TRADE BARRIERS, STRUCTURAL MOBILITY AND UNEQUAL EXCHANGE

A STUDY OF INDIA-EEC TRADE

Thesis submitted to
the Jawaharlal Nehru University, New Delhi
for the award of the Degree of
Doctor of Philosophy

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THIRUVANANTHAPURAM

1995

I hereby affirm that the research for this thesis titled "***Trade barriers, structural mobility and unequal exchange : a study of India-EEC trade***" being submitted to the Jawaharlal Nehru University, New Delhi for the award of the Degree of Doctor of Philosophy is entirely my own work and has not been considered for the award of any other degree at this or any other University.

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We certify the above and recommend that this thesis be forwarded to the examiners for evaluation.

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ACKNOWLEDGEMENTS

This study has taken an unjustifiably long time. Its course has not been smooth and linear as I planned, rather wished, it to be in the beginning. On many occasions, I found it necessary to take several steps backward to ensure that the study was moving in the right direction. Half way through, I also had to take a long break, during which I got married, took up a job and pursued many other interests and commitments. Coming back to the study and the mainstream of research was difficult and painful. But for the affection, encouragement, advice and help received in plenty from many near and dear ones, I could not have made it. I owe them all a lot. This formal exercise of 'acknowledgements' is a grossly inadequate way of expressing my feeling of gratitude to them.

I consider myself fortunate to have got the opportunity to work with Prof. K. K. Subrahmanian and Dr. T.M. Thomas Isaac. Their interventions have been extremely helpful, constructive and intellectually stimulating. They gave me all the freedom to pursue my ideas, but have always been meticulous in subjecting my arguments to thorough logical scrutiny and criticism. In completing this work Prof. Subrahmanian has been the single most important source of inspiration and encouragement. Dr. Isaac, who introduced me to research and academics has always been forthcoming to offer his helping hand to sort out my problems, academic and personal.

During the formative stages of the study, I have had the opportunity to interact with prof. Krishna Bharadwaj, prof. V.M Dandaker, prof. V.R Panchamukhi, prof. Ranjith Sau, prof. Prabhat Patnaik and prof. Deepak Nayyar. I have immensely benefitted from their comments and suggestions.

I am indebted to Mr. Ramakrishnan and his colleagues in the CDS library for their kind cooperation, especially for the pains taken to procure missing back volumes of DGCI&S publications. Dr. Satyabratha Chakraborty and Mr. Suresh of the DGCI&S office, Calcutta have been helpful in clearing many doubts related to the Indian data base on trade.

What I enjoyed the most during this work has been the company of fellow scholars in CDS. The CDS hostel has been an invaluable source of criticism and constructive comments. Informal sessions in the hostel, especially discussions with Sakthi Padhi, Raman Mahadevan, Pyarelal, Anandraj, Rajagopal, Joseph, Rammohan, Raju, Baby, Sudhakaran, Nata, Sunny, Anil, Das, Ravi Raman, Kabir, Mohan and Christopher have been helpful in evolving and perfecting some major threads of the arguments. My friendship and interactions with the younger group of scholars in the Centre including Vinod, Bhasker, Dennis, Kurup, Sanjith, Suresh, Saikath, and Deepa have always been memorable and helpful. I thank them all for the overwhelmingly selfless friendship.

Thanks are also due to my colleagues, students and the Director of the School of International Relations, Mahatma Gandhi University, Kottayam. In spite of inconveniences caused by my preoccupation with this work, they have all been extremely nice to extend their full support.

My wife, Shaila, would heave a sigh of relief to know that the thesis is finally submitted. She had to bear the burden of managing the household alone for long. My father would have been the happiest person to see the copy of this thesis. I am not fortunate to share this moment with him. I dedicate this thesis to his memory with affection and love.

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Chapter 1
INTRODUCTION

The network of trade flows among countries may be seen as an outward expression of the underlying division of labour among nations. Thus viewed, changes in the ebb and flow of trade are simply reflections of the corresponding changes at the level of the division of labour. Growth in trade, especially when it surpasses growth in production, for instance, would signify a process of intensification of the division of labour, as also growing interdependence, among nations. Similarly, changes in the composition of world trade would denote structural shifts in international demand and production.

The fact that the spheres of exchange and production are closely interrelated raises some important questions regarding the nature of their interaction. Obviously, changes in the structure of world demand and trade would require some sympathetic restructuring at the level of production. How is such re-orientation of the structure of production, to suit the changes in the composition of world demand, brought about? Clearly, reorganisation of the structure of production would generally require a redistribution of capital - capital being the prime mover of the elements of production - across different lines (sectors) of production. How does the play of market forces achieve such a reallocation of capital among competing sectors? Does such a redistribution of capital in favour of product lines facing dynamic demand conditions involve intersectoral differences in rates of profit, at least temporarily, i.e., till the sphere of production gets adjusted to the shift in the pattern of demand? To put the question in more general terms, will the sectors facing dynamic demand conditions be more attractive for investment than the sectors facing declining demand? If so, what would be the plight of individual nations, which find themselves incapable of, or which are restricted from, adapting their pattern of specialisation to the changes in the structure of world demand?

Incidentally, the adaptation of a nation's specialisation to the changes in the structure of world demand would involve an upward mobility - which we refer to in the present study as structural mobility - for the nation concerned in the international division of labour from sectors facing declining demand conditions, which for the same reason tend to get phased out of the network of world trade, to product lines facing dynamic demand conditions.

Structural mobility assumes importance in an analytical framework which see intersectoral mobility of capital as an essential attribute of competition. Competitiveness of firms, and for that matter countries, cannot be

confined to their ability to produce and sell cheap in historically given areas of specialisation. Introduction of non-price factors employed by producers of a given product/industry will not also suffice. Competition is a much more complex process than what can be defined within the confines of an industry. It involves, in addition to the intra-industry attributes, movement of capital across sectors in search of higher rates of profit. It is this incessant movement of capital, and hence of productive forces of the society, in search of higher rates of profit that helps the production sphere adjust itself to the changes in the structure of demand.

The question of structural mobility attains added importance when considered against the contemporary realities of the world economy. On the one hand, there is increasing pressure on countries to be structurally mobile, thanks to the rapidity with which the structures of world demand and trade are undergoing changes[1]. On the other hand, there are major obstacles, both internal and external, which constrain the process of structural mobility of individual countries, especially the underdeveloped ones. The legacy of underdevelopment makes many of them practically incapable of coping with the fast changing structure of world demand and trade. Added to this is the problem of growing protectionism among developed countries. That the trade policy regimes in industrialised countries offer systematic resistance to the structural mobility of underdeveloped countries is the central proposition we put forward for analysis in the present study.

The bias against structural mobility arises from the uneven distribution of trade barriers in developed countries across trade flows. Certainly, the underdeveloped countries do not face a uniform level of entry restriction across all lines of their exports. In fact, they are extended almost complete free and non-discriminatory access with respect to many products. This would mean that the underdeveloped countries are generally free, and often also encouraged, to participate in certain lines of international specialisation. But, we would hasten to add that their freedom of choice of the area of specialisation is limited. We argue thus because, the same group of underdeveloped countries which enjoys free access in some product lines, encounters stringent and highly discriminatory entry barriers in many other areas of their exports[2]. Which are the areas where they face either more or fewer trade barriers? Our hypothesis is that, among different plausible lines of specialisation of underdeveloped countries, they face more restriction in areas that face relatively dynamic world demand conditions.

The fact that trade barriers are not evenly distributed across product lines and that they exhibit specific patterns has not received the attention it deserves. This indifference towards the structure of trade barriers, as we argue out at length in chapter 2, is largely attributable to the limitations of the mainstream theories of trade

that inform studies on commercial policy. However, later developments in the realm of theory has paved way for unearthing certain interesting dimensions of the structure of trade barriers. For instance, the fact that trade barriers in developed countries escalate across processing chains and accord very high effective protection to their processing industries is now fairly established. Similarly, studies on the distribution of trade barriers in developed countries have noted a clear bias against imports of labour intensive manufactures from underdeveloped countries. In the present study, as already mentioned, our attempt is to look at yet another dimension of the distribution of trade barriers in developed countries, viz., its bias against structural mobility of underdeveloped countries in the international division of labour. Nevertheless, it is important to be noted here that structural mobility constitutes only one among different possible dimensions of mobility of countries in the international division of labour. For instance, international competition can be seen in terms of mobility from low technology (low skill) products to high technology (high skill) areas of specialisation. The latter dimension assumes special significance in the context of growing popularity of the evolutionary theory of growth and emergence of the technology gap theories of trade. It would have been a highly rewarding line of enquiry to see whether the distribution of trade barriers in developed countries exhibit any bias towards mobility of less developed countries from low technology areas to high technology lines of specialisation. However, due to conceptual problems and non-availability of data, which we discuss in chapter 2, we could not pursue the above line of analysis. However, here we wish to highlight it as a major limitation of the present study.

The primary focus of the present study is on the protectionist barriers to structural mobility. The fact that we concentrate on protectionist barriers, it may be underlined, by no means implies that other factors, which influence structural mobility of countries, are less important.

Admittedly, there are other equally or more important factors that influence the ability of nations to adapt their pattern of specialisation to the changes in the structure of world demand and trade. For instance, a country's ability to influence the pattern of changes in world demand itself would have a bearing on its capability to adapt to such changes. Even though it would be a highly fruitful line of enquiry, we do not make any attempt in this study to analyse the forces that may fashion the pattern of changes in world demand. However, it is only logical to infer that the developed countries, by virtue of the cultural hegemony that they enjoy, are in a better position to influence the pattern of changes in world demand[3]. The cultural dominance that they possess may easily get translated into consumer choices in different markets. Therefore, their domestic production structures, and their evolution, are likely to be more suited to take on the challenge of structural change in

world demand. The opposite is true of the dependent countries. As culturally subjugated societies they lack the power to influence the tastes and preferences of consumers in the global market place. In fact, trends in their own domestic markets are influenced a great deal by the dominating external influences[4].

The underdeveloped countries, therefore, are left with no choice, but to take the structural changes in world demand as given. Given the nature and direction of changes in world demand, they may try to reorganise their areas of specialisation. This, more often than not, would involve mobility from traditional to new areas in their export specialisation. That the underdeveloped countries make an effort to move into non-traditional areas of international specialisation, and that some of them succeed in that attempt, is evident from the literature on the new international division of labour[5]. The ability to produce and supply non-traditional exportables at internationally competitive prices would depend on a host of domestic factors, viz., the existing pattern of specialisation, nature of capitals operating within the nation, technological dynamism of the production structure, the pressure of domestic demand, government policies, etc. A detailed examination of these 'internal factors', notwithstanding their importance, is beyond the scope of our study.

Contextually, studies on the export performance of underdeveloped countries seem to have focussed - in many cases even at the expense of 'external factors' - mainly on, what is generally referred to as, 'internal factors'[6]. It is important here to mention an often ignored link between the so called 'internal' and 'external factors'. In our view, the distinction between internal and external factors is ahistorical in nature. We argue so because, viewed in a historical perspective both the set of factors are seen to interact and influence each other. For instance, internal constraints on structural mobility of most underdeveloped countries, viz., their current specialisation, nature of domestic capital, technological backwardness, etc., cannot be explained independently of their colonial past. In short, all factors which are apparently internal to the country need not be so when considered in a dynamic perspective. The link between internal factors and external constraints would become more clear when considered in the specific context of trade barriers. Even when a country is well endowed with the potential to be structurally mobile, the same need not be realised because of the hostile distribution of trade barriers that the exports encounter. Further, persistence of external barriers, over time, might even wipe out the potential for such mobility, so much so that, at a later stage, the country's inability to adapt to the changes in external demand would appear to be purely internal![7] In short, the importance of external barriers, in terms of their present and future effects on structural mobility, can hardly be exaggerated.

Among 'external' barriers to trade and mobility, which may include measures like intellectual property rights, citizens' boycotts, restrictive business practices of transnational corporations, unfavourable shipping costs, etc., it must be noted, we take into account only the trade policy measures initiated by the governments[8].

The implications of structural mobility, or lack of it, for the participants in the international division of labour constitutes the broader problematic of the present study. However, the primary focus of the study is on the effects of protectionist policies in industrialised countries that constrain structural mobility of underdeveloped nations. The effects of barriers to structural mobility is dealt with mainly at the theoretical level. Whether or not the trade policy regimes of industrialised countries restrict the structural mobility of underdeveloped countries is primarily an empirical question. We seek to provide empirical support to the proposition that trade barriers offer systematic resistance to the structural mobility of the underdeveloped countries by making a detailed analysis of India's exports to the European Economic Community (hereafter, the EEC or the Community).

Apparently, the conceptualisation of the problem, as outlined above, marks a break with the mainstream theories of trade and protection. In fact, the mainstream theoretical approach leaves no room for our question on the effects of barriers to structural mobility. A critical review of the theories of commercial policy in chapter 2 clearly shows that the mainstream approaches to protection are almost completely indifferent to the question of structural mobility. The review, apart from making the point of departure clear, helps us establish the case for an alternative framework. In Chapter 3, we evolve an alternative approach, based on an extension of the Marxian prices of production framework to the international sphere. In sharp contrast to the mainstream theory, the alternative approach helps us place the process of structural mobility at the centre of international competition. The Chapter also introduces the proposition that restrictions on structural mobility would perpetuate unequal exchange between countries. The interpretation of the prices of production and unequal exchange in the present study, it may be noted at the outset itself, differs significantly from the existing neo-Marxian and neo-Ricardian theories.

In Chapters 4 through 6, we turn to the empirical question as to whether or not the trade policy regimes of the developed countries, especially that of the EEC, tend to resist India's efforts to adapt her pattern of specialisation to the structural changes in external demand. In Chapter 4, with the help of an analysis of the growth in India's global as well as bilateral exports, we establish the role of structural mobility as a crucial determinant of export performance. In Chapter 5, we examine changes in commodity composition of India's

exports in detail and assess India's efforts to be structurally mobile in the international division of labour. In the process we also identify important sources of structural mobility (mobility areas) in India's exports. In Chapter 6, we take up for analysis the distribution of trade barriers in developed countries in general and the EEC in particular, to see whether they tend to bunch together against mobility areas in India's exports and thereby constrain her efforts to be structurally mobile. Chapter 6 also attempts to empirically validate the theoretical proposition that structural rigidity, and hence, restrictions on structural mobility, would cause unequal exchange. Chapter 7 brings together important strands of our *a priori* arguments as well as major findings of the empirical analysis. The concluding Chapter also attempts to outline important policy implications of the study.

Notes

1. Structural change in world demand is too complex a process to be captured by simple statistical indicators. However, the following facts would give a general idea. The share of manufactures in world exports [SITCs 5 to 8 less (67+68)] in non-petroleum exports [SITCs 0 to 9 less 3] has gone up from 61 per cent in 1970 to 73 percent in 1989. The composition of manufactures has also been subjected to major changes. For instance, the share of Chemicals, Machinery and transport equipment [SITCs 5 and 7] in the above total [SITCs 0 to 9 less 3] has increased from 39 per cent in 1970 to 48 per cent in 1989 (UNCTAD, Handbook of Trade and Development Statistics, Various Issues). Added to this has been the remarkable growth of trade in services. Trade in services is reported to have been growing at almost the same pace as the trade in merchandise (Riddle 1986:107-129, Clairmonte 1991).

2. Trade barriers in general discriminate between domestic producers of the country which resorts to such measures and the foreigners. The degree of discrimination would increase with the restrictiveness of the barrier. Further, discrimination need not be limited to the one between the nationals and the foreigners. The trade policy regime of the EEC for example tends to discriminate among foreigners. The European countries with which the EEC has free trade agreements are given better access, with respect to many products, than the underdeveloped countries.

3. One of the important determinants of the structure of social demand within a nation is the distribution of income among different social classes (Bukharin 1972:54-7, Marx 1974:181-82). Extending the same logic, one may argue that, by virtue of the biased distribution of income at the international level, the developed countries would be in a better position to control the pattern of changes in international demand.

4. The following observation of Bagchi (1986:pc-72) is contextual to be cited: "With a greater degree of internationalisation of world production and consumption patterns, the rich in the third world generally imitate the consumption styles of the rich and the not so rich in the first world. Often they tend to live ostentatiously in order to show their own people that they are as good as the colonial rulers they have displaced or the native aristocracy they hope to be co-opted into".

5. According to studies on the new international division of labour, as developed countries move into new product lines, older areas of their specialisation would be left open for the underdeveloped countries. They cite many such areas where the underdeveloped countries have lately entered. Growth in the share of manufactures in developing countries' exports is also cited as an evidence for the emergence the new division of labour (Frobel, Folker et.al 1976). For a critique of the optimistic views on the new international division of labour, see Chandrasekhar(1986) and Nayyar(1983).

6. The bias originates mainly from the small country assumption in the theory of trade and protection. On the one hand the protecting country is assumed to be too small to influence the pattern of world demand, supply or prices (Corden 1986:101). On the other hand, individual exporting countries, as they are small entities, are assumed to enjoy infinite demand elasticity (Anjalikumar 1988:11).

7. Persistence of external barriers would affect the investment decisions of the domestic firms; they may quit export production or reduce the pace of capacity creation in that sector. Uncertainties created by the protectionist policies would force firms to operate with minimum investment on overheads. External barriers can also lead to very high mortality of firms operating in such sectors. For instance, death rate of firms in the Indian garments industry which encounter MFA restrictions is reported to be high (Anjalikumar(1988:135)).

8. That Intellectual Property Right regimes can affect the process of structural mobility needs no explanation. For instance, the product patents would not allow others (except the patentee) to produce (at times even to trade in) the patented product during the patent period. Longer the patent period, longer will be the waiting time for others to move into the patented areas.

   Restrictive business practices of Transnational Corporations (TNCs) are known to affect exports of non-traditional

items from the underdeveloped countries. For instance, the TNCs may impose export restrictions on their subsidiaries and collaborators. See for examples from the Indian context (Subrahmanian 1972, Chandra 1986a:1269-71, Anjalikumar 1988:284-88).

