earlier import substitution has laid the foundation for export promotion. Moreover, both early transition from IS to an export promotion (EP) strategy, and the success of EP, are due to intensive government intervention in the form of selective trade, industrial investment, financial and fiscal policies. That the government has intervened in these countries less than other countries is a fallacy (Wade 1990, Amsden 1989). Therefore, the issue is not whether to intervene, but how to intervene and when and how to liberalize.

The experience of East Asia indicates that the opponents of neoliberalism are correct in believing that government has achieved selective intervention in trade and industrialization strategies; that one should take into account potential role to be played by States in adapting and improving past protective policies. The counter-argument is that the experience of East Asia cannot be applied to other countries mainly because of the weak capacity of the government machinery (World Bank 1993). Moreover, the Asian financial crisis of late 1990s was attributed to government failure related to “statism” and “crony” capitalism which was believed to have prevailed in these countries (e.g. Corsetti et al. 1998 and Noland et al. 1998).

Fifth, a number of important scholars who have argued in favour of government failure have based, explicitly (e.g. Bhagwati 1978 and Bauer 1984) or implicitly (Lal 1983) their argument on the evidence derived from the experience of Indian industrialization. Similarly, the pro-government intervention school has based its argument mainly on a few successful cases in East Asian countries. While there are elements of truth in both arguments, any generalization on the basis of a few cases, with particular initial conditions and timing, is not justified. For example, while India has not particularly succeeded in exports of manufactured goods until recently, government achievements in industrial and agricultural growth are noteworthy. Further, while extensive government intervention in India is blamed for the failure of export promotion, it is not clear how China's achievement in industrialization and export expansion can be explained, taking into account that government intervention in the economy has been far more extensive in that country than in India. The proponents of government failure hypothesis have often attributed the success of East Asia to the market, rather than to the State, but it cannot do so in the case of China. This country has never experienced anything close to *laissez-passer* or *laissez-faire* even in the 1990s.

Similarly, the mere success of governments in East Asia cannot in itself be used as an argument in favour of any government intervention elsewhere. The success of intervention would depend on a large number of other factors which may vary from one country to another. In fact, East Asian countries have not pursued exactly the same policies. Nevertheless, one can learn from their experience as each of next-tier NIEs learned from the experience of Japan and first-tier NIEs, and Japan learned from the experience of Germany.

The existing empirical evidence on the experience of developing countries indicates, generally speaking, a strong association between state involvement in the economy and growth and development. For example, a cross-country study by Reynolds (1983) on 41 developing countries for the period 1950–1980 attributes the success to the political organization, the administrative competence of the government and government policies. For a more recent period, a time series study of 100 countries, mostly LDCs, finds a strong association between the size of government, measured by the ratio of public expenditure to GDP, and economic performance (Ram 1986 and Ram 1989).⁸ Further, empirical evidence has also shown that “outward looking” strategies were also accompanied with large government size; “there exists a positive correlation between an economy’s exposure to international trade and the size of its government (Rodrik 1998). Hence, *prima facie*, there is no justification for a categorical acceptance of the government failure hypothesis.

H. CONCLUDING REMARKS AND AN ALTERNATIVE APPROACH: TOWARDS A COORDINATION SYSTEM

We have discussed the limitations of the market and the risks of government failure. We have refuted that there was no, or a limited, need for government intervention in the process of industrialization. We have also explained that the market inadequacy and market failure is not a justification for any government intervention. To do so, we have identified three key issues in industrialization and expansion of exports of manufactured good of developing countries over time: creation and acceleration of production capacity, attaining and maintaining competitiveness of established industries and upgrading of the industrial structure. It was shown that the market was “inadequate” to accelerate growth of production capacity, to create and develop institutions necessary for the operation of the market and to tackle shocks. Referring to various forms and causes of market failure, we have also argued that market on its own can fail, in its both allocative and creative functions, to create and develop a competitive industrial structure and upgrade it over time particularly in the case of new-comer firms of developing countries and countries at early stages of development and industrialization. Nevertheless, market inadequacy and failure is not an argument in favour of unnecessary, rigid and prolonged government intervention in the economy as there are reasons to believe that the government may also fail. Similarly, government failure is not an argument for leaving everything at the mercy of the market.