According to Yeats (1979:173-201), transport costs exhibit systematic bias against exports of processed products from underdeveloped countries. He shows that the shipping costs escalate with the degree of fabrication.

Chapter 2
THE MAINSTREAM THEORIES OF COMMERCIAL POLICY
A CRITICAL REVIEW

The present study, as stated earlier, is woven around the proposition that the distribution of trade barriers across trade flows in developed countries is such that it restricts structural mobility of underdeveloped countries in the international division of labour. By structural mobility, we mean, the adaptation of the nation's specialisation to the changes in the pattern of world demand. What are the implications of trade barriers to structural mobility, especially to those whose mobility is restricted? In this Chapter, we review the existing theoretical approaches to see how far they help us in addressing the above question.

Indeed, the existing stock of studies is too extensive to be reviewed in a single Chapter. Therefore, we would confine ourselves to a review of some important theoretical developments, which are of some relevance to the central theme of the study. Another limitation of the present review is related to the lag with which the theory of commercial policy respond to fresh insights emanating from new theories of growth and trade. For instance, implications of the technology-gap explanations of trade for the theory of tariff remains to be worked out in sufficient detail. The review is also constrained by the absence of studies which directly address the question of trade barriers to structural mobility of countries in the international division of labour. Despite the fact that the existing studies are designed to focus on other issues, they provide some useful insights, albeit indirect, on the effects of trade barriers that restrict structural mobility of countries. One major objective of the review is to draw such useful insights from the existing studies, though we would also focus on their important limitations.

It is surprising that the literature should be so indifferent to the question as to whether trade barriers facing underdeveloped countries restrict their efforts to adapt the pattern of specialisation to the changes in the structure of world demand and trade. This is especially so when considered against the backdrop of systematic changes in the structure of world demand and trade. Therefore, it may be important from the point of view of our study that we identify the limitations of the existing approaches which make them insensitive to the question of structural mobility.

In fact, while the present study requires us to see the problem of cost of protection from the point of view of those, who are protected against, the approach of the existing literature is mainly from the point of view of

countries, which resort to such protectionist policies. One important reason for this bias is the small country assumption in the theory (Corden 1986:101). Individual countries, who resort to such trade restrictions, are assumed to be too small to be able to influence the course of world demand, supply or prices. On the same logic, export performance of individual countries, it is argued, would not be affected by changes in world demand, not to speak of trade restrictions imposed by small importing countries!

We take the position that the small country assumption is unacceptable for a variety of reasons. First, most developed countries, not to speak of their groupings like the European Economic Community (small union assumption is also widely prevalent!), are major buyers in the international market. Second, trade policy regimes of developed countries exhibit significant similarities. For instance, almost all of them restrict imports of garments into their countries. Therefore, from the point of view of exporting countries, it is immaterial whether individual importing nations are small or not. Coming to the countries whose exports are restricted, even smaller nations can have significantly large shares in individual product markets. Further, many new protectionist tools (e. g. , country specific quotas or voluntary export restraints) are capable of targeting even the smallest of all suppliers[1]. Further, individual countries, however small they be in geographical size, cannot be excluded from the possible terms of trade effects of trade policy measures.

Removal of the small country assumption and the consequent recognition of possible adverse effects of protectionist policies on those who are protected against, by themselves would not make a theoretical framework sensitive enough to the problem of structural mobility. It requires the framework to see intersectoral mobility of competitors as an essential attribute of competition. A theory which approaches competition and price formation ignoring intersectoral mobility of producers (countries) across different lines of specialisation is likely to be insensitive to structural mobility.

The Chapter is organised in two Sections. In Section I, we attempt a brief presentation of the selected approaches to the cost of protection. In Section II, we develop, a critique of the existing theoretical arguments and in the process, also make out a case for an alternative approach.

Section I
The theory of commercial policy: some approaches to cost of protection

The mainstream theories of international trade- Ricardo's theory of comparative costs as well as its neo-classical interpretations- characterise international trade as a wonderful game, in which each partner has every chance of winning without the slightest risk of losing (Emmanuel 1972:xiii). From this generally accepted proposition on gains from free trade, it follows that protectionism cannot but always be a costly affair. It is costly not only for the world as a whole but also for every participant, including the country that resorts to protectionist measures. Thus, the mainstream approach rarely acknowledges the possibility of gaining through the use of commercial policy tools, leave alone the prospects of gaining at the expense of others! Here, mention must be made of the divorce between the theory and the commercial policy praxis. In the traditional theory, there is no room for disadvantageous trade or advantageous commercial policy intervention. Yet, the normal practice of trade policy in the world has been and continues to be dominated by protectionism (Emmanuel 1972:xii-xx, Pomfret 1988:13-99). As the theory could not explain consistent popularity of protectionism among policy makers, the tendency among economists has been to characterise the protectionist measures as irrational interventions not amenable to logical reasoning!

It is contextual here to cite a new and growing stream of studies commonly referred to as `studies on the political economy of protectionism' (for a survey, Baldwin 1986). One of the major common objectives of these studies has been to identify sources of pressure for such `irrational behaviour', i.e. protectionist policies (Cable 1983:47-50). These studies have also been fairly successful in identifying specificities of industries/sectors which demand and gain protection from external competition. Studies on the political economy of protectionism accept that protectionism can prove advantageous to certain sectors and groups of people, at least in the short-run. Conversely, they also tend to acknowledge that free trade can be disadvantageous for some sectors or some groups of people within a country. Nevertheless, they do not at all challenge the basic propositions of the traditional theory of trade and cost of protection. They also agree that protectionism would be costly for the country taken as a whole.

Now, can we dismiss the century old practice of protectionism as something beyond reason? Cannot there be situations, where protectionism is advantageous for the nations resorting to it, if not for the world as a whole? Let us examine the literature on this question in some detail.

According to the conventional theories, free trade would maximise global welfare because it facilitates Pareto optimal allocation of resources (Corden 1974:6-7, Attia 1976:9-16)[2]. Any intervention prohibiting the application of this principle of optimality, therefore, entails a decrease in world welfare. The theory focuses exclusively on the resource allocation effects of trade and trade barriers to define gains from trade and cost of protection. But what about other possible effects? In order to avoid such disturbing questions, economists have constructed an imaginary world, where effects other than those on resource allocation are ruled out. This optimal free trade world, which helps the theory to focus almost exclusively on the resource allocation effects of trade rests on a number of restrictive assumptions such as; (1) small open economy that cannot affect world relative prices; (2) perfect competition; (3) absence of market distortions; (4) constant returns to scale; and (5) full employment without any adjustment problems. As long as these assumptions hold, the impact of trade barriers would be limited to changes in the pattern of resource allocation and hence, would entail a cost in terms of reduction in welfare. However, as we relax the assumptions, a variety of arguments for government intervention starts appearing (Attia 1976:9, Helpman and Krugman 1989:2).

The case of optimum tariff

Now we take up the arguments for protection, which arise on account of the violation of one or more of the limiting assumptions of the traditional definition of cost of protection. First and foremost is the small country assumption, which makes it possible to draw a perfectly elastic foreign supply curve. Once the elasticity of foreign supply is assumed to be infinite, it is possible to rule out the terms of trade effect of tariff. However, the assumption regarding the terms of trade effect, as it is widely accepted now, is far removed from reality. Further, as we relax the small country assumption and allow the terms of trade to change, the traditional concept of cost of protection becomes blurred, and welfare gains due to terms of trade improvement may even outweigh the negative effects of the mis-allocation of resources in production and of the distortion of consumption. It follows that given certain conditions, a country can improve its welfare by applying the right tariff. This is exactly what the theory of optimum tariff tells us. The case of optimum tariff emerges when the country concerned possesses monopolistic or monopsonic power in the world market so that it can exploit its market power by levying an optimum tariff on imports or a tax on exports and achieve a higher welfare level (Corden 1986:82-86). Interestingly, the advantage derived from the optimum tariff would be at the expense of the trading partners (Kitson and solomou 1990:23).

Preferential trading

In this special case, there are two perfectly elastic supply curves representing the supply of imports from the preferred sources and the supply of imports from the rest of the world. The assumptions of the optimal free trade world and the perfectly elastic supply curves, as in the tariff case, help the theorists to exclusively focus on the resource allocation effects of the economic integration, ignoring scale economies, technical efficiency, terms of trade and growth aspects.

The implication of the above approach is clear; the net welfare effect of the preferential tariff reduction can be no better than that of unilaterally eliminating the tariff on a non-preferential basis. Thus, preferential trading arrangements are economically irrational, as compared to the first-best option of non-preferential tariff cuts, and therefore, can only be explained by non-economic motives (Pomfret 1988:111-116). Later developments, however, could break the impasse of the above framework, by relaxing the limiting assumptions and incorporating more dynamic effects of preferential trading arrangements, viz., scale economies, improved technical efficiency, possible terms of trade effects and higher growth rates (Lipsey 1960, Corden 1986:111-123). Thus, the theory can now explain proliferation of preferential trading arrangements in terms of potential economic gains. For instance, Mundell (1964) concludes that members of preferential trading arrangements improve their terms of trade with the rest of the world through preferential tariff reductions in a manner that could not be replicated by MFN cuts. Here again, the welfare gains would be at the cost of the rest of the world.

The theory of domestic distortions

The theory of optimum tariff originates, as we have seen, from the rejection of the small country assumption. Violation of other basic assumptions of the traditional theory opens up further cases for government intervention. To illustrate, violation of the Pareto equilibrium conditions arises mainly due to distortions or imperfections existing in commodities or the factor markets of the economy. Monopolistic influences, presence of external economies (diseconomies) are the main causes of distortions in the commodity market (Johnson 1971:135). Distortions in the factor market can take place in cases of immobility of factors, downward rigidity of factor prices or factor price differentials (Corden 1974:21-40). Such domestic distortions hinder the economy from achieving the Pareto equilibrium conditions of equality between market prices and social marginal opportunity costs. This will prohibit the economy from producing and trading according to

its comparative advantage, and hence, also from achieving the optimal welfare maximum. In such cases of domestic distortions, protection gives better results than free trade.

However, for the theory of domestic distortions, the first-best option is never the intervention in international trade. A policy of domestic intervention confined to taxes or subsidies on domestic consumption, production or factor use would render better results. This is so because intervention in international trade to correct domestic divergences would necessarily introduce another set of distortions that distract the economy from the welfare maximisation goal (Bhagwati and Ramaswami 1968). The theory of optimum tariff is virtually the only exception in the neo-classical framework, where trade restrictions are superior to the free trade proposition (Johnson 1987).

Thus, the theory approves of the fact that state policy may be profitably used to redefine a country's role in the international division of labour and to restructure its pattern of comparative advantage. An import-competing infant industry may be given domestic incentives to reap potential internal economies and to convert itself into an export oriented industry. And if domestic measures like subsidies are not effective or cannot be used, protection extended to such industries will be better than nothing, i.e. free trade (Corden 1974:248-264).

Similarly, there are cases, where a country can improve its welfare gains by converting certain export industries/sectors into import competing industries. This will be so if the private marginal cost of production in the export sector is lower than the social marginal cost. This distortion can be corrected by introducing domestic measures, which do not affect the country's external trade directly. But, if such domestic measures cannot be used, measures clearly affecting external trade will be better than the free trade option (Helpman and Krugman 1989:20-22). The list of cases, which demand deviation from the laissez-faire policy, can be extended to a large number of situations, viz., to maintain full employment, to bring about desirable distribution of income, to adjust resource allocation and consumption patterns in the light of external economies and diseconomies, etc.(Corden 1974:4-5). Interestingly, from beneath such cases for departure from laissez-faire policies, more often than not, cases for protection also appear, even though not as the first best policy option. Therefore, what the theory of domestic distortions offers to the free trade proposition is only a narrow escape, because it admits that protection in many cases is better than free trade. The only consolation to the free traders is that the theory attempts to prove the first-best character of domestic interventions.

The theoretical sanction for government intervention brings us to an interesting aspect of the international political economy. The case for free trade is developed as an extension of the general argument for laissez-faire policies. But, development of the theory of domestic distortions, which legitimises government intervention, has broken the link between the case for laissez-faire and the case for free trade. The case for laissez- faire has weakened, but the same for free trade survives; governments may profitably intervene in the domestic economy but let them not dare touch the sacred cow of free trade! How is this delicate and apparently paradoxical balance between the sanction for domestic intervention and the steadfast defence of free trade achieved? Apparently, the economists have attributed all the deviations from the Pareto optimal free trade world to domestic distortions.

New trade theories and strategic trade policies

The emergence of what is generally referred to as the `new international economics' has generated fresh and stronger cases for protectionist policies; to use modern jargon `strategic trade policies' (Helpman and Krugman 1985 and 1989). The case for protectionist policies emanating from the new trade theories is significantly different from the same derived from the theory of domestic distortions. For the theory of domestic distortions the reference frame has always been the Pareto optimal free trade world. The theory has been offering solutions for correcting deviations from the optimal world that occur on account of domestic distortions, whereas in the new theory the imperfections are built into the system. According to Helpman and Krugman (1989:8), two leading exponents of the new international economics: "Admittedly, there is a philosophical difference between the new arguments and the old. In international trade policy analysis, distortions that could justify government intervention were in effect superimposed on the theoretical structure whose basic logic was that of efficient, competitive equilibrium. In the new theory the imperfections are built into the structure from the beginning. So the arguments for interventionist policies are deeper in some logical sense".

In contrast to the earlier theories, which assume perfect competition in all markets, where firms take prices as given and set their own prices equal to the marginal cost, increasing returns and external economies play an important role in the new theory of trade. To be more specific, in the new theory increasing returns and external economies play a coequal role with comparative advantage in giving rise to trade. Further, as increasing returns are inconsistent with perfect competition, the new approach necessarily models markets as imperfectly competitive. The traditional argument for free trade depends heavily on the assumption of perfect

competition. The new trade policy models, which incorporate imperfectly competitive market structures, therefore, generate many new arguments for government intervention.

The arguments for interventionist policies that emanate from the new trade theory may be broadly classified into two, viz., the profit (rent) shifting argument and the externalities argument (Krugman 1987, 1990:12). The profit shifting argument builds mainly on the oligopolistic nature of international competition in many markets. The externalities argument advocates government promotion for industries and firms that generate positive externalities, which are not fully appropriable. The externalities argument, as we have seen while discussing the theory of domestic distortions, has long been advanced as an argument for government intervention and protection. However, as Krugman (1987) argues the new trade theory has given greater concreteness to the theoretical case for government intervention to promote external benefits.

There are many variants of the profit-shifting argument. One often cited variant of the argument is to provide a subsidy to the domestic firm engaged in a Cournot duopoly game with a foreign competitor in a third market (Brander 1990). The government action can alter the strategic game played by foreign and domestic firms by inducing the foreign firm to contract (or expand more slowly than it otherwise would). This will enable the domestic firm to capture a larger market share and increase its share of rent. The example of wide-body jet aircraft industry has been widely used to illustrate the above variant.

Another commonly cited variant of the profit shifting argument rationalises the use of a tariff to extract the rents that a foreign oligopolistic firm might be enjoying under potential entry (Brander 1990:35). To begin with, the domestic market is served by the foreign firm. But the threat of potential entry of domestic firms induces the foreign firm to pursue a strategy of deterring such entry by absorbing the tariff to some extent. "A sufficiently high tariff will eventually force the foreign firm to give up this practice of entry deterrence; domestic prices will rise, and domestic entry will occur" (Brander 1990:35). Krugman's 'import protection as export promotion' argument has also been widely discussed. Having a protected domestic market provides a firm characterised by economies of scale, internal to the firm, an advantage in scale over foreign producers and enables it to compete more successfully in domestic as well as foreign markets. Such interventions can help to shift profits from foreign to domestic firms and thereby increase domestic welfare at the expense of foreign welfare.

The size of domestic market is a crucial determinant of the success of many strategic trade policies[3]. For instance, the small size of domestic market may preclude the exploitation of scale economies and therefore make Krugman's 'import protection as export promotion argument' irrelevant. According to the new trade theorists plants with large home markets are better able to exploit scale economies and thus are more competitive abroad (Tybout 1993). Further, strategic moves from small countries are more likely to attract strong foreign retaliation.

According to Krugman (1993), external economies provide a more empirically important argument against free trade than excess returns. The high technology industries to which international trade is increasingly shifting are characterised by valuable spillovers. The idea behind the 'externalities argument' for active trade policy is to encourage external-economy-producing activities. Protection of such industries, or subsidies extended to them, it is argued, might raise national income (Krugman 1990:13-14). Foreign promotion of such sectors, conversely, might be depriving the home country of valuable spillovers and should, therefore, be countered. Technological spillovers from military investment to US industries producing civilian aircraft and semiconductors offer a good example for strategic use of externalities.

The empirical relevance of increasing returns and external economies in trade, and the practical significance of new models in guiding trade policies, are highly debated issues (Helpman and Krugman 1989:155-180, Krugman 1990, 1993, Tybout 1993). However, while the debate may continue for long, the present trend, supported even by leading exponents of the new school, appears to be to play down the importance of strategic trade policies (McCulloch 1993, Krugman 1993). The mood is better expressed in Krugman's (1993) words, "Free trade is not the optimal policy, these studies suggest, but clever interventionist policies will only do a little better". In addition to this, difficulties associated with the selection of strategic sectors, choice of policy tools and their mix, possible foreign retaliation, etc., are cited to de-emphasise the policy implications of the new theory. In our opinion, this renewed apology of free trade does not appear to be based on any sound economic logic or historical experience. The industrial organisation theory, on which the new trade theory is based, does not at all suggest that the oligopolistic rent would always be unimportant. Further, the history of commercial policy, especially the experience of US, Japan, South Korea, etc., cited in the new literature, would not allow us to underrate the significance of strategic trade policies.

The above debate, however, does not preclude us from drawing the following lessons. The new trade models clearly establish that free trade is rarely the optimal policy for imperfectly competitive industries, where

increasing returns and external economies play a major role. In the case of such industries, if certain identifiable conditions are met, strategic interventions would help the home country to enhance competitiveness of domestic firms, improve the market share, extract rent from foreigners, as well as to appropriate externalities. Such strategic policies, more often than not, would be predatory in nature.

The concept `cost of protection' implicitly suggests that protection always entails a cost in terms of welfare. But as the foregoing review of the theories of commercial policy shows, economists have identified innumerable situations, where commercial policy tools may be used gainfully by the countries, which resort to such measures, and that too at the expense of others. Initially, the arguments for protection were presented as exceptions to the general proposition on gains from trade and cost of protection. This is true of the theory of optimum tariff as well as the theory of domestic distortions. But the exceptions themselves, as they grew in number, started threatening the status of the proposition on gains from trade and cost of protection as a general rule. More recently, the advent of the theory of strategic trade policies has broken the conventional framework of free trade. Competitive free trade has ceased to be the reference frame for modelling trade policy situations. Instead, the new trade theorists perceive international trade as a strategic game full of opportunities for strategic as well as gainful intervention. The logic of the new theory is so linked to government intervention, that it very well justifies the following comments of Panchamukhi (1994:22): "God alone knows as to what is left to the market forces when all policy interventions of this dimension are made!"

Evolutionary Approach to Growth and Technology Gap Theories of Trade

The implications for policy of evolutionary approach to growth and technology gap theories of trade need to be discussed on a separate track for they mark a methodological break with the approaches outlined above. The discontinuity in approach is represented by the substitution of the neo-classical 'market equilibrium' with that of the 'selection process'. In the selection process, the differences in the competitive power of firms are the driving forces of the system; firms endowed with high competitive power will grow (in terms of market share or profits) and others will loose the race and be pushed out of the market. Thus the evolutionary way of looking at the world - and the selection mechanism - takes heterogeneity of individuals as the starting point and leads to an explicit dynamic representation of the market process, instead of the motionless equilibrium that might (theoretically) result (Verspagen 1993:57-75).

In the evolutionary approach, the prime mover of growth is technological progress. According to its proponents, normal technological change consists of relatively small improvements upon bigger, revolutionary technological breakthroughs, viz., 'technological paradigms'(Dosi 1984:13-22). A technological paradigm will assume the proportions of a techno-economic paradigm if its technological principles can be used in a wide spectrum of economic sectors (Freeman 1987:60-77). The take-off of a new techno-economic paradigm need not at once do away with existing paradigms. The old paradigm and firms within it would try to survive and strengthen their competitive position by making minor innovations and improvements in the old technological trajectory. However, as the new paradigm matures, decreasing returns to research efforts would set-in in the older technological trajectories. The progress within and across paradigms would also involve creative destruction of old capital: Firms and regions which fail to adapt would loose out in the process of competition (Verspagen 1993:68-75).

One obvious manifestation of the evolutionary approach to growth has been in the realm trade theory. The 'technology gap' explanations of trade maintain that countries which successfully open up 'technology gaps' over others would perform much better in international trade. Those who successfully imitate the technology leaders may also benefit, but the process of catching up would be rendered difficult due to various factors including successive improvement of the technology by the leaders.

In short, countries and firms which are more successful than their competitors in developing new products, and in improving old ones or improving the manufacturing technology by which the products are made are likely to perform relatively better (Dosi 1984:225-249, Freeman 1987:91-117). Obviously, the policy advice that emanates is in favour of interventionist policies that strengthen the national system of innovation. Coming to the realm of commercial policy, the evolutionary theorists seem to support policy measures which support industries with external economies and, in general interventions which enhance national technological capability. Given their theoretical framework, the technology-gap theorists should also support trade policy measures which favour mobility of the country from traditional (low technology) products to new (advanced technology) products. However, broad generalisations apart, a thorough revision of the theory of commercial policy in view of the insights provided by the evolutionary approach is yet to be undertaken. For instance, it would be interesting to see how the mainstream theory of tariffs would have to be changed to incorporate the effects of a tariff or structure of tariffs that favourably or adversely affect mobility of a country from well established products and technologies to new products and new technologies. But as stated at the outset, the

theory of commercial policy respond rather obstinately to the new insights in the realm of the theories of growth and trade.

Section II
Mainstream approaches to protection: a critique

The present critique of the theory of commercial policy is not designed to be an exhaustive one and admittedly leaves out many important dimensions of the same, including some major limitations cited elsewhere in the literature[4]. Instead, we now focus almost exclusively on the question as to how far the existing approaches help us pursue the problematic of the present study: Implications of the distribution of trade barriers in industrialised nations that constrain structural mobility of underdeveloped countries.

In order to be able to tackle the question, the theoretical framework that we use should have two essential properties. First, it should be sensitive to the structure of trade or the pattern of specialisation. In other words, it should be able to discriminate among product groups or areas of specialisation. Clearly, a theory, which considers all lines of specialisation advantageous, would be indifferent to different lines of specialisations as well as to the question on the barriers to mobility across such lines. Second, the theoretical framework should be versatile enough to integrate into itself the dimension of mobility of participants across different lines of specialisation. We insist on the second condition because, as we shall demonstrate below, a theory, which is sensitive to the structure, need not necessarily be able to integrate the dimension of mobility[5].

To begin with, let us take up the naive, albeit the most popular approach, which extends unqualified support to free trade and hence, completely rules out the possibility of advantageous commercial policy intervention. Obviously, the approach is indifferent to the structure of trade. Its propositions on gains from trade and cost of protection are insensitive to the pattern of specialisation of participants and the nature of products subjected to protectionist policies. Trade, according to this view, would be advantageous to any participant regardless of the area in which it chooses to specialise, provided that the choice conforms to the principle of comparative advantage. Similarly, protection would be costly to the country which resorts to it regardless of the nature of the product affected by the policy intervention. Now, a theory, which is indifferent to different areas of specialisation, cannot but be indifferent to the question of mobility. It follows that the above approach would not help us to study the effect of trade barriers, which restrict mobility of participants across different areas of specialisation.

The theory of domestic distortions, as the name itself suggests, also would not be of much help to the study of external barriers to structural mobility. As explained in Section I, the theory focuses almost exclusively on domestic distortions and uses the Pareto optimal free trade world as the reference frame to analyse the effects of measures taken to correct such distortions. Nevertheless, some important lessons on the desirability of free trade and the effects of protection can be drawn from the studies on domestic distortions.

According to the theory of domestic distortions, a country's actual role in the international division of labour need not represent her potential comparative advantage because of domestic distortions. More importantly, uninterrupted international trade would not correct such imperfections on its own. Free trade may not allow the country to exploit economies of scale in many sectors, need not represent externalities, and may perpetuate imperfections in factor markets. Implications of such distortions for the growth process is clear. Whatever may be the static gains from it, free trade would, at least in certain cases, prohibit the country from attaining its potential growth[6]. Thus, to the theory of domestic distortions, there is nothing natural, or sacred about the international division of labour evolved under free trade. Therefore, it may be possible for the participating countries to design appropriate interventionist policies to redefine their role in the international division of labour and improve their gains from trade.

The theory of optimum tariff and the strategic trade theories, admittedly, are sensitive to the nature of products. The terms of trade effect of a tariff, for instance, depends a lot on the nature of the product (defined in terms of elasticities) on which the duty is imposed. Similarly, strategic policy options and their effects would also depend on the nature of the product (defined in terms of its market structure, external economies, etc.) in question.

Even though the theory of optimum tariff and the strategic trade theories take into account the nature of products studied, they define the effects of protection independently of the structure of trade and distribution of trade barriers. Clearly, trade barriers imposed on areas other than the product considered are `irrelevant' for the theory of optimum tariff. The same observation is generally applicable to the strategic trade theories as well. Strategic trade theories are based on neoclassical models of market structure, which view competition essentially as an intra-industry phenomenon. Therefore, such models cannot be dynamic enough to capture inter-industry mobility of capital/producers. It needs to be reiterated that our criticism, since it is built around the limitations of neoclassical models of market structure, is applicable to all the strands of strategic trade theory.

The inability of the strategic trade theory to address the question of structural mobility may be illustrated with the help or a hypothetical underdeveloped country which faces the problem posed in the present study, viz., external trade barriers to structural mobility. Given our definition of barriers to structural mobility, the distribution of trade barriers that the country's exports encounter will be such that the hostile measures crowd together against products facing relatively dynamic demand conditions. The country may not be facing any barriers whatsoever in such areas of its specialisation where the world demand is stagnant or declining. In other words, the distribution of trade barriers is such that the country is forced to specialise in sunset areas which are being phased out of international circulation. The point that we wish to drive home in the present study is that the structure of trade barriers that force the country to specialise in sunset areas - even though they are apparently unrelated - would have a bearing on the quantity exported of such sunset products and the prices they fetch in the international market. It would be difficult to adapt the models used by strategic trade theorists so as to capture the effects of trade barriers imposed against apparently unrelated products! The difficulty arises because of the simple reason that the underlying neoclassical models discuss competition as well as price formation within the strict confines of individual industries taken separately. That they are not adequately sensitive to intersectoral mobility (competition) of producers is a well established criticism of the neoclassical framework to be reiterated here. We shall take up the question of neoclassical approach to competition in some more detail in subsequent Chapters. In our opinion, only a theory which organically integrate intersectoral mobility of capital can be adequately sensitive to the question posed in the present study, viz., barriers to structural mobility.

We do not, however, deny the importance of the insights provided by the strategic trade theories. They provide many new ideas regarding the charecteristics of industries where protectionist policies are successfully used. Similarly, the theory of optimum tariff, which acknowledges the terms of trade effect of tariffs, may be used to draw certain useful insights into the implications of the structure of trade barriers. Regarding the terms of trade effect of a tariff, it can be stated in general that, the lower the price elasticities of demand and supply of the foreign country, the higher the improvement in the terms of trade (Sodersten 1980:177). One needs to go only a little beyond the elasticities to show that the terms of trade effect of a particular tariff would be influenced by the entire commercial policy structure. Large values of price elasticities of demand and supply suggest that consumers and producers in the foreign country (exporting country) are highly sensitive to changes in relative prices. For the producers to be sensitive to relative prices, i.e., for the price elasticity of supply to be high, they should be able to move the factors of production easily from one sector to the other. In the context of the international division of labour, it would mean that the country's export sector should be

dynamic; it should be able to move factors of production from one export sector to the other. Now, adaptability of the export sector (structural mobility) would depend, apart from other factors, upon the structure of the trade barriers the country's exports face. Thus, trade barriers on even distantly related products may influence the elasticity of supply of the product considered and the terms of trade effect of the particular tariff studied[7].

It may also be noted here that such effects of the structure of trade barriers cannot be captured by the general equilibrium models, despite the fact that they use multi-commodity models. We argue so, because they generally assume that each foreign supply curve is independent of all other curves (Corden 1974:168-70). The models, which assume that foreign supply curves are independent of each other, in effect are assuming away the structural effect of trade barriers[8].

From our discussion on the terms of trade effects of tariffs, it is clear that the effects of a tariff on any particular trade flow, or any other trade policy measure for that matter, would be influenced by the trade policy measures applicable to the rest of the trade flows. The theory of effective protection was an effort to address this gap.

Effective protection

The theory of effective protection can be regarded as a major improvement over the conventional approach to the measurement of protection. For, it helps capture certain structural features of protection. Prior to the introduction of the effective rate, the theory of tariff used to work with the implicit assumption that domestic production of the protected product is vertically integrated. The theory of effective protection removes this assumption and introduces purchased, produced inputs, which are themselves traded, and which may be subject to tariffs, taxes or subsidies (Corden 1971:28-34). Now it is obvious that an import tariff on the final product would have a protective effect, not only for the final product, but also for the input producing industries. Conversely, trade barriers on imports of inputs, for that matter even liberalisation of import barriers, would have its effects felt on the final product producing industry. In short, structure of production as well as distribution of trade barriers acquire unavoidable significance in the analysis of protection.

The effective rate of protection tries to incorporate these structural dimensions by calculating the combined rate of protection effected by the relevant tariffs, i.e., tariffs on the final product as well as those on the

produced inputs, on the value added of the industry for which it is computed[9]. Needless to say that the effective rate of protection would vary from the nominal rate. Normally, liberalisation of imports of inputs would increase the effective rate of protection granted to the final product and *vice versa*.

However, the effective rate takes care of only one of the many dimensions of mobility. Mobility of participants in the international division of labour cannot be restricted to the one along the processing chains, i.e., from inputs to their final products. Mobility can occur between totally unrelated product lines as well. As we have seen in the case of the terms of trade effect of a tariff, trade barriers, which restrict other dimensions of mobility, also can be of major significance. More importantly, the effective rate, at best, is only an improved measure of protection. When it comes to the effects of protection, (e.g. its effect on the terms of trade) it does not offer anything new or different as compared to the approaches reviewed so far.

The technology gap explanations of trade admittedly are sensitive to the question of mobility. Even though insights provided by the technology gap explanations are yet to be translated into a coherent theory of commercial policy, their framework may be used to argue that trade barriers which restrict mobility in the international division of labour from traditional (low technology) products to new (advanced technology) products would be costly for the country concerned in terms of market share, terms of trade, etc. But, unfortunately, their framework, developed in the context of an entirely different problematic, is not easily amenable to address the question of structural mobility which happens to be the central concern of the present study. We owe an explanation as to why the present study do not take up the question of trade barriers to mobility of countries from products embodying established technologies to new products and advanced technologies. We shall take up this question towards the end of the present Chapter.

The case for an alternative approach

An alternative approach is necessitated by the unique nature of the question that we wish to pose in the present study. We visualise international division of labour as a dynamic sphere, where the structures of world trade and demand are subjected to systematic change, and where relative importance of different lines of specialisation tend to systematically increase or decline. We also see the underdeveloped countries as bogged down to such lines of specialisation which are being phased out of circulation. It is also our contention that the underdeveloped countries face many hurdles, especially the systematic resistance offered by the structure of trade barriers in developed countries, in their effort to move on to areas facing relatively dynamic world

demand conditions. It is in this backdrop that we raise the question as to what would be the implications of the distribution of trade barriers in developed countries that restrict structural mobility of their underdeveloped counterparts in the international division of labour. Admittedly, within the theoretical frameworks reviewed so far there is no space for raising such a question, and, therefore, it may even appear to be too trivial a question to be pursued seriously. But, this is only an optical illusion created by the limitations of the theory which is known to be blind to certain hard facts of international competition and commercial policy. It would be counter-intuitive to assume that barriers, which force a country to products being phased out of international circulation, are of no consequence.

The inability of the existing approaches, leaving technology gap theories aside, to take into account the structure of trade barriers and the dimension of mobility can very well be traced to the underlying theory of international trade and prices. Interestingly, while explaining the formation of international prices, the existing theories of trade do not take into account international mobility of capital. Evidence for this is not far to seek. Ricardo's theory of trade and its modern interpretations alike, explicitly assume immobility of capital and labour across countries. More importantly, they use neo-classical market structure models which approach competition essentially as an intra-industry phenomenon. What is being ignored in the process is inter-sectoral mobility of capital, which incidentally is one of the most crucial aspect of competition we wish to highlight in the present study.

The assumption of immobility of capital and labour, especially that of capital, is of crucial importance. As Emmanuel (1972:xxx) has rightly pointed out, the immobility of capital rules out the possibility of any objective evaluation of international prices. Immobility of capital rules out the tendency for equalisation of rates of profit across different lines of specialisation as well as the possibility of formation of what Smith refers to as natural prices, and Ricardo and Marx refer to as prices of production. The concept of natural prices or prices of production would have provided the basis for an objective evaluation of international prices[10]. Thus, within the framework of existing theories, there is no objective basis to examine whether a line of specialisation or a pattern of specialisation is advantageous or not. Market prices of commodities cannot be contrasted with their prices of production, and individual rates of profit cannot be compared with the general rate of profit.

Having argued that the mainstream theories offer no basis for an objective evaluation of prices, it is important to ask here, how then can they characterise international trade as a mutually beneficial game, where everybody

stands to gain regardless of their role in the international division of labour. For sure, the above claim is not based on any objective evaluation of international prices. Instead, what the theory has done is only to prove the superiority of free trade, regardless of the pattern of specialisation, over autarky. In fact, it is only in this trivial sense that the mainstream theory of trade characterises trade as beneficial to all regardless of the pattern of specialisation[11].

In the context of the present study, whether participating in the division of labour is better than living in isolation is not the right question to be posed[12]. In today's world of very high and growing interdependence of countries, it is almost impossible for individual nations to produce and consume in isolation. Naturally, the superiority of trade in its trivial sense, i.e., over autarky would appear obvious. But, the theory should be able to go beyond the static comparison of trade with autarky and facilitate an objective/social evaluation of international prices. If so, the theoretical framework would be able to discriminate among different lines of specialisation and hence would also be able to be sensitive to the question of mobility. But all these would be possible only if we drop the crucial assumption of immobility of capital, and recognise the massive process of internationalisation of capital and production that the world has witnessed over the past several decades.

Finally, it needs to be explained as to why we do not pursue the technology gap theories and see whether trade barriers in developed countries resist mobility of underdeveloped countries from traditional (old technology) products to new (advanced technology) products. First and foremost reason is the desire to delimit the scope of the study and to focus on the question of structural mobility. This in no way underrates the significance of the dimension of mobility highlighted in the technology gap theories. Second, we consider structural mobility to be a more or equally important dimension of competition whether at the national or international level. To illustrate, intersectoral mobility of capital is induced primarily by the quest for higher rates of profit and not by the search for new technologies *per se*. The introduction of a new product and the new technology facilitating the same by itself is no guarantee for a higher rate of profit. In fact, the rate of return and hence the rate of accumulation and growth of the newly introduced product line would depend very much on the nature of demand that it is likely to encounter. Thus, the nature of demand appears to play a more fundamental role in determining the prices, rates of return and growth prospects of alternative lines of specialisation. It should also be pointed out here that sustained changes in the structure of demand can be induced by a variety of factors other than changes in technology. For instance, sustained changes in the level and distribution of income, cultural shifts, changes in consumer perceptions and fashion, etc., may also lead to changes in the structure of demand. Obviously, the structures of demand and production cannot move in

different directions. Re-orientation of the production structure to suit the changes in the pattern of demand would more often than not require a re-distribution of capital (productive forces) among competing lines of specialisation. Such re-distribution of capital would also require intersectoral differences in the rate of return on capital, at least till when the production structure is reoriented to the new pattern of demand. It is the observation that international economy is characterised by sustained changes in the structure of demand, and consequently varying rates of profit, accumulation and growth across different lines of specialisation that prompted us to focus on structural mobility.