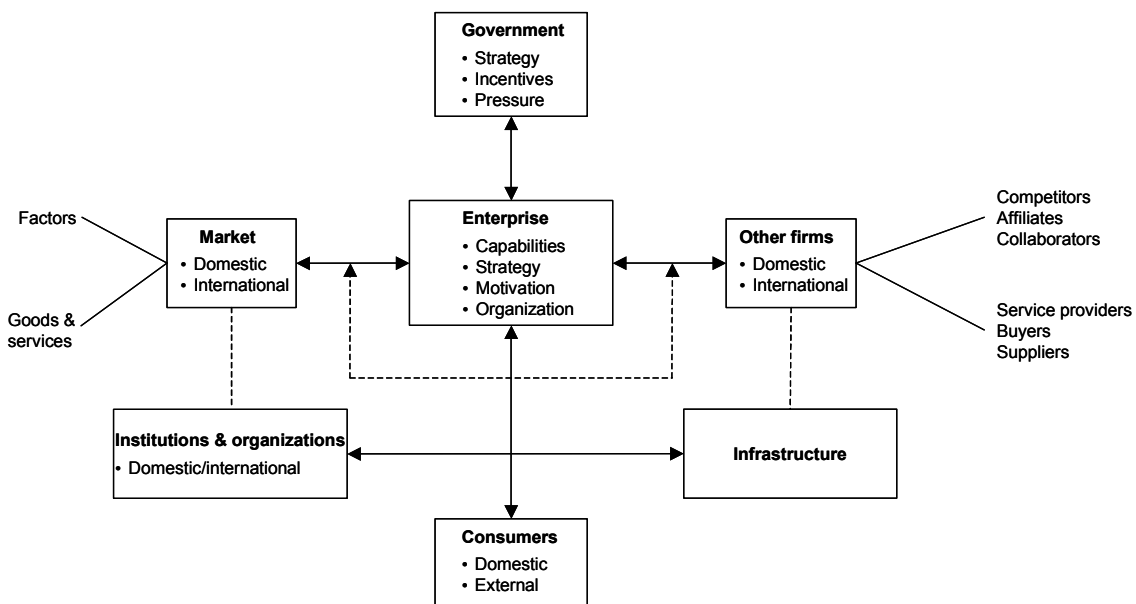
The literature on both market failure and government failure is misleading because it suffers from two main shortcomings. First, the literature on market failure often regards government as a substitute for market, and the proponents of government failure hypothesis believe in the elimination of government intervention or in a minimalist State. Therefore, in both cases the debate often takes place in the form of market or State. Second, both literatures regard, explicitly or implicitly, market and/or government as the only coordination mechanism.

⁸For a critique of his analysis see articles by Rao (1989:272–280) and Carr (1989:267–271) in the same source as Ram (1989).

We shall present here an alternative approach which emphasizes the complementarity of economic coordination mechanisms in a society. This approach modifies and develops on the literature which propagates the idea of complementarity of markets and State (Streeten 1993, Shapiro and Taylor 1990 and Arndt 1988). For example, Streeten argues that prices have their impact on supply and demand when complementary action is taken by the State to tackle institutional and other obstacles to production; otherwise “right prices” can be ineffective (Streeten 1993).⁹ To him, such complementary actions should deal with the following non-price instruments: input, innovation, information, infrastructure and institutions – or “Ins” (Streeten 1987:1473–1474). Failure in any of these instruments leads to failure in the responding component of the market and ineffectiveness of price incentives.

On the basis of the experience of both developing and developed countries, we argue that coordination of economic activities in an economy takes place through a combination of markets, State and firms, complemented by non-price factors, namely the institutions, organizations and infrastructure. Such a coordination system, if we may call it that, is also influenced by the outside world. None of these mechanisms is, however, perfect on its own and cannot succeed without interaction with others and without the complementary role played by non-price factors. Figure 2 shows the interrelation among various mechanisms. The nature of that combination, the relative role of each mechanism and the degree of the interaction among various mechanisms vary from one country to another and over time in each country, depending on the level of development, structural, historical and socio-political conditions, and on the interrelation among various sectors of the economy. No generalization can be made. Nevertheless, contrary to the assumption made in the neoclassical theory, the figure indicates that the firm is an active and driving force in such a coordination system, around which the other coordination mechanisms operate.