Third, the technology gap theories are known to be more suited to explain the pattern of trade of developed countries than their underdeveloped counterparts. The underdeveloped countries like India rarely succeed in opening up technology gap trade and hence generally tend to specialise in fairly established product lines. However, it is very likely that the product lines in which they specialise face different patterns of change in demand.

Another reason which made us desist the temptation to study the technology dimension in detail has been the problems related to data. Even at the 3-digit level of the SITC, the product lines included are fairly old and well established ones. Therefore, in order to identify newly introduced product lines one may have to use data at the lowest level of aggregation. Further, even at the lowest level of aggregation many new products are likely to be left out for the simple reason that it takes some time for the trade classification to be revised to incorporate the newly introduced products. One way out would be to employ the case study method, which unfortunately is not suited to study the problem of mobility and mobility barriers[13].

Summary

The theory of commercial policy has witnessed many important changes in the recent past which helped the theorists come closer to the reality of commercial policy praxis. It is true that the naive approach, which extends unqualified support to free trade and denies the possibility of advantageous commercial policy intervention, continues to be the most advertised and perhaps also the most popular of all approaches to cost of protection. But, ironically, it also happens to be the most divorced from the reality of commercial policy praxis. The widespread popularity of protectionist policies among policy makers of the world, in other words `the critique of the real', has forced economists to revise many of their earlier theoretical positions. The later developments in the theory of commercial policy, thus, provide many valid arguments in favour of

interventionist policies, which may be used to reap welfare gains, often at the expense of the trading partners.

The later improvements, however, do not free the theory of commercial policy from one of its major limitations, viz., the failure to take into account the structure of trade and the distribution of trade barriers. The theory, despite the progressive revisions, continues to be insensitive to the question of structural mobility of participants in the international division of labour. The difficulty arises mainly on account of the fact that the underlying neo-classical models define competition as well as price formation within the strict confines of individual industries taken separately. What is being overlooked in the process is intersectoral mobility of capital, which incidentally is one of the most crucial aspects of competition we wish to highlight in the present study. Another debilitating feature of the existing approaches is the assumption of international immobility of capital. Since international prices are explained assuming immobility of capital, the data on barriers which restrict such mobility, are irrelevant to the existing approaches.

The theory of international prices based on the assumption of immobility of capital leaves no scope for an objective/social analysis of prices. The theory, therefore, cannot discriminate among different areas of specialisation, nor can it be sensitive to the question of mobility across such lines of specialisation. Therefore, there is a very strong and valid case for an alternative theoretical framework to study the effects of protection. The critique of the existing theories also suggests that the alternative approach should take note of the growing internationalisation of capital and production and treat intersectoral mobility of participants as an essential attribute of competition among nations.

Notes

1. Even such a small country as Bangladesh, whose share in the world market for garments is well below 0.5 per cent, is covered by the Multi-Fibre Agreement (MFA). As per the provisions of the MFA, the Bangladesh government is bound to voluntarily restrain its garments exports to the developed countries (Spinanger 1987, World bank 1990:123).

2. The Pareto optimality may be defined as follows. "Given certain assumptions, free trade is optimal. The assumption upon which this proposition rests are notably that there is perfect competition, that all goods and factor services pass through the market, that there are no distorting taxes and other interventions, and that a country cannot affect its terms of trade. In that case free trade will, for any pair of goods, automatically bring about equality between the marginal rate of transformation in domestic production, marginal rate of substitution in domestic consumption, and the marginal rate of transformation through trade" (Corden 1974:6).

3. In fact, the success of strategic moves would depend on a variety of factors that characterises the concrete policy situation. The models, in their effort to focus on the most crucial aspects, might not be incorporating all those factors.

4. For instance, we do not consider the possible macroeconomic effects of trade policy measures. Free trade doctrine and the mainstream theory of protection generally assume full employment and instantaneous adjustment to economic shocks. However, it is argued, that a more realistic approach to the effects of trade policy measures should take care of their macroeconomic implications as well (Kitson and Solomou 1990:23-30).

5. As we shall see subsequently, some approaches to cost of protection (for example, the theory of optimum tariff), which are sensitive to the nature of the products studied, define the cost of individual tariffs imposed on a particular trade flow, independently of the rest of the structure of tariffs and trade flows.

6. Interestingly, this leads us to a very important limitation of the free trade doctrine. For instance, according to Yeats(1979:15) "While production according to comparative advantage may yield optimal results in a single (current) time period, there remains the question of whether some alternative pattern of resource allocation might lead to more advantageous results over the long run. In other words, there is no assurance that current allocation of resources based on comparative advantage will be optimal over time, even though it may be optimal in the current period". Contextually, with the help of historical studies on Portugal, Frank (1976) has argued that the decision to specialise in the production of wine had a long run retarding effect on the Portuguese economy.

7. Importance of the structure of trade barriers becomes all the more obvious in the context of the discussion on the long-term deterioration of the terms of trade of peripheral economies. The conditions for secular decline in terms of trade are defined in terms of specificities of the commodities the peripheries export, viz., low price elasticity of supply and demand and low income elasticity of demand. Now, if producers were able move out of such over-crowded, disadvantageous areas of specialisation, it would have saved such lines of specialisation, especially those who specialise in such areas, from the adverse terms of trade movement. If the inability to move into areas facing favourable demand conditions is, at least partly, due the structure of trade barriers that their exports face, then the structure of trade barriers could be seen as an important reason for the secular deterioration of the terms of trade of peripheral economies.

8. It is unrealistic to assume that each foreign supply curve is independent of all other curves. We have already seen that the price elasticity of supply of any particular product would depend on the supplying countries ability to shift resources from one export sector to another. Thus viewed, all foreign supply curves are highly interrelated. This is particularly so when we consider the effect of trade barrier; restrictions on individual trade flows are likely to affect the elasticity of supply of other products.

9. "The effective rate of protection of an industry is normally defined as the percentage difference between the industry's value added per dollar of output under tariff protection and its value added per dollar of output in the absence of protection" (Yeats 1979:85).

10.. Within the classical system, the exchange values of commodities are determined by the objective conditions of production. For instance, in Marx, it is the socially necessary labour time that, in the ultimate analysis, regulates relative prices of commodities. Market prices may deviate from the exchange values (prices of production), due to temporary fluctuations in supply and demand. But such fluctuations would be tendentially regulated by the natural prices\prices of production. That the market prices would be regulated by the conditions of production is ensured by the mobility of capital and labour.

11. To illustrate, the theory of comparative advantage says only that, if prices before trade differ between two countries, then they can gain by trading. In Ricardo's example, the relevant autarky prices are: (1) Portugal, 1 unit of wine = 8/9 units of cloth, and (2) England, 1 unit of wine 12/10 units of cloth. When international trade is open, Portugal would gain if one unit of wine fetches anything more than 8/9 units of cloth from England. And if international price of one unit of wine is less than 8/9 units of cloth, Portuguese traders would not participate in trade. Thus, there is no question of Portugal losing from trade! The theory boils down to the tautology that trade is beneficial because it takes place.

12. The argument may be made more clear by drawing some parallels from within a national division of labour. No labourer would compare the livelihood that he earns from an occupation to an imaginary situation he would have been in had he opted to live in isolation. In fact, the labourer might agree that living in isolation would be miserable and that any line of specialisation in the social division of labour would be better than the misery of isolation. But, the labourer would insist on comparing what he earns with what his fellow workers get in comparable occupations. Further, such social or objective analysis of prices is possible in a capitalist society where there is freedom of mobility of capital and labour. Incidentally, it is this mobility of capital and labour which helped the classical political economists to evolve their theory of the prices of production. What is said in the context of the capitalist division of labour within a nation can very well be extended to the international context, provided we recognise fluidity of capital across sectors and between countries.

13. The problem that we encounter is related to the direction of mobility. If we follow the framework of effective rate of protection we have a very clear direction of mobility in the processing chains. But once we come to the technology gap theories, mobility of firms or countries from their traditional areas of specialisation to new products cannot be restricted to processing chains or any other pre-determined routes. Obviously, the case study approach will not be adequate to cover all directions of mobility. It may be reiterated that the present study is about mobility and mobility barriers.

Chapter 3
TRADE BARRIERS STRUCTURAL MOBILITY AND UNEQUAL EXCHANGE AN APPROACH TO THE STUDY OF EFFECTS OF PROTECTION

The review of literature in the previous Chapter has shown that the mainstream approaches to cost of protection are insensitive to the question of structural mobility of participating countries. In the present Chapter our endeavor is to suggest an alternative approach to the study of effects of trade barriers in industrial countries that restrict structural mobility of underdeveloped countries in the international division of labour.

As argued in the previous Chapter, the inability of the existing approaches to take into account the structure of trade barriers and its likely impact on mobility of countries can very well be traced to the underlying theory of competition and prices that ignores mobility of capital between countries as well as across sectors. A theory which conveniently abstracts itself of the reality of capital mobility can hardly leave any space for an objective/ social analysis of prices. It is only an objective/ social analysis of international prices that would help us discriminate between different areas of specialisation and thus, recognise the importance of structural mobility (or restrictions on the same) of participating countries in the international division of labour. Such an objective/ social analysis of prices, we argue, would require the extension of the labour theory of value of the classical economists to the international context.

Indeed, international economic integration, especially the growth in inter-country mobility of capital since the days of classical political economy, has prompted many scholars to extend the classical framework to analyse international prices. Neo-Ricardian and neo-Marxian literature on trade, especially the theories of unequal exchange belong to this tradition. In our attempt to suggest an approach to study the effects of protection, we broadly follow the path opened by the unequal exchange theories. More specifically, the suggested approach would be based on an extension of the Marxian theory of the prices of production to the international sphere.

Incidentally, the existing theories of unequal exchange, as many critics have already pointed out, are known to suffer from some important limitations. While interpreting the 'prices of production' in the present study, therefore, special care has been taken to overcome the limitations attributed to the existing theories of unequal exchange.

In spite of the expansion of the literature on unequal exchange, there is as yet no consensus on the use of the labour theory of value in the international context. In fact, a good deal of criticism against the unequal exchange theories seems to originate from the opposition to the extension of the prices of production framework. In Section I of the present Chapter, we take up the arguments against the extension of the prices of production framework and explain why we consider it justifiable to extend the same to the international sphere. The critique of the theories of unequal exchange is not confined to the well known opposition to the extension of the prices of production framework. Many among the critics are not, in principle, against the extension of the prices of production framework. Their critique of the unequal exchange theories focusses mainly on the latter's misinterpretation of the prices of production scheme. On our part, we find ourselves fully in agreement with the second group of critics whose arguments focus not on the extension of prices of production framework as such but on its faulty interpretation. A brief account of these arguments presented in Section I would help us situate our own attempt to use the prices of production framework in the international context.

In Section II, we discuss some aspects of the working of the law of formation of prices of production within a national economy and show that the original proposition on prices of production, if interpreted properly, needs no manipulation to explain unequal exchange and uneven development of capitalist production. The focus in Section II, however, is mainly on the implications of lack of structural mobility for individual capitals and regions. In Section III, we extend the prices of production framework to the international sphere and analyse the effects of trade barriers, which restrict mobility of participants in the international division of labour.

Section I
Theories of unequal exchange

Emmanuel's (1972) study of the imperialism of trade is regarded as the first systematic account of what is now widely known as unequal exchange among nations. Emmanuel's point of departure is his rejection of the assumption of international immobility of capital in the traditional theory of trade. For him, capital is fluid enough to generate the tendency for the rates of profit to equalise internationally. This enables him to extend Marx's theory of prices of production to the sphere of international trade. As is well known, formation of prices of production involves transfer of value from branches with lower than average to those with higher than average organic composition of capital. For Emmanuel, this transfer of value due to the equalization of rates of profit across sectors does not amount to unequal exchange in the strict sense. Unequal exchange in the strict

sense, which is also unique to international trade, occurs due to immobility of labour across countries and the consequent international wage differences. International difference in wages necessitates some modifications in the proposition regarding prices of production. This modified extension of the prices of production framework constitutes the corner-stone of Emmanuel's theory of imperialism through trade. Exploitation through trade occurs because, international trade with differing wage levels and with the tendency for the rates of profit to equalise, necessarily implies unequal exchange; the low wage country exporting products embodying more value in exchange for those containing less.

Emmanuel's thesis on unequal exchange, as it proved to be a powerful critique of the conventional wisdom on gains from trade, was not to be left unnoticed. Since 1972, many studies, which test the practical validity of the arguments as well as theoretical contributions, which attempt to improve upon earlier versions, have appeared (e.g. Evans 1976, Gibson 1980 Sau 1984, Chandra 1986b). Amin (1974), who hailed Emmanuel's thesis as a fundamental contribution has tried to modify and integrate the same with the theory of development of underdevelopment. Thus, the theory of unequal exchange in its various forms enjoys pride of place in the neo-Marxist analysis of imperialism and accumulation of capital on a world scale (Frank 1978:103-10, Wallerstein 1983:30-43). Amin (1976), like Emmanuel, has used Marx's formulation of prices of production to evolve the theory of unequal exchange. Neo-Ricardians on the other hand, use Sraffa's model of price formation to derive the same (Gibson 1980, Dandekar 1981, Braun 1984).

The debate has also thrown up certain serious objections to the proposition on unequal exchange. The 'Orthodox Marxists', derogatorily so referred to by the neo-Marxists, have generally been uneasy with the revival of the prices of production framework, not to speak of its extension to the international sphere[1]. They view the unequal exchange theory as based on a model of 'competitive capitalist production', blown up on a world scale. Existence of monopolies and pre-capitalist formations-- more specifically production units not run on the basis of principles of 'competitive capitalism' -- makes the extension of prices of production an 'undiluted non-sense'! (Patnaik 1986:340).

The marxist debate between those who disown the theory of prices of production for reasons cited above and those who argue that its relevance would only increase with the evolution of capitalism would continue unsettled for long[2]. The debate is too extensive to be summarised here. However, in what follows we may briefly explain why we consider it justifiable to extend the prices of production framework to the international sphere.

It is now widely recognised that the disavowal of the prices of production framework originates from a fundamentally wrong reading of the Marxian notion of competition (Semmler 1982). The 'orthodox marxists' seem to have mistaken the classical notion of competition for its neo-classical counterpart, 'perfect competition'. As Datt (1990:164) observes in his critique of classical and neo-classical notions of competition: "For Smith, Ricardo and Marx, the central feature of competition refers to the mobility of capital (stock) between different branches of competition and the resulting tendency towards an equalization of rates of profit between sectors". This definition of competition, obviously, is not based on the industrial structure. In sharp contrast, the neo-classical notion of perfect competition, which has an in-built static aspect to it, pre-supposes detailed specifications regarding the industrial structure, viz., large number of buyers and sellers to ensure 'atomistic' nature of agents and perfectly elastic demand for the output of each seller, homogeneity of the product, perfect information, perfect mobility of factors, etc. The classical notion of competition does not require such perfect conditions. As Robinson (1962:8) puts it: "Here (in classical theory) it is not necessary that there should be a perfectly elastic demand for the output of each seller in each market at each point of time; it is necessary that there should be no limitation on access, *given time*, to any market, so that an equal rate of expected profit on investment tends to be established throughout the system" (emphasis added).

The above reconstruction of the classical notion of competition has prompted many economists to argue that the concentration and centralisation of capital, and even the emergence of multinational corporations are not inconsistent with the classical notion of competition and the prices of production framework (Clifton 1977, Shaikh 1978, 1980a, Weeks 1981, Semmler 1982). In their opinion, concentration and centralisation of capital, and the consequent changes in the industrial structure would only heighten competition in the classical sense[3]. Further, according to Clifton (1977) concentration of capital in modern corporations which operate in different sectors and in different countries would make capital more fluid. Centralised investment decision making by the corporate office, which analyses profit performance of different divisions, would hasten the equalization of profit rates. Weeks (1981:167) questions "the concept of `golden age' of competition, when competitors were many, production units small and competition was free. This view is totally ahistorical. Competition, since it derives from the inner nature of capital, develops and intensifies as capital develops. It is with the development of capital in its most advanced form, monopoly capital, that competition, too, develops to its fullest extent".

Moreover, with the help of an extensive review of main empirical studies on monopoly and differential profit rates since the 1950s Semmler (1982) has shown that the Marxian theory of competition and profit provides

a framework consistent with the available data. Intersectoral differences in profit rates are quite consistent with the law of formation of prices of production. In our opinion, as we shall try to demonstrate in Section II, if the tendency for the rates of profit to equalise across sectors is interpreted as absence of differential profit rates, it would rob the prices of production framework of its dynamic essence.

Now, should the impurities in the system, i.e., presence of units run not on the principles of competitive capitalism make the prices of production framework redundant? This line of reasoning, we fear, would amount to characterising Marx's theory of prices of production a mere exercise in abstraction devoid of any concrete application. Because, at any point in time, and for that matter in any national economy, one may come across production units and even sectors, which defy the principles of 'competitive capitalism', viz., small peasant land proprietorship, public enterprises, oligopolies, workers' co-operatives, etc. There could also be inefficient firms or groups of producers who fail or even refuse to respond to price signals in a rational manner. But, such impurities in the system do not seem to have caught the classical economists in any doubt. For instance, while justifying theoretical simplification of the complex reality of competition, Marx (1974:175) wrote, "But in theory it is assumed that the laws of capitalist production operate in their pure form. In reality there exists only approximation; but, this approximation is the greater, the more developed the mode of production and the less it is adulterated and amalgamated with survivals of former economic conditions". In our opinion, during the long period since Marx, the capitalist mode has become much more pervasive all over the world to be adulterated and amalgamated with survivals of former economic conditions'.

It is also important here to raise the question as to whether such isolated units, not run on the principles of competitive capitalism would be able to defy the operation of the law of value. In today's world of highly integrated markets, it cannot be the subjective preference of the individual producers, nor the production conditions of individual units that ultimately determine the relative prices. As we shall try to argue in subsequent Sections, regardless of their individual characteristics, those who maintain a higher cost of production viz-a-viz their fellow producers in the same industry, as well as those who fail or refuse to move out of product lines facing hostile demand conditions are likely to be penalised by the market. It may be possible that many such producers would try to survive by employing various strategies like self exploitation, family labour, super exploitation of workers, etc. But, the very fact that such producers are penalised and are forced to resort to such survival strategies is indicative of the objective limits set by the operation of the law of value.

In fact, such impurities in the system appear to have forced many Marxists to abandon the labour theory of value for good. At the international level, they do not have any known alternative to the Ricardian theory of comparative costs or its later neo-classical interpretations. Further, their approach to prices within a nation also is not significantly different. Growth of monopolies and absence of 'competitive conditions' have made them discard Marx's prices of production. In order to analyse internal prices, they resort to Kaleckian, or other theories of monopoly power and pricing. It is known that cost-plus theories of Kalecki (1939), Steindl (1952), etc., do not add up to a general theory of prices. "By focussing on the individual firm in one industry, the cost-plus theories neglect those interactions among firms in the economic process as a whole which must be the basis for a general theory of price" (Clifton 1977:143)[4].

In short, the 'orthodox Marxists' lack a general theory of prices, which would facilitate social/objective analysis of prices. It may be remembered here that it was the labour theory of value that helped Marx locate production of surplus value as well as its appropriation within the production sphere (Wolf, et.al. 1982). The 'orthodox Marxists' seem to believe that production conditions within a firm or a sector are independent of, or can be analysed by taking for granted, the nature of exchange relations that surround any such isolated unit or sector of production considered. In the process they overlook the fact that exchange relations are nothing but a reflection of production relations. Thus, an approach which abstracts from exchange relations to focus exclusively on the production relations of the sectors studied also abstracts from production relations in the rest of the society which shape the conditions of exchange.

International Mobility of Capital

Coming to the extension of the prices of production framework to the international sphere, one major hurdle has been the immobility of capital across national borders. We have the following arguments to present in this connection. First, within the Marxian framework, mobility of capital is not an essential condition for the law of value to emerge. What is related to the emergence of the specifically capitalist production is the consequent transformation of values into prices of production. Thus, exchange of commodities at their respective values may be regarded as historically prius to the capitalist mode of production (Sau 1984). Marx (1974:177-78) himself has also been quite categorical on this issue[5].

However, for our purpose, we do not need to enter into the controversy over the plausibility of a general theory of value which is not specific to the capitalist epoch. It is especially so, because we propose to work

with the prices of production frame-work. Our aim here is just to caution against the undue emphasis being placed on the question of mobility of capital[6].

Second, regarding international mobility of capital, which obviously is essential for the extension of the prices of production framework, the existing studies seem to have focused almost exclusively on the geographical or locational mobility of capital. In the present study, we would like to emphasise other, equally significant, if not more important, dimensions of capital mobility.

In the theory of prices of production (Marx 1974:154-72), the tendency for the rates of profit to equalise operates between sectors/branches of production, and not necessarily between regions or individual owners of capital. Now, the moot question is as to what kind of mobility of capital would help ensure the tendency for the rates of profit to equalise across sectors. Obviously, mobility of capital, judged by the requirement of equalization of rates of profit across sectors, should have an inter-sectoral dimension to it. For further elaboration of the point, let us suppose that sector 'n' yields a higher than average rate of profit. Now, the tendency for the rates of profit to equalise would require movement of capital from the rest of the sectors into the n^{th} sector. Such inter-sectoral mobility of capital need not necessarily involve any significant geographical/locational mobility of capital. Our conclusion would hold except in the not so rare case where the n^{th} sector is highly location specific. But even in this specific case, capital belonging to other sectors operating in the same region may move into the n^{th} sector.

Interestingly, there are some other dimensions to mobility of capital which activate the tendency for the rates of profit to equalise across sectors without effecting significant locational movement of capital. For instance, consider the case of reinvestment of surplus made in the n^{th} sector. If the capital in the n^{th} sector reinvest the surplus profits in the same sector, it would undoubtedly contribute to the tendency for the rates of profit to equalise, because then the rate of accumulation and output growth would be higher in the n^{th} sector as compared to the rest of the sectors. The opposite would hold true for sectors, which receive a lower than average rate of profit[7]. Surplus profits and constant recycling of the same could go together only in industries characterized by high growth in demand. Otherwise, the rate of growth of output may overtake the rate of growth in demand and pull down the profit rates. However, firms in the industry would have the option of not reinvesting the surplus profits in the same line. But, hoarding of the reinvestable surplus or investment of the same in industries with normal profits (if so the firms growth will be taking place in normal profit sectors), etc., would affect the overall profit rates of the individual owners of capital operating in the surplus profit

sector. In fact the only practical option to maintain the surplus profit would be to hunt for existing or new sectors which yield surplus profits. This is what modern corporations attempt to do by the techniques of product differentiation and continuous introduction of new products. Thus the situation boils down to surplus profits chasing surplus profits. Interestingly, this is exactly what the tendency for the rates of profit to equalise needs; a constant reallocation of capital in favor of sectors which yields higher than average rate of profit, so that the surplus profit sectors constantly face the threat of equalization.

It follows from the above discussion that the tendency for the rates of profit to equalise between sectors can be active even in the absence of significant spatial movement of capital. This by no means is meant to undermine the significance of spatial mobility of capital. Spatial mobility would certainly complement other dimensions of capital mobility in ensuring the tendency for the rates of profit to equalise. But it needs to be stressed that spatial mobility of capital *per se* need not contribute to the tendency. Spatial mobility of capital may contribute to the tendency towards equalization of the rates of profit across sectors only when it possess an in-built inter-sectoral dimension to it[8]. Such movement of capital can be said to combine both intersectoral and spatial dimensions.

In fact, in concrete situations it would be a combination of these different dimensions of capital mobility that operate to establish the tendency for the rates of profit to equalise. Further, the integration of the world economy since the days of the classical political economy seems to have strengthened each of these dimensions of capital mobility that ensure the tendency for the rates of profit to equalise. First, for instance, let us consider inter-sectoral mobility of capital which does not involve significant spatial movement. Capital operating in any country can enter the world market for the n^{th} sector product, which enjoys surplus-profit without moving their production facilities across the national boundaries. Admittedly, this requires a high level of integration of the world market. In an 'ideally' integrated world market, there would not be any discrimination between suppliers. The opposite extreme would hold when the national markets are protected as water-tight compartments. But the global economic integration has gone a long way ahead of the latter extreme. Growth in international trade during the last two centuries, especially since the Second World War may be cited to prove the point. In fact, except for some brief spells of disruption, the international trade has tended to grow at a faster rate as compared to the rate of growth of the world output. Here, it is not insignificant to note the crucial role played by the international institutions, especially the General Agreement on Tariffs and Trade [GATT] in extending institutional support and developing a legal framework for trade

among nations. The newly formed World Trade Organisation [WTO] would ensure that the multilateral institutional support is extended to hitherto uncovered but expanding areas of international trade like services.

Coming to the inter-country spatial mobility of capital, the integration of money markets and capital markets of the world and the growth of multinational corporations have greatly augmented the flow of capital across national boundaries. The explosion of economic literature on international operations of capital may be taken as symptomatic of the phenomenon. It is simply unrealistic for the same discipline to hold on to the assumption of international immobility of capital when it comes to theorising on international trade.

Circulationism

The critique of the theories of unequal exchange, admittedly is not restricted to the well known opposition to the extension of the prices of production framework to the sphere of international exchange. Many among the critics are not, in principle, against the extension of the prices of production framework (e.g.. Bettelheim 1972, Shaikh 1980b). Bettelheim has, in fact, even tried to outline the general conditions that such an extension of value theory should satisfy. Their critique of the unequal exchange theories focuses mainly on the latter's misinterpretation of the prices of production scheme. On our part, we find ourselves fully in agreement with the second group of critics whose arguments focus not on the extension of the prices of production framework as such but on its faulty interpretation. A brief account of the arguments, therefore, would help us situate our own attempt to use the prices of production framework in the international context.

In Marxist analysis, the price of production is a transformed form of value; a transformation necessitated by the changes in production relations associated with the transition from simple commodity production to generalised commodity production. The unequal exchange theorists approach the emergence of prices of production in abstraction from the underlying changes in production relations. For instance, in Emmanuel (1972:1-20), prices of production originate because of the changeover from a system of production with a single 'factor of production' to a system, which uses two 'factors of production'. Here, it may be noted that the 'means of production' as an element of production is present even in the simple commodity production. Therefore, it is not the addition of one more factor that necessitates transformation, but changes in production relations that transform means of production into capital. Emmanuel's definition of factors of production as primary claimants to the social product and the price of production as the sum of rewards for such factors would hardly fit into a Marxist analysis. The implicit attempt to explain wages and profits as 'claims' or

'rewards' amounts to a challenge to the labour theory of value. Further, the categories, 'factors of production' and 'rewards' are not rooted in production relations as compared to their Marxian counterparts, 'capital', 'labour', 'profits and 'wages'. Thus, it may be concluded that Emmanuel's definition of the prices of production is essentially circulationist in character (Bettelheim 1992:276-82). This criticism leveled against Emmanuel can be extended to the unequal exchange theories, which make use of the neo-Ricardian models of price formation as well[9]. In fact, the prices of production model that Emmanuel employs to derive his unequal exchange thesis is best characterised as neo-Ricardian in essence (Evans 1976:149-51).

Implications of the circulationist definition of the prices of production are enormous. First, the unequal exchange theories fail to provide an analysis of the material and social conditions of production and reproduction that perpetuate unequal exchange of values. To quote Bettelheim (1972:300): "Relations of exploitation cannot be constituted at the level of exchange; they necessarily have to be rooted at the level of production, or otherwise exchange could not be renewed".

The apparent incompatibility between unequal exchange due to lower wages and international mobility of capital can also be traced to the circulationist interpretation of the prices of production. For Emmanuel, unequal exchange in the strict sense occurs due to lower wage rates in underdeveloped countries. If so, underdeveloped countries should be able to make use of the low wage advantage and out-compete others in their areas of specialisation. Further, domestic capital can make use of the lower wages to venture into new and advantageous areas of specialisation. If domestic capital is incapable of exploiting the advantage of lower wages, given the assumption of international mobility of capital in Emmanuel, foreign capital should flow in to make use of the situation. In short, international mobility of capital would make the unequal exchange based on lower wages unsustainable (De Janvry and Kramer 1979, Brown and Wright 1984:87).

The above incompatibility between unequal exchange due to lower wages and international mobility of capital arises on account of the failure to root the phenomenon of unequal exchange in material and social conditions of production which in the ultimate analysis determine the exchange relations. Unequal exchange and the persistence of lower wages should be seen as a reflection of the underlying production conditions. Further, if unequal exchange is rooted in the material conditions of production, simple manipulation of the wages would not help solve the problem, it would require fundamental changes in the production conditions that generate inequality in exchange.

Second, a theory of value which bases itself in production relations need not be worked out in terms of a market equilibrium[10]. But in neo-Ricardian models, as also in Emmanuel, prices of production are equilibrium prices, where rates of profit are always equalised across sectors[11]. Whereas, in the Marxist framework, market forces, deviations between market prices and prices of production, divergences in profit rates across sectors, inter-sectoral mobility of capital, etc., play a crucial role as mechanisms of the law of value. The general law of formation of prices of production cannot exist independently of its mechanisms. But the neo-Ricardian models which define prices of production as equilibrium prices ignore the crucial mechanisms of the law of value (Freeman 1984).

This obsession with equilibrium prices may be the reason why the existing theories of unequal exchange ignore the unequal exchange of value that arises on account of deviations between market prices and prices of production. We argue later in Section II of the present Chapter, that unequal exchange of values associated with the deviation between market prices and prices of production constitutes a very important reason for unequal development of sectors and regions. The existing theories focus on unequal exchange of values that occurs despite the exchange of commodities at their respective prices of production. It should be remembered here, that exchange of commodities at their prices of production would ensure an equal rate of return on capital invested across sectors. If the rate of return on capital is the same across sectors, it would tend to ensure more or less equal rate of growth of output across sectors (Houston and Paus 1987). Thus, the unequal exchange theories which deny inter-sectoral variation in profit rates, would not take us much ahead in our attempt to explain uneven development of sectors and regions.

Finally, the existing models of unequal exchange, as they interpret the prices of production as equilibrium prices, cannot discriminate among different areas of specialisation. Equalization of rates of profit across different lines of specialisation makes all the lines equally attractive for capital investment. Therefore, the unequal exchange models cannot be sensitive enough to the question of mobility across different areas of specialisation. Thus, the unequal exchange models seem to suffer from the same limitation we have identified with respect to the mainstream theories of trade and protection.

Section II
Unequal Exchange and Unequal Development within a nation

In this Section we will examine some important aspects of the working of the law of formation of prices of production within a national economy. The prices of production framework, no doubt, presupposes mobility (competition) of capital as well as the consequent tendency for the rates of profit to equalise. But does it mean perfect mobility of all participants so that the rates of profit are unfailingly equalised? In other words, can the prices of production framework accommodate individual capitals and regions which fail to be adaptive and mobile in the division of labour? If so, what would be the plight of such individual capitals and regions which refuse or fail to be mobile and adaptive? An attempt to answer these questions is important in the context of our objective to study the effects of mobility barriers in international trade.

Let us begin our analysis with the transformation of values into prices of production. The transformation of values into prices of production necessarily involves a transfer of value from sectors with lower than average to those with higher than average organic composition of capital. Emmanuel (1972:160-65) refers to this transfer of value between sectors as unequal exchange in the broad sense. But, under capitalist production, it is inevitable that commodities exchange at their prices of production because, what the exchange of commodities at their prices of production reflects, and helps reproduce, is the underlying material and social conditions of production specific to the capitalist society. Exchange of commodities at their values, when organic composition of capitals differs among sectors, would mean wide variation in the rates of profit across sectors. This obviously is inconsistent with the capitalist mode of production, because competition among capitals would always tend to equalise the rates of profit across sectors. Therefore, capitalist production demands exchange of commodities and the values embodied in them in a manner that equalises rates of profit across sectors. In fact, exchange of commodities at their values would require an altogether different set of material and social conditions of production (Marx 1974:177).

More importantly, it should be underlined that when commodities are exchanged at their prices of production, capitalists belonging to different sectors are rewarded equally, each getting an equal rate of return on the capital advanced. It follows, therefore, that exchange of commodities at their prices of production need not lead to uneven development of the sectors. This point needs further elaboration because it is important for our study to pursue the question as to whether a particular pattern of specialisation would lead to uneven development. If rates of profit are equal across sectors, as it is assumed in unequal exchange models, the rate

of accumulation should also be the same. Let us explain the point. First, if equal rate of return is guaranteed across sectors, there would not be any incentive for inter-sectoral mobility of capital. Second, the rate of internally generated surplus available for re-investment would also be the same across sectors.

The condition that all sectors receive an equal rate of profit may be written as

$$\frac{P_1}{C_1+V_1}=\frac{P_2}{C_2+V_2}\ldots=\frac{P_n}{c_n+V_n} \quad \ldots\ldots\ldots (1)$$

Assuming that profits are used exclusively for re-investment.

$$P_1=\Delta C_1+\Delta V_1 \quad \ldots\ldots\ldots (2)$$

$$P_2=\Delta C_2+\Delta V_2 \quad \ldots\ldots\ldots (3)$$

$$P_n=\Delta C_n+\Delta V_n \quad \ldots\ldots\ldots (4)$$

Replacing P_1, P_2 and P_n in equation (1) with their equivalents, we get:

$$\frac{\Delta C_1+\Delta V_1}{C_1+V_1}=\frac{\Delta C_2+\Delta V_2}{C_2+V_2}\ldots\ldots=\frac{\Delta C_n+\Delta V_n}{C_n+V_n} \quad \ldots\ldots\ldots (5)$$

Therefore, equal rate of profit would necessarily imply equal rate of capital accumulation across sectors. Now, suppose that the rates of profit are not allowed to vary across sectors in the subsequent cycles of production. If so, the rate of growth of output, measured in terms of prices of production cannot vary across sectors. This would be so, because a higher/ lower rate of growth of output in a sector, measured in terms of the price of production, would also mean a higher/lower rate of profit for that sector. Thus, if rates of profit are equalised permanently across sectors, different sectors of the economy would tend to grow more or less at the same rate[12].

Uneven development of sectors

However, it is simply unrealistic to assume a capitalist economy where the rates of profit and hence, the rates of accumulation are permanently equalised across sectors. In real life, capitalist economies are characterised by constantly changing product structure; wherein new products appear and gain prominence and old ones stagnate and even disappear from the scene. In our opinion, any enforced equalization of rates of profit across sectors, as in the neo-Ricardian models of unequal exchange, would rob the prices of production framework off its dynamic essence. In Marxist analysis, neither the prices of production framework nor the tendency for the rates of profit to equalise are inconsistent with inter-sectoral differences in rates of profit, rates of accumulation, and rates of growth. In what follows we shall attempt to explain the above observation in more detail.