Figure 2: Interlinkages of market, firms, government and “non-price factors”



⁹ He also mentions the role of civil society, i.e. NGOs, in allocation of resources through their influence on individuals, the government and the private sector. Nevertheless, the civil society cannot be regarded as a coordination mechanism. Its role is indirect.

To explain further, the relative role of the market in relation to other elements of the coordination system depends on the existence of various markets and the degree of market failure which is, *inter alia*, influenced by the nature and the degree of development of “non-price factors”. The market mechanism interacts with both firms and government. The market structure influences the behaviour and performance of firms and the degree of market failure and market inadequacy determines the need for government intervention.

In a world where large firms increasingly dominate production and international trade (table 3), coordination of certain transactions or economic activities increasingly takes place through a non-market coordinating mechanism rather than through the market. This mechanism includes strategic planning – the planning system – and vertical and horizontal coordination among firms through networking, long-term supply and purchase contracts, technological alliance, etc. (Galbraith 1975, Williamson 1975, Lazonick 1991, Best 1990 and Porter 1990). While large TNCs are owned predominantly by developed countries, developing countries are, as mentioned earlier, affected by their activities.

Table 3: The share of top firms in global production and trade (late 1990s)

<i>Activity</i>	<i>Number</i>	<i>Per cent</i>
All output	20028	
Industrial output	1000	80
World trade	500	70

Source: (Mooney 1992:74).

Table 4: The importance of the largest* world industrial enterprises (in or around 2000)

<i>Description</i>	<i>Total</i>	<i>The share of largest firms with employees more than</i>			
		<i>10,000</i>	<i>20,000</i>		
			<i>Total</i>	<i>100</i>	<i>25</i>
Number of firms	18,540.0	8.8	5.1	0.5	0.13
Employees (millions)	100.5	77.7	68.0	27.6	7.30
Sales (billion dollars)	2,108.4	7.6	66.8	21.7	6.40

Source: Based on Thomson Financial and UNCTAD database.

* In terms of numbers of employees.

The figures in table 3 overestimate the share of the top firms in output as the data at the firm level is measured in terms of output, but it is in terms of value added at the global level. Nevertheless, they provide some indications. Table 4 presents alternative data on industrial enterprises based on Thomson Financial survey of about 19,000 listed public companies. Again the data is not complete, as it does not include all companies, but it provides some information on the degree of concentration of firms at the global level. Accordingly, the largest 1,270 companies (5 per cent of the total number) and the largest 100 firms, account for over two-third, and one-fifth of total sales of companies surveyed, respectively. Further, according to the main source, the bulk of large companies are located in the developed countries. For example, half of the companies with 20,000 employees are located in the United States (accounting for over 62 per cent of their total sales), 22 per cent in six European

countries (the United Kingdom, Germany, France, Switzerland, Italy and the Netherlands), 8 per cent in Japan and 19 per cent in the rest of the world. Further, the United States firms are more concentrated than the rest at the world level; companies with 20,000 employees and more account for over 85 per cent of sales of all United States companies included in the database as against 67 per cent for the world as a whole.

To continue, the relative role and success of firms depends mainly on three main factors: motivation (incentives), pressure and the internal organization of the firm by the management. This in turn would depend, *inter alia*, on the degree of entrepreneurship. The market, through forces of competition and the government, through other incentives and/or disciplines, provides motivation and pressure on the entrepreneurs. The success of entrepreneurs depends on two main factors: their ability to develop and update the firm's strategic behaviour in the market – their ability to compete on price and non-price attributes; and their capacity within the internal organization of the firm to attain efficiency, productivity and upgrading. In other words, the active behaviour of a firm towards other firms, market, government and the outside world, as well as its strategic behaviour, affect its performance.

The interaction of a firm with other firms might take place, either through the market, or directly. Their direct interaction, replaces the coordination function of the market in the activities concerned. In their interaction with the market, or other firms, however, the non-price factors play the role of catalyst. For example, the implementation of an input purchase contract is not easily possible without availability of sufficient infrastructural and institutional facilities for transport, credit financing, insurance, etc.