The price of production of a commodity (Marx 1974:165) may be written as

$$P = k + k\,\Pi_g$$

Where, k represents the cost-price of the product and π_g stands for the general rate of profit. Thus, the mass of profit in each case would depend not only on the general rate of profit but also on the individual cost-prices. However, the rates of profit across sectors would be the same, provided that the commodities are exchanged at their respective prices of production. But, the prices of production framework allows for deviations between market prices and prices of production. Consequently, the individual rates of profit, i.e., the rates of profit associated with the market prices, can differ from the general rate of profit.

Difference between market prices and prices of production occurs mainly due to incompatibilities between market forces of supply and demand. Individual rate of profit of the sector and its market price would be higher than the general rate of profit and the price of production respectively, if the sector concerned is characterised by an excess demand. The opposite would hold good for sectors facing excess supply conditions.

Assuming that cost-price of the commodity is not affected by the difference between market price and the price of production, the market price (P_m) may be expressed in the following equation.

$$P_m = k + k \Pi_m$$

Writing π_m in terms of the general rate of profit (π_g) we get:

$$\Pi_m = r . \Pi_g$$

The market price equation can now be re-written as:

$$P_m = k + k . r\Pi_g$$

When the value of 'r' is equal to unity, the individual rate of profit would be equal to the general rate and the market price would coincide with the price of production. In other words, social demand and supply balance each other so that the entire output is sold at the price of production. If the value of 'r' is higher than unity, the sector concerned would earn a surplus-profit, i.e., over and above the general rate. Sectors with the value of 'r' lower than unity would yield a rate of return lower than the general rate. Inter-sectoral differentials in rates of profit would also lead to inter-sectoral mobility of capital. It is this process of competition and mobility of capital that form the general rate of profit. Once abstracted from the sphere of competition among capitals, the prices of production would become meaningless. To quote Marx (1974:195):

> "But capital withdraws from a sphere with a low rate of profit and invades others, which yield a higher rate of profit. Through this incessant outflow and influx, or, briefly, through its distribution among the various spheres, which depends on how the rate of profit falls here and rises there, it creates such a ratio of supply to demand that the average profit in the various spheres of production becomes the same, and values are, therefore, converted into prices of production".

Therefore, the difference between the sector's individual rate of profit and the general rate of profit may be taken as an indicator of adequacy of social capital available in the sector vis-a-vis the social demand. Surplus profit in a sector, while showing an inadequate allocation of capital, would attract inflow of capital into the sector, and *vice versa*.

One can identify two significantly different sets of factors that generate mismatch between social demand and the supply. The first group of factors are purely temporary in nature. They may arise out of temporary dislocations in the economy and would disappear as fast as they appear. For instance, a temporary short-fall in supply of an agricultural product due to a flood or drought. Such temporary dislocations may not require any restructuring of the production structure. The second type of factors, which cause deviation between individual rates of profit and general rate, are more stable in nature and would demand a restructuring of the production base. For instance, take the case of a change in the structure of social demand. The disparity between supply and demand, and the inter-sectoral difference in the rates of profit would continue till the production structure is reorganised, i.e., according to the newly established structure of social demand[13].

However, during the period of adjustment, sectors, which enjoy a favourable shift in the social demand, are likely to earn surplus profits. Likewise, sectors, which face stagnant or declining social demand, are likely to be more prone to the problem of lower than general rate of profit. In surplus-profit sectors, re-investment of surplus-profit, influx of capital from outside, technological breakthroughs, etc., would ensure the tendency for the rates of profit to equalise. Thus, surplus-profit industries would face a threat on the extra profits from both within and outside the sector. From within, as noted earlier, surplus-profit itself, as it needs re-investment, would prove to be a threat on surplus-profit. But, individual owners of capitals may escape from this threat of the tendency for the rates of profit to equalise across sectors by constantly diversifying their area of operation.

Thus, in the prices of production frame-work, surplus profit of an industry, or more specifically the value of 'r' in our market price-equation can be taken as an indicator of the industry's monopoly power. Interestingly, the surplus-profit or the value of 'r' in our analysis, is not directly dependent on the number and size structure of firms in the industry. As such, the above indicator of monopoly power is quite consistent with the classical notion of competition. In order to prove the point, let us consider the case of an ideal monopoly, defined in the neo-classical sense where there is only one supplier, operating in an industry which faces declining social demand. Despite strict entry restrictions, the 'ideal monopoly' would find it extremely difficult even to manage normal profits over time. Even to manage a rate of profit not lower than the general rate, the firm would be forced to disinvest and look for other areas of investment. Thus, in a dynamic setting, sustenance of surplus-profit/ monopoly power of the firm would depend not on short-run supply adjustments, but on the long-run investment behaviour (Schumpeter 1980:81-106). Similarly, existence of a large number of firms,

per se, does not rule out occurrence of surplus profit, especially when the industry concerned faces exceptionally dynamic demand conditions (Ornstein 1973, Semmler 1982).

Coming to industries facing stagnant or declining demand and lower than the general rate of profit, outflow of capital would ensure the tendency for the rates of profit to equalise. But notably, exit of capital from such sectors need not be a smooth process. The specific nature of capitals operating in such sectors may not be conducive for such upward mobility. For instance, they may not have the technological capability to shift the area of specialisation. Thus, such capitals would try to stick to their traditional areas of operation by resorting to various survival strategies. Their survival strategies may include super-exploitation of the work force, use of family labour, etc. But, such survival strategies may not suit higher forms of capitalist production. Thus, one would see incidence of lower forms of capitalist or even non-capitalist organisation of production (for e.g.. worker's cooperatives!) in such stagnating sectors[14] . Anyhow, here again the general law of formation of prices of production would assert itself by reducing the relative importance of such sectors, by pauperising the capitalists concerned, by marginalising the segment of population attached to such activities, etc.

Uneven regional development

From our analysis of the prices of production within a national economy, the following conclusions may be drawn. First, in spite of the tendency for the rates of profit to equalise across sectors, the prices of production framework would allow uneven development of the sectors. Second, as far as individual capital owners are concerned, the tendency for the rates of profit to equalise is no guarantee for an equal rate of profit. Even when the commodities are exchanged at their prices of production, there can be intra-industry differences in profit rates. Relatively less efficient firms would earn lower profits vis-a-vis other firms in the sector. Further, because of divergences between market prices and prices of production, inter-industry difference in the rates of profit can occur. Individual capitals specialising in less dynamic areas are more prone to the problem of lower than the general rate of profit. Third, individual owners of capital can make attempts, and often succeed in that, to escape from the general tendency for the rates of profit to equalise across sectors by switching sectors.

Further, the prices of production framework is quite consistent with uneven development of regions within the national economy. Regional development would depend mainly on the pattern of specialisation. But, regardless of the nature of specialisation in the national division of labour, the rate of return on capital may

vary between regions depending upon the nature of firms located in each region. If firms belonging to a particular region are relatively less efficient in comparison with the rest of the firms in corresponding sectors, the region may experience a lower return on capital invested. However, a more important factor that determines the relative development performance of regions would be the pattern of specialisation. For instance, consider the case of a region which specialises in sectors facing stagnant or declining social demand. As we have stated earlier, such sectors and consequently the regions which specialise in such sectors are likely to experience lower than the average rate of return on capital. Further, as long as the pattern of specialisation continues, the region may also experience a net outflow of capital. Examples of such regions, tied down by the burden of a production structure dominated by traditional activities facing stagnant demand conditions, are not hard to find. Thus, we may conclude by reiterating that under capitalist production even uninterrupted specialisation and free trade could generate uneven development of sectors and regions within a nation. Further, it may be underlined that the theory of prices of production if interpreted properly, needs no manipulation of the type effected by the existing theories of unequal exchange, to be used to explain the process of uneven development of capitalist production.

Uneven development and unequal exchange

Can development of a region be at the expense of another? Further, can unequal exchange of values between regions be used to explain development of a region at the cost of underdevelopment of another? We have seen that transformation of values into prices of production involves transfer of values across sectors with varying organic composition of capital. But, as discussed earlier, this form of unequal exchange of values that occurs even when commodities are exchanged at their prices of production does not command much significance in the context of the problematic of uneven capitalist development.

Another form of 'unequal exchange', which also occurs despite the exchange of commodities at their prices of production, allegedly arises out of the process by which market values are formed. Mandel (1975), for instance, employs the above form of 'unequal exchange' to explain unequal development of nations. It is true that within an industry, which produces a single product, the individual values of the firm and the market value could differ. Therefore, as noted earlier, rates of profit can vary significantly among firms within a sector. Such intra-industry variation in profit rates can also affect the pattern of regional development, depending on the regional distribution of firms. But, formation of market value does not involve any intra-industry transfer

of value among the firms (Menon 1986). What determines the value of a product is the *socially necessary* labour time to produce the same, and therefore, it may not be correct to assume that individual producers, who put in more effort than what is socially necessary generate more value.

Coming to inter-industry differences in rates of profit which in our opinion constitute a very important reason for the uneven development of sectors as well as regions, it is important to note that the same cannot be explained in terms of inter-industry difference in technology used. Technology, no doubt, is an important factor that determines intra-industry differences in the rates of profit. But, within the prices of production framework, a technologically more dynamic sector need not receive a higher rate of profit for that reason. Technological progress, as the new technology is diffused widely among the firms, would reduce the socially necessary labour time needed to produce the product, i.e. its value, as well as its price of production. Therefore, technological progress need not improve the profit performance of the sector as a whole.

Now we are left with the inter-industry difference in the rates of profit that arises on account of discrepancies in the market forces of supply and social demand. But can we attribute the uneven development of sectors/ regions that arises on account of discrepancies between the market forces, to unequal exchange of values? In our opinion, inter-sectoral differences in the rates of profit cannot but be explained in terms of a transfer of value from sectors which receive lower than the general rate of profit to sectors which enjoy surplus-profit. An excess demand situation, which causes the surplus-profit, cannot create any fresh value on its own (Shaikh 1984:51-52). Monopoly power that an industry enjoys due to excess demand conditions, is not a source of value. Similarly, excess supply conditions cannot reduce the value produced by a sector. A discrepancy between the market forces cannot create or destruct value, it merely transfers value from one sector to another. An industry may earn a surplus-profit by selling its product at a market price higher than the price of production. But, it would not be possible if all other sectors insist on receiving, or receive, a rate of profit equal to the general rate, or market prices that equal the prices of production. There should be sectors which are desperate to sell, because of excess supply conditions even at lower profits or at prices lower than their prices of production. Thus, surplus profit in a sector cannot be explained in isolation from other sectors. In the prices of production frame-work of Marx, profits, wages, prices, etc. are social categories.

The following passage from Marx (1974:861), though lengthy, is worth reproducing, for it clearly brings out his views on some of the issues raised in this Section.

> "Finally, if equalization of surplus value into average profit meets with obstacles in the various spheres of production in the form of artificial or natural monopolies, and particularly monopoly in landed property, so that a monopoly price becomes possible, which rises above the price of production and above the value of commodities affected by such a monopoly, then the limits imposed by the value of the commodities would not thereby be removed. The monopoly price of certain commodities would merely transfer a portion of the profit of the other commodity- producers to the commodities having the monopoly price. A local disturbance in the distribution of the surplus value among the various spheres of production would indirectly take place, but it would leave the limit of this surplus value itself unaltered. Should the commodity having the monopoly price enter into the necessary consumption of the labourer, it would increase the wage and thereby reduce the surplus value, assuming the labourer receives the value of his labour power as before. It could depress wages below the value of labour power, but only to the extent the former exceed the limit of their physical minimum. In this case the monopoly price would be paid by a deduction from real wages (i.e.. the quantity of use values received by the labourer for the same quantity of labour) and from the profit of other capitalists. The limits within which the monopoly price would affect the normal regulation of the prices of commodities would be firmly fixed and accurately calculable".

The passage makes it clear that occurrence of monopoly profits in some sectors does not break the law of formation of prices of production. Further, it shows that monopoly power is not a source of value and that it involves a transfer of value from other sectors. Regarding deviations of market prices from natural prices Ricardo also seems to have held the same view (Ricardo i973:49-53)

Structural unequal exchange

In order to distinguish it from other forms of unequal exchange identified in the literature, the transfer of values across sectors/regions that arises on account of changes in the composition of social demand may be referred to as 'structural unequal exchange'. A shift in the structure of social demand would require a corresponding change in the structure of production and reproduction. This can be brought about by a reallocation of the social capital and the socially available labour time. But such a reallocation of social capital would not be possible if all commodities are exchanged at their prices of production. In other words, the reallocation would not be possible if the rate of return on capital across sectors is the same. However, mechanisms of the law of value would ensure the required reallocation of social capital by generating inter-sectoral differences in the rates of profit. Sectors, which enjoy buoyant demand conditions, would tend to have surplus-profits as well as net-inflow of capital from other sectors and *vice versa*. In the process, sectors and regions, which fail to adapt to changes in the structure of social demand, are bound to lose a part of the

surplus-value they produce. In addition to the problem of lower than the general rate of profit, such sectors and regions would also witness a net-outflow of capital. Further, it would be foolhardy to ignore the problem of 'structural unequal exchange' and its effects on the pattern of regional development as temporary aberrations, because capitalist economies are characterised by recurring shifts in the structure of demand as well as production. It is also not rare to see individual capitals, non-capitalist production units, and regions suffering, unable to cope with the fast changes in structure of social demand.

Section III
Structural unequal exchange in international trade

The problem of frequent shifts in the structure of demand, perhaps, is as significant at the international level as it is at the level of nation states. It would also be counter-intuitive to assume that structures of demand and production would grow independently of each other at the international level. Let us, therefore, try to see as to how the law of value operating at the international level ensures that the sphere of production is sensitive to the changes in the structure of demand. It would also help us address the issue of barriers to structural mobility of countries.

The operation of the law of value at the international level, however, has certain important distinguishable features. These specificities originates mainly from the fact that the world is structured into nation states. But as explained earlier, the existence of nation states is no excuse for denying the operation of law of value at the international level[15]. In view of our discussion on mobility of capital in Section I, we do not see any reason to hold on to the archaic assumption of international immobility of capital. Consequently, we consider it justifiable to extend the prices of production to the international level. Further, in our effort to explain the process by which the structure of production adapts to the changes in the pattern of demand at the international level, our focus would be on structural unequal exchange which arises on account of deviations of market prices from the prices of production.

Coming to the modification of the law of value at the international level it is important that we consider the specific ways in which national boundaries, and the policies of the state which constitute the same, affect different dimensions of international competition. However, since our focus is on the deviations of market prices from prices of production, we do not need to spell out in detail the specificities of the process by which prices of production are formed at the international level. As many authors have pointed out, formation of

prices of production at the international level would involve transfer of value between sectors as well as nations. But, as we have argued at length in the previous Section such transfer of value, which occurs despite the exchange of commodities at their prices of production, would not throw much light on intersectoral difference in the rates of profit, accumulation or growth. Regarding specificities of the law of value at the international level, therefore, we confine ourselves to the factors that have a direct bearing on our problematic, viz., the process by which the structure of production gets adjusted to the changes in the intersectoral pattern of demand.

One important distinction that we wish to highlight is the international difference in the price of non-tradables. Capital mobility and the tendency for the rates of profit to equalise are assumed to be active across sectors producing tradables as well as non-tradables. But, since non-tradables are not sold and bought in the international market, their prices may tend to differ between countries. Further, as we explain subsequently, the state policy regimes can and do try to influence the balance between prices of tradables and non-tradables. Second major distinction is the international difference in wage rates which arises on account of the near total immobility of labour across national boundaries[16].

Having set the background, let us now try to analyse the effects of state policies, especially the trade barriers that restrict structural mobility, from the point of view of an underdeveloped country which specialises in areas facing stagnant demand conditions. The export oriented industries in our country would tend to fetch market prices lower than the prices of production and hence rates of profit lower than the general rate, because over-crowding of capital and excess supply conditions are likely to persist in such sectors. In other words, the country in question would be subjected to structural unequal exchange in its trade with the rest of the world.

The relatively lower rates of profit in the stagnating sectors itself is a signal for exit of capital. It is such outflow of capital that helps to re-arrange the production structure and ensure the tendency for the rates of profit to equalise. There are different plausible modes of exit of capital. First, the capitals operating in unattractive branches of export production can attempt to move into more attractive export oriented industries. This would mark an upward mobility for the nation in the international division of labour. But this mode of exit, or upward mobility in the international division of labour, would depend upon the development of productive forces. Capitals operating in the country need not have the dynamism to move up the ladder of the international division of labour. From the point of view of the present study, a more important constraint on such upward mobility would be the structure of trade barriers that the country's exports face. Trade barriers

can effectively deny the chance of upward mobility even when the dependent country possess the capability to redefine its role in the international division of labour. We shall take up the question of trade barriers facing developing country exports at an empirical level in Chapter 6. Here it suffice to note that there are external barriers to the upward mobility of capital, i.e., the mobility of capital from stagnating or declining to more dynamic areas in terms of demand.

Another mode of exit of capital would be the outflow of capital from the country concerned. This mode of exit, in our opinion, is not too insignificant to be ignored. Outflow of capital from the country can take various forms, including that of foreign direct investment. Studies on foreign direct investment originating from underdeveloped countries underline its importance as a form of capital outflow (Dutt 1984, Morris 1987, 1990). Other forms of capital outflow, viz., portfolio investment, transfer of capital through dividends, royalties, transfer pricing etc., as they represent a drain on the re-investable surplus produced in the country, also might contribute to the tendency for the rates of profit to equalise across sectors[17]. The third mode of exit would be the movement of capital from export-oriented production to production for the domestic market. As production for exports becomes unattractive, the above tendency would appear. Studies on developing country exports have noticed the recurring tendency among exporters of these countries to shift towards production for domestic markets (Singh 1964, Bhagawati and Desai 1970:368-95).