As implied above, the role of government is to take action to complement firms and market through provision of incentives, pressure and facilitation of non-price factors. The degree of success of the government would depend on the political will and the capacity of the government. Both the interventionists and neoclassical economists make extreme assumptions about the “will” and “capacity” of the government. The interventionists assume that the government is benevolent and competent. The neoclassical economists assume that the government group looks after its own interests, not the public interest and that the government is inefficient. In reality, the situation is different. The political will of the government is the subject of political economy, for which a theory of State is required. Unfortunately, a satisfactory one is still not available. We wish, however, to stress that it is not possible to effectively achieve an economic target without a suitable political environment (Meir 1993); that the political will of the government for industrialization and export expansion depends, *inter alia*, on its structure and its vested interest. The interest of the government might not necessarily coincide with the interest of the public at large. For example, the rate of time discount of political actors may tend to be higher than that of the community. In this context, one may differentiate the government indifference decision curves from the communities indifference curves (Kalecki 1971).

If political will exists, however, the degree of government success would depend on its ability to analyse, formulate and implement policies and correct them over time. It also depends on its capacity to take direct action on creating and developing markets, remedying market failure and providing an appropriate institutional, infrastructural and organizational framework for the operation of the market. Hence, here again the interaction of government with other coordinating mechanisms and with non-price factors is important. The government interacts with the market by changing its signalling mechanism, influencing prices and incentives indirectly through policies or directly through allocation of resources. It also interacts with firms directly or indirectly through its action on the market and on

non-price factors. Hence, government actions influence market structure, firms' behaviour and their performance. Government activities and policies influence each of aforementioned "Ins" directly or indirectly. On the basis of the experience of successful developing countries one may also add the importance of three "Ps" as far as influence of government on firms is concerned. These are political stability, policy predictability and "pressure" for performance.

The external environment influences the behaviour and capacities of all coordination mechanisms in an economy. The power and policies of TNCs, the government of main trading partners and international institutions influence all elements of the coordinating system. For example, the degree of market concentration in an industry affects the ability of a developing country firm to enter the international market. The strategy and behaviour of large TNCs affects the ability of the existing firms to compete in that market. Further, their involvement in a developing country through FDI affects the structure of the domestic market, the autonomy of decision making of the government and puts the independent national firms in an unfavourable competitive position. Similarly, trade policies of the trading partners and the rules and regulations drawn by international trade and financial institutions limit the policy autonomy of the government in a developing country. Further, they influence the access of national firms to international market, positively or negatively, depending on the rules or measures taken.

The relative role of firms, market and government may vary from one country to another and over time in each country. Nevertheless, at the early stages of their development, LDCs face a dilemma because all coordination mechanisms run a high risk of failure. In these countries, market failure is pervasive because of the lack, or underdevelopment of markets. The risk of entrepreneurship failure is high because of the lack of experienced entrepreneurs, and underdevelopment of the formal sector. Similarly, the risk of government failure is significant because of the low capacity of the government. The lower the level of development, the higher is the risk of coordination failure. Moreover, it is a vicious circle. The country is underdeveloped because of the failure of the coordination mechanisms; the coordination mechanisms fail because of the low level of development. Such vicious circle, however, does not justify the elimination of government intervention. Nor is it an argument for eliminating the role of the market or firms. In fact, to break this circle, action should be taken on all fronts: to create or improve markets; to increase the organizational capacity of entrepreneurs; to develop the necessary infrastructure and institutional framework of the country; and to increase the capacity of the State.

Nevertheless, to break the vicious circle, initially a key role is to be played by government as indicated by the experience of all developed countries (see Shafaeddin 1998), NIEs and next-tier NIEs. Neither the market, nor the non-price factors such as institutions, organizations and infrastructure, will be developed rapidly by market forces per se. The development of the state capacity requires education, training, motivation, sense of responsibility by the civil service, discipline and, most of all, the enhancement of the learning capacity, i.e. "learning to learn". Since design of a trade and industrial policy differs from one country to another, nobody knows what the "right policy" should be in each specific case. It is a question of trial and error – learning by doing. As markets, firms and non-price factors are developed, government intervention may be gradually reduced, not only in international trade but also in all spheres of economic activities, in favour of market and firms. In the case of new comers firms from countries at early stage of development and industrialization, government intervention is, in particular, required to assist new industries to develop and compete with established firms.

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