Exit of capital from disadvantageous sectors, regardless of the form of capital flows and their other effects on the dependent economy, would help restructure the production base and check the process of structural unequal exchange. Individual capitals operating in the export sector can opt for any one of the three modes of exit discussed above rather than remain in the unattractive line of export production. But, from the point of view of the underdeveloped country considered, the first mode of exit is the only viable option. Because, the latter two modes of exit of capital from the export sector would lead to marginalisation and isolation of the country in the international division of labour. Given the level of division of labour among countries and the consequent interdependence, isolation or autarky is not an option for any country. Therefore, the nation concerned would be forced to design the state policy to check the second and the third mode of exit of capital from export production.

The government policies that check the desertion of capital of the export sector need some elaboration. The government would be forced to intervene and guarantee a reasonable rate of return for exporters by offering, direct and indirect subsidies, exemption from labour welfare legislations, tax concessions, etc. In India, for

example, according to available estimates, direct and indirect subsidies during the early eighties amounted to around 10 per cent of the f.o.b. value of her exports (Deepak Nayyar 1987)! It is also not incidental that most of the exportables of the underdeveloped countries emanate from sweat-shops where relatively lower wages and poor working conditions persist. This is generally true of major Indian exports, viz., coir, cashew, marine products, jute, gems and jewellery, leather products, garments, etc[18]. It is strange that such poor labour conditions, even according to the national standards, should prevail in industries which cater to the world's rich.

Another important and widely used strategy to check the exit of capital from the export sector is devaluation of the home currency. Devaluation operates through changing the structure of relative prices in favor of tradables vis-a-vis non-tradables. International prices remaining the same, devaluation would help the exporters earn a higher price in terms of domestic currency, whereas the input prices of the exportables would continue to be the same augmenting the profitability of the export sector. Inflationary pressure, if unchecked, would nullify the devaluation induced advantage extended to the export sector, but further doses of devaluation would be resorted to restore the discriminatory advantage. In other words, countries suffering from structural unequal exchange would be forced to resort to periodic real devaluation of the currency.

Thus, the capitals operating in the export sector would be denied all possible ways of exit from the sector. The perpetuation of unequal division of labour and unequal exchange of values, therefore, may be regarded as an important distinguishable feature of the operation of the law of value at the international level. Within nations there are many factors which operate against perpetuation of unequal exchange. There could be policy measures to ensure upward mobility of capital and labour bogged down by disadvantageous and declining lines of production. If upward mobility of capital is not possible, the law of value would ensure the tendency for the rates of profit to equalise by denying an equal rate of return on capital, and ultimately by pauperising individual capitals operating in such sectors. Individual capitalists may try to transfer the burden of structural unequal exchange on to the labourers. But, freedom of mobility of labour would set limits on such strategies of the capitalists. However, as we have noted in the previous Section, lower forms of production would tend to survive in such sectors. But ultimately the law of value would triumph because pauperisation of individual capitalists and proletarianisation of independent petty commodity producers would help to re-structure the production base according to the changes in the structure of social demand.

However, the international situation is strikingly different. National policies, from within and outside, would tend to reproduce the unequal division of labour by restricting exit of capitals from disadvantageous export production. Distribution of trade barriers in the international market would limit the chances of upward mobility of underdeveloped countries in the international division of labour. State policies within the nation would plug other plausible ways of exit, viz., outflow of capital from the country and the shift towards production for domestic market by shifting the burden of unequal exchange from the export sector to the rest of the economy. Therefore, unfavourable specialisation as well as unequal exchange would tend to get perpetuated. Unequal exchange tend to get perpetuated because the national policies help shift the burden of unequal exchange from the export sector to the workers as well as the non-tradables. National policies succeed in effecting such transfer of income between sectors mainly for the reason that non-tradables are not internationally traded. As we have already mentioned, it is possible for non-tradables to have different prices in different national markets. Similarly, wages might also differ between countries due to lack of mobility of labour across countries. International differences in the prices of non-tradables and wage rates tend to worsen due to the structural unequal exchange. The structural unequal exchange would tend to manifest itself in lower wages and lower prices of non-tradables in the underdeveloped country.

The strategy of switching the burden of structural unequal exchange, however, is no solution to the underlying problem, viz., the inability to be mobile in the international division of labour. It would continue to operate as long as the structure of production remains unaltered. A reduction in the prices of non-tradables vis-a-vis tradables, and the downward adjustment of wages would solve the problem of unequal exchange for the exporters, but not for the country concerned. The nation considered as a whole would continue to receive market prices lower than the prices of production. Similarly, in terms of international value, the country would continue to face the problem of a lower return on investment.

Notably, a further adverse shift in the structure of international demand might even accentuate the problem of unequal exchange. The consequent reduction in the market prices of the exportables would again tend to threaten the profitability of exporters, requiring further reduction in wages as well as in the prices of non-tradables. Therefore, as long as the country is caught up in disadvantageous areas of international specialisation, it would be forced to spend more and more in terms of its non-tradables for every new unit of international purchasing power that it acquires. Incidently, there is no dearth of empirical evidence to prove the above observation. One such piece of evidence, which is symptomatic of structural unequal exchange, is the movements in real effective exchange rates. Studies on exchange rate movements have noted a secular

decline in the real exchange rate of the currencies of underdeveloped countries (Wood 1991)[19]. The following observations of Wood (1991:317) are worth reproducing here:

> "In the early 1960s, the average per capita income of developed market economies, measured in current US dollars at official exchange rates, was about 20 times greater than that of low income countries such as India. By the early 1980s, it had become about 40 times greater. Part of this widening of the nominal income gap could be explained by slower real growth of per capita income in poor countries. But most of it was due to devaluation of the currencies of poor countries relative to that of rich countries by much more than would have been expected from the difference between the inflation rates of the two groups. Another way of describing this empirical phenomenon is to say that the real exchange rates of low income countries had depreciated substantially relative to those of developed countries"

Another source of evidence, which of course is related to the former, is the difference between purchasing power parity exchange rates and the market exchange rates of different national currencies. " The purchasing power parity (PPP) is defined as the number of units of a country's currency required to buy the same amount of goods and services in the domestic market as one dollar would buy in the United States" (World Bank 1992:300). In terms of the purchasing power parity, national currencies of most underdeveloped countries are under-valued, ie., the PPP exchange rates are lower than the market exchange rates. On the other hand, national currencies of most developed countries are found to be overvalued. International trade among these two groups of countries, therefore, would involve unequal exchange in terms of the purchasing power parity (Sau 1993). According to Sau (1993:1927), "In world money market the Indian rupee, for example, is worth only 26.1 per cent of its purchasing power over the US gross domestic product. It means that India's presently exported merchandise of 20 billion dollar is otherwise worth about four times as much". Significantly enough, the gap between purchasing power parity rates and the market rates has been widening in the case of many countries. As a proof for unequal exchange, one may also cite the widely observed deterioration of the factorial terms of trade of underdeveloped countries (Sarkar and Singer 1991).

It needs to be cautioned here that our definition of unequal exchange is not in terms of wages, prices of non-tradables or undervaluation of the national currency. We define unequal exchange in terms of the deviations between market prices and prices of production. However, since such unequal exchange is expected to manifest in lower wages, lower prices of non-tradables, undervaluation of the currency, etc., they may be taken as indirect indicators of unequal exchange.

Our observation that international unequal exchange would tend to get perpetuated does not suggest that there is no way out of the problem. Unequal exchange as defined in the present study is the product of unfavourable

specialisation. Its solution, therefore lies in the efforts to achieve upward mobility in the international division of labour. As we have mentioned in the introductory Chapter, underdeveloped countries do make some efforts to move out of areas being phased out of international circulation. But, the point to be emphasised is that they face many hurdles, especially hostile trade policy regimes of developed markets, in their efforts to be structurally mobile. However, once a country successfully moves into areas of international specialisation not affected by the problem unequal exchange, the difference in the price on non-tradables as well as wage rates would tend to narrow down. Thus, it is not necessary that the initial wage disparity between two partner countries should widen over time.

Now, will not the perpetuation of unequal exchange contradict the law of formation of prices of production? The fact that some nations find themselves completely unable to move away from sectors affected by unequal exchange does not disprove the law of formation of prices of production at the international level. In fact, it is possible to come across such situations even within nations. Some of the traditional occupational caste groups in India would serve as good examples. Most of their traditional products are fast disappearing from the market. Many such communities have been able to adjust themselves to the demands of time. But there are exceptional cases where members of the community refuse or are unable to move out of the community based occupations. They continue to operate in the traditional lines, self exploiting themselves, to earn a miserably low level of subsistence. Their existence does not contradict the operation of the law of value at the national level. On the contrary, the fact that they and their occupations are getting marginalised, that they need to self-exploit themselves to be able to subsist, only proves the infallibility of the law of value. Similarly, the fact that product groups facing structural unequal exchange and the countries caught up in such areas tend to get marginalised in the international division of labour, and that such countries are constrained to forgo more and more of their non-tradables per every unit of international purchasing power that they earn, proves that there is no escape from the law of value operating at the international level.

The proposition on unequal exchange as formulated in the present study -- structural unequal exchange -- it should be underlined, is free from most of the limitations attributed to the existing theories of unequal exchange. As noted in Section I, most of their limitations could be traced to the circulationist interpretation of the prices of production. In sharp contrast, structural unequal exchange is firmly rooted in the production sphere; it is only a reflection of the underlying unequal division of labour. Further, persistence of the unequal specialisation is explained in terms of unequal development of productive forces as well as external barriers which constrain mobility in the international division of labour. Therefore, it is not difficult to explain how

unequal exchange renews itself. A solution to the problem of unequal exchange would require fundamental changes, in the underlying production conditions, in the unequal nature of the international economic order, and in the factors that determine the changes in the structure of world demand.

The question as to whether inflow of foreign capital would not eliminate the conditions of unequal exchange is also important to be raised here. This issue is particularly relevant as we expect structural unequal exchange to manifest in lower wages as well as lower prices of non-tradeables. The question, in our opinion, arises partly out of a wrong understanding of the notion of competition and the tendency for the rates of profit to equalise. It is unrealistic to expect an influx of capital into sectors which suffer from structural unequal exchange. The sectors, which produce exportables in the dependent country are prone to the problem of a lower than general rate of profit. The same is more or less true of the sectors which produce the non-tradeables. Structural unequal exchange in the export sector, through the government policy, are likely to affect the non-tradeables as well. For instance, consider the case of a real devaluation of the home currency, resorted to make the exports 'competitive'. The impact of devaluation on non-tradeables would be a reduction in their prices in terms of foreign exchange. Thus foreign capital operating in the production of non-tradeables, apart from other difficulties that they face like restrictions on repatriation of profit, would also be hard put to hedge against the risk of depreciation of the dependent country's currency. In order to make a reasonable rate of return in terms of hard currency, they would be forced to make a much higher return in terms of the dependent country's currency.

A more feasible option for the foreign capital would be to invest in the production of new exportables, which are likely to face dynamic demand conditions in the international market. But lower wages and cheap availability of non-tradeables alone cannot clinch the issue of location of such production units. There are many other factors that influence profitability and location of firms. For instance, location of the third country markets to which the new exportables are to be sent, trade barriers that they are likely to face in such markets, host country's policy towards foreign investment, etc., would influence the inflow of foreign direct investment. In fact, the role of trade barriers needs to be emphasised. Trade barriers can continue to hinder structural mobility of the underdeveloped country regardless of the pattern of ownership of firms that produce the exportables.

This, however, is not to deny the importance of the advantage of lower wage rates and relatively cheap availability of non-tradables. Certainly, they are favourable factors for attracting foreign direct investment.

It is also true that the consequent diversification of the export basket would help reduce the intensity of structural unequal exchange. But will it not lead to a more direct form of exploitation and domination of the country by foreign capital? How should the country choose between structural unequal exchange and direct exploitation by foreign capital? Although these questions regarding the desirability of foreign direct investment are very important, they are beyond the scope of our immediate concern in the present study.

The questions raised above, however, gives us an opportunity to reiterate the limitations of the present exercise. The present study is narrowly focused on the question of distribution of trade barriers in industrial countries which constrain structural mobility of underdeveloped countries in the international division of labour. We find the indifference of the existing theories towards the distribution of trade barriers across product lines to be totally unacceptable. By using the framework of the prices of production we have established the importance of structural mobility in the international division of labour, and underlined the fact that those who fail to be structurally mobile might suffer from unequal exchange. It is also argued that such unequal exchange would have a bearing on the development dynamics of partner countries. However, the scope of the study is too narrowly defined to be able to address the larger question of development or underdevelopment of nations. Obviously, a nation's involvement in the international division of labour, and the nature of gains or losses that it entails, cannot be taken as the sole determinants of its development dynamics. There are many other forces and factors, including those beyond the realm of pure economics, that need to be considered while attempting a general explanation of underdevelopment. In fact, even the unfavourable specialisation that leads to unequal exchange cannot be explained independently of the larger phenomenon of underdevelopment. Therefore, the insights that the present study provide for unraveling the larger question of underdevelopment, admittedly, is rather limited. The same limitation of the study, it is important to be cautioned, has a bearing on the policy insights that it provides.

This certainly is not to suggest that the study does not have any policy implications. Our observation that 'inability to be structurally mobile would be highly disadvantageous' should certainly guide policy. In fact, we make an attempt in the concluding Chapter to derive the limited policy implications of the study. Here, it suffices to note that policy makers would require a more general framework and understanding of factors that block development of the country to be able to arrive at a meaningful strategy of development. It is in this context that the existing theories of imperialism and underdevelopment assume importance. Our idea has not been to provide a competing explanation of underdevelopment. On the contrary, our attempt has just been to

highlight the role of trade in general and the trade barriers in particular, in reproducing and perpetuating the conditions of underdevelopment.

Conclusions

The proposed approach to the study of protection places structural mobility of nations at the centre of the stage of international competition. The ability to produce efficiently in the historically given areas of specialisation alone need not make a country internationally competitive. The adaptability of the nation's specialisation to the structural changes in world demand is an equally important determinant of international competitiveness.

Implications of the suggested approach for the study of the effects of trade barriers are clear. The effects of individual trade barriers cannot be studied in isolation. It is important to see how individual trade barriers, and for that matter the structure of trade barriers that the country encounter, affect her efforts to be structurally mobile in the international division of labour. Trade policy measures, which restrict structural mobility of countries, can cause unequal exchange of values among nations.

The social division of labour of our times, national as well as global, is characterized by periodic shifts in the structure of demand. Obviously, therefore, all lines of specialisation cannot grow at the same pace. In other words, structural changes in demand would require sympathetic restructuring at the level of production. Re-orientation of production presupposes reallocation of social capital- capital being the prime-mover of the elements of production- among competing lines of production. Clearly, such reallocation of the productive forces would not be possible in a system, which unfailingly ensures equal rate of return on capital in all the sectors. As we have explained at length, the mismatch between the structures of production and demand would lead to what we refer to as structural unequal exchange. Sectors with buoyant demand conditions would tend to receive market prices higher than the respective prices of production, and *vice versa*. More importantly, sectors adversely affected by the changes in the structure of demand are likely to suffer from the problem of lower than the general rate of profit. The problem of unequal exchange, it needs to be underlined, will get corrected as soon as the structure of production is adjusted to the newly established pattern of demand. However, sooner or later, another round of dislocation and adjustment would set in.

The process of structural unequal exchange- the process by which the society reorients its production to the changes in the pattern of its needs- is more direct and apparent at the national level. The fact that the world

economy is structured into nation-states, makes the process more complex and less visible at the international context. In the national division of labour, the burden of structural unequal exchange falls directly on those who are caught up in areas facing unfavourable demand conditions. The burden of international unequal exchange is often shifted, due to the intervention of the state, from the capitals operating in the export sector to the rest of the economy. The strategy of shifting the burden, however, does not save the country from the process of structural unequal exchange. The country as a whole would continue to suffer from unfavourable unequal exchange as long as it is bogged down by unfavourable specialisation.

Notes

1. According to critics, the prices of production framework presupposes 'competitive capitalist conditions' in all lines of production. Therefore, the framework cannot be used at the international level, where different modes of production co-exist. This argument, however, has been dealt with, in detail, by the unequal exchange theorists (e.g.. Amin 1977:181-238).

2. The objection to the use of the prices of production framework can be traced to a larger Marxist debate. Datt (1990) summarises the main theme of this debate as follows, " Following the changes in industrial structure due to the concentration and centralisation of capital, a tradition of Marxist economists originating in Lenin and Hilferding, and culminating in the work of Kalecki, Steindl, Baran and Sweezy, argues that the laws of competition have to be replaced by those of monopoly capitalism, according to which the capitalist system was ultimately regulated by the balance of power relations between workers, capitalist firms and the state. While accepting the empirical facts regarding changes in industrial organisation, another group of marxist writers using, somewhat paradoxically, ideas developed by Lenin, argues that such tendencies merely intensified the forces of competition in a capitalist economy, so that the framework of the classical economists, with their concept of competition, remains the appropriate one for the analysis of modern economies with large firms".

3. The theory of monopoly capitalism uses a notion of competition which is related more to the neoclassical theory of perfect and imperfect competition than to the classical and Marxian theories. Within the Marxian framework intersectoral differences in rates of profit is no indication of any imperfection in competition (Semmler 1982).

4. In the Marxian framework, competition, mobility of capital and the tendency for the rates of profit to equalise are defined in the intersectoral context. The Kaleckian approach on the other hand ignores the intersectoral dimension of competition.

5. To quote Engels's comments on the controversy regarding the applicability of the law of value to the spheres of exchange and production prius to the specifically capitalist production: "In a word: the Marxian law of value holds generally, as far as economic laws are valid at all, for the whole period of simple commodity production, that is, up to the time when the latter suffers a modification through the appearance of the capitalist form of production. Up to that time prices gravitate towards the values fixed according to the Marxian law and oscillate around those values. Thus the Marxian law of value has general economic validity for a period lasting from the beginning of exchange, which transform products into commodities, down to the 15th century to the present era" (Engels 1974:899-00).

6. Incidentally, there are some important studies that have attempted to develop a theory of international value without the assumption of mobility of capital. For instance (Matsui 1970) assumes international immobility of capital. Notably, Matsui's formulation is on international value, not on prices of production.

7. There is another important dimension to the notion of mobility of capital which, however, operates in a more indirect fashion. In order to explain this, let us assume away all fresh inflow of capital into the n^{th} sector. Now, it is possible that over time the sectors which consume the products of the n^{th} sector decline in relative importance - or alternatively, they start substituting products of the n^{th} sector. The consequent decline over time in the social demand for the n^{th} sector can exert pressure and finally even wipe out the surplus profit in the n^{th} sector. This indirect aspect of mobility and competition between capitals can be assumed to play a very significant role in the tendency for the rates of profit to equalise, because in the capitalist mode of production, distribution of social demand as well as social capital across different lines of production is subject to immense changes over time. In other words, restrictions on entry *per se* need not ensure sustained incidence of surplus-profits in an industry.

8. In our example, the surplus-profit in the n^{th} sector need not be affected by a movement of capital from the rest of the regions to the region where the n^{th} sector is concentrated. It requires investment of such capital drawn from other regions and sectors in the n^{th} sector.

9. According to Marxist critics, neo-Ricardian models abstract from social relations. They define production in isolation, in terms of technical relations, with no reference to social relations of production or the struggle over the labour process. Since the neo-Ricardians consider the surplus as a relation between things, they are incapable of understanding that its existence reflects a real struggle between social classes at the level of production (Romero 1984:111-13, Shaikh 1984:50-51). According to many authors, it is this peculiar interpretation of the prices of production that gives rise to the neo-Ricardian argument that the labour theory of value is redundant (Shaikh 1982, Langston 1984, Farjoun 1984, Albarracin 1984, Freeman 1984).

10. In Marxist analysis, prices of production are determined by the material and social conditions of production. Therefore, definition of prices of production does not require the concept of market equilibrium. Market forces, by virtue of their constant interaction would ensure that the market prices fluctuate only around the prices of production (Bettelheim 1972).

11. "Several authors have commented that despite neo-Ricardianism's critique of the marginalist element in neo-classical theory, both schools share an equilibrium approach. They do not, therefore, furnish the tools to study one of capitalism's most essential features; the uneven and combined character of capitalist development, distinguished by the constant movement of capital, the never ending disequilibriation of the prices, profits and differential rents of independent producers" (Mandel 1984:xii). Shaikh (1982), attributes the notions of general equilibrium, perfect competition, and profit as a cost of production, to the neo-Ricardian models.

12. Following the argument of Lardy (1985), Bhalla (1992) specifies the conditions of balanced growth as follows:

$$K_1/Y_1 = K_2/Y_2 = K_n/Y_n$$

where K_i and Y_i represent incremental capital and incremental output respectively. Interestingly, the prices of production models, as they rule out inter-sectoral difference in rates of profit, cannot but satisfy the above condition of balanced growth.

13. Ricardo (1973:50) explains the process of adjustment to changes in the structure of demand as follows, "Suppose now that a change of fashion should increase the demand for silks and lessen that of woollens; their natural price, the quantity of labour necessary to their production, would continue unaltered, but the market price of silks would rise and that of woollens would fall; and consequently the profits of the silk manufacturer would be above, whilst those of the woollen manufacturer would be below, the general and adjusted rate of profits. Not only the profits, but the wages of the workmen, would be affected in these employments. This increased demand for silk would, however, soon be supplied by the transference of capital and labour from the woollen to the silk manufacture; when the market prices of silks and woollens would again approach their natural prices, and then the usual profits would be obtained by the respective manufacturers of those commodities."

14. The process of structural decline, from advanced forms to lower forms of capitalist production has been well documented for coir and cashew industries in Kerala (Kannan 1983 and Isaac 1984). A detailed account of the emergence of workers co-operatives in the traditional industries of Kerala is available in Raghavan (1995).

15. As Wallerstein (1983:31) has rightly pointed out, existence of `sovereign' states tend to hide the operation of the law of value at the international level. "The key to hiding this central mechanism lay in the very structure of the capitalist world-economy, the seeming separation in the capitalist world system of the economic arena (a world-wide division of labour with integrated production processes all operating for the endless accumulation of capital) and the political arena (consisting ostensibly of separate sovereign states, each with autonomous responsibility for political decisions within its jurisdiction, and each disposing of armed forces to sustain its

authority). In the real world of historical capitalism, almost all commodity chains of any importance have traversed these state frontiers".

16. The mobility of labour across different lines of export production within individual countries may tend to narrow down the international difference in wage rates. But capital being the prime mover of elements of production, such mobility of labour would be dependent on the inter-sectoral mobility of capital.

17. "Some semi-official estimates have been made of the private capital outflows from the heavily indebted countries of Latin America. According to these estimates, over the period 1974-82, capital flight from Mexico amounted to U.S $32.7 billion, and from Venezuela amounted to $10.8 billion, and from Argentina to $15.3 billion. Over the Same period, the external debt of Mexico, Venezuela and Argentina increased by $82.6 billion, $27 billion, and $32.6 billion respectively" (Bagchi 1986:pe-73). For a study on visible and invisible transfer of resources from developing to developed nations, see Faulwetter(1985).

18. The coir industry, for instance, is notorious for its inability to give anything more than `starvation' wages to its workers. According to a recent study (Isaac et.al.1992:49): "The real wages in the industry have declined in the recent years compared to other rural wages in Kerala. Minimum wages are not paid even within the co-operatives; instead an agreed wage is paid, which is around 30 per cent lower than the statutory minimum wages and other benefits". For labour conditions in other export industries in India, see Krishnaswami(1989), Cawthorne(1993), and Kashyap and Tiwari(1987). Cawthorne`s comments on working conditions in the garments industry-- "Work is nasty, brutish and long"- would very well suit other major export industries of India. The fact that powerful lobbies of the world's wealthiest countries are now trying to insist that the developing countries tighten\enforce their labour welfare laws, under the threat of various forms of sanction or boycott, is a formal recognition of the pitiable conditions of work in their export industries.

19. Real exchange rates are derived from nominal rates adjusting for differences in the rates of inflation between the countries concerned. According to Wood's(1991) estimate, between 1964 and 1984 India and other low income group of countries experienced a trend depreciation of about 40 per cent in the real exchange rates.

Chapter 4
STRUCTURE OF EXTERNAL DEMAND AND EXPORT PERFORMANCE AN ANALYSIS OF INDIA'S EXPORTS TO THE EEC

In the previous Chapter, we have argued at an abstract level that trade policy measures, which act as barriers to structural mobility, can cause unequal exchange of values among nations. Our attempt, in the present and the forthcoming Chapters, would be to place the above theoretical generalisations in the empirical context of India's trade with the European Economic Community. More specifically, on the basis of the analysis of Indo-EEC trade we show how trade policy regimes of developed countries tend to resist India's mobility in the international division of labour.

Setting out the empirical enquiry, the present Chapter attempts an analysis of the recent trends in India's exports to the EEC. At a general level, export performance of countries may be seen as a function of their competitiveness and the level of world demand. While the level of world demand determines the size of the cake (world trade) to be distributed, it is competitiveness that decides the size of individual pieces (country shares). But, competitiveness, as we have explained at length in the previous Chapter, means much more than the ability to produce and sell cheap in historically given areas of specialisation. Efficiency in traditional areas of specialisation would have almost exclusively determined a country's competitiveness, if the composition of world demand was to remain unchanged. The fact that the structure of world demand is subject to constant change makes the question of competitiveness more complex. Efficiency in any set of areas is no guarantee for a fair share in international trade. To illustrate, ability to produce and sell cheap such goods and services that have already become non-tradables, or are fast becoming so, would not contribute much to a country's international sales. Therefore, a study on export performance cannot be indifferent towards the interface between structural change in external demand and change in commodity composition of exports. In short, structural mobility or adaptation of the product structure in response to changes in external demand is an important aspect of competitiveness. It is in the light of the perspective on competition and competitiveness outlined above, that we undertake the present analysis of the determinants of India's export performance.

The Chapter is divided into two Sections. In Section I, we examine the trends in bilateral trade orientation between India and the EEC ('bilateral trade', unless otherwise specified means trade between India and the EEC) and put forward certain tentative hypotheses on the factors that shape the mutual orientation of their trade. In Section II, first, we identify growth phases in India's exports and try to explain inter-phase differences in the growth pattern. Thereafter, we proceed to identify important determinants of growth in India's exports.

Section I
India and the EEC: bilateral trade orientation

Although the European Economic Community was established as early as in 1957, we confine our analysis to the post-1973 period. The year 1973 has special significance in the history of Indo-EEC trade. For, it was in that year U.K., Ireland and Denmark joined the EEC. With U.K.'s entry into its fold, the Community's weight in India's external trade has nearly trebled (see Table 4.1.1). The year 1973 also marks end of an era of Commonwealth preferences, which used to be a major determinant of the direction of India's trade till then (Fukuda 1973: 51-65, Kalyankar, 1975).

Table 4.1.1: Share of major trade partners in India's exports and imports

(per cent)

Year	EEC		U.S.A.		Japan		U.S.S.R	
	Exports	Imports	Exports	Imports	Exports	Imports	Exports	Imports
1969-70	7.12	10.87	16.87	29.53	12.73	4.26	12.51	10.83
1974-75	20.97	19.20	11.26	16.30	8.92	10.07	12.68	9.05
1979-80	27.01	24.37	12.58	11.03	10.03	6.78	9.97	8.99
1980-81	21.27	20.31	11.09	12.10	8.95	5.97	18.39	8.09
1981-82	18.52	22.48	12.29	10.43	9.26	6.51	21.83	8.35
1982-83	18.87	23.26	12.28	9.98	11.03	7.61	22.01	9.89
1983-84	20.71	24.08	17.95	11.63	10.16	9.14	14.97	10.39
1984-85	19.74	23.95	17.81	9.93	10.36	7.24	18.88	10.45
1985-86	18.42	25.63	19.30	10.50	11.41	9.02	19.47	8.53
1986-87	22.72	32.59	19.37	9.39	11.12	12.89	15.49	5.00
1987-88	26.15	33.27	19.49	8.99	10.77	9.56	13.12	7.23
1988-89	25.02	31.89	18.95	11.47	10.95	9.32	13.28	4.45
1989-90	25.52	33.70	16.60	12.04	10.12	7.96	16.57	5.76
1990-91	28.35	29.36	15.52	12.14	9.65	7.51	16.68	5.90

Notes: Figures for the EEC correspond to EEC(6) upto 1971-72, EEC(9) between 1972-73 and 1979-89, EEC(10) between 1980-81 and 1985-86 and EEC(12) from 1986-87 onwards.

From 1982-83 onwards export figures do not include export of petroleum products. Further, re- exports have not been considered.

Source: Monthly Statistics of the Foreign Trade of India, DGCI&S, Calcutta, March Issues.

European Community is one of the fast growing trading blocs in the world. Two sources of the Community's growth as a trading bloc can easily be identified, viz., (1) geographical expansion through accession of new members and (2) growing importance of existing members in the network of international trade. Significantly, both these sources of growth are active even today, as is evident from fresh applications for membership and new Community plans for higher levels of internal integration and growth.[1] As Table 4.1.3 shows the Community accounts for about 40 per cent of the world exports and roughly around the same proportion of the global imports.

As the largest and one of the most dynamic trading blocs in the world, importance of the Community as a market for Indian goods can hardly be exaggerated. As can be seen from Tab.4.1.1, the Community is India's largest trading partner, absorbing roughly around 25 per cent of her exports and supplying nearly 30 per cent of the imports. Notably, the Community has also been improving its share in India's exports as well as imports over the period, barring the short interruption of early 'eighties.[2]

Table 4.1.1 also brings out one of the most disturbing aspects of the bilateral trade, viz., the growing deficit in India's balance of trade with the Community. Note that the EEC has consistently maintained a higher share in India's imports as compared to her exports. In fact, the E.E.C. is responsible for about 50 per cent of India's overall annual trade deficit, a figure, which is on the higher side when compared to the Community's share in India's exports.[3]

Given the liberal policy atmosphere in India it would be unrealistic to expect policy intervention on the import side to adjust the trade gap. Further, control of imports may not be feasible because, as Table 4.1.2 shows, her imports from the EEC is dominated by what may be referred to as unavoidables like, Pearls, Precious and semi-precious stones, Machinery and other Capital goods, etc.

An attempt to correct the continued imbalance in the bilateral trade should, therefore, focus on the export side, which is more amenable for policy intervention and improvement.

In sharp contrast to the EEC's paramount importance in India's external trade relations, India's role in EEC's trade is relatively insignificant. Table 4.1.3 presents share of India in the Community's exports and imports. During the period of our analysis, India's share in EEC imports has always been well below 0.5 per cent. Further, India's share in the Community imports does not exhibit any statistically significant trend over the period studied. In contrast, despite fluctuations, the share of India in the Community exports exhibits statistically significant increasing trend over time.[4]

Table 4.1.2: Structure of India's imports from the EEC (April 1991 to March 1992)

(Share in per cent)

Commodities	Belgium	Denmark	France	Germany	Italy	Nether-lands	U.K.	EEC	All Countries
1. Metalifers Ores and Metal Scrap	0.50	0.49	1.20	2.09	3.17	12.15	4.68	2.73	2.45
2. Organic Chemicals	0.98	3.36	4.23	5.78	5.74	15.21	1.65	3.96	2.84
3. Medicinal and Pharmaceutical prods	0.25	27.79	2.28	1.39	5.10	6.32	1.36	2.06	1.17
4. Fertilizers Manufactured	0.00	0.00	1.71	6.01	0.00	2.68	0.00	2.01	3.32
5. Artificial Resins, Plastics, etc.	1.40	1.98	1.28	1.46	1.69	3.70	0.61	1.38	2.93
6. Chemical Manufacturers and Products	0.23	1.59	1.57	1.06	0.95	1.17	2.04	1.13	0.71
7. Pearls, Precious-Semi-Precious Stones	87.58	0.00	0.04	0.19	0.00	0.01	49.98	32.74	10.08
8. Iron and Steel	0.88	0.02	4.63	11.88	5.32	1.35	4.39	5.51	3.64
9. Manufactures of Metals	0.38	0.29	1.08	1.82	1.86	0.49	0.95	1.11	0.67
10. Machine Tools	0.16	0.57	0.36	3.94	6.54	0.13	0.77	1.89	0.89
11. Machinery except elect & Mechanic tool	2.16	11.04	21.09	20.46	17.20	9.33	8.15	12.37	7.51
12. Electrical Machinery	0.20	5.63	3.82	5.02	2.93	5.52	2.89	3.09	3.24
13. Transport Equipments	0.02	0.24	2.74	1.16	4.32	9.87	0.87	1.67	1.91
14. Project Goods	1.62	19.57	32.70	22.69	17.19	3.36	7.50	13.80	7.58
15. Profsnl.Instr, Optcl goods, etc.	0.82	6.24	2.14	4.56	1.37	7.79	2.54	2.85	2.10
16. Other Commodities	2.82	21.19	19.13	10.49	26.70	20.92	11.60	11.70	48.96
Total	100	100	100	100	100	100	100	100	100

Note: The EEC level imports are obtained by adding imports of important members listed in the Table. Major component of 'Other commodities' is import of crude oil and petroleum products.

Source: Foreign Trade Statistics of India (Principal Countries and Commodities), DGCI & S, Calcutta, March 1993.

Further, as a comparison of columns 2 and 3 in Table 4.1.3 indicates, India seems to have been consistently maintaining a higher share in the EEC exports than in the Community's imports. The implicit element of imbalance in the two-way trade, it may be noted, cannot be dismissed as a temporary phenomenon as it has been a fairly stable feature of the bilateral trade (Rangnekar 1963:225 and Panchamukhi 1985:162).

The EEC, for sure, has emerged as India's leading trade partner. But, is the EEC adequately represented in India's external trade, i.e., in relation to the Community's relative importance in the net-work of world trade? Analogously, is India adequately represented in the Community's exports and imports? An analysis of bilateral trade orientation, using trade intensity indices, would help us address the above questions. Following Kojima's method (Asher and Wadhva 1985:14-18), export intensity and import intensity indices may be defined as follows:

$$m_{ij} = (M_{ij}/M_i) / (X_j/X_w - X_i)$$

$$x_{ij} = (X_{ij}/X_i) / (M_j/M_w - M_i)$$

where m_{ij} and x_{ij} are import intensity and export intensity indices respectively of country I with country j. M and X stand for imports and exports respectively. Subscripts I, j and w represent country I, country j and world in that order. Mij is imports of country I from trading partner j.

Trade intensity indices as defined above help us compare the bilateral trade with the partners' relative importance in world trade. For instance if m_{ij} is greater than unity, it would imply over-representation of country j in country I's imports. On the other hand if m_{ij} is lower than unity, it would imply under-representation. Trade intensity indices calculated for India and the EEC are presented in Table 4.1.4.

Table 4.1.3: India's share in the EEC and the EEC share in world trade

(Share in per cent)

Year	India's Share in EEC Exports	India's Share in EEC Imports	India's Share in World Exports	EEC Share in World Imports	EEC Share in World Exports
1974	0.36	0.34	0.50	37.97	36.06
1975	0.45	0.36	0.55	37.48	37.66
1976	0.39	0.45	0.55	37.91	36.40
1977	0.41	0.48	0.60	37.20	37.19
1978	0.51	0.44	0.53	37.81	38.75
1979	0.47	0.40	0.55	39.17	38.35
1980	0.48	0.33	0.45	39.69	36.47
1981	0.60	0.31	0.37	35.70	34.35
1982	0.66	0.41	0.57	36.55	35.76
1983	0.59	0.33	0.58	36.15	35.51
1984	0.61	0.37	0.59	34.44	34.27
1985	0.68	0.34	0.56	35.09	35.91
1986	0.71	0.30	0.52	37.59	39.99
1987	0.68	0.34	0.46	39.53	40.70
1988	0.62	0.36	0.48	39.06	39.57
1989	0.68	0.40	0.53	38.89	39.03
1990	0.56	0.41	0.53	41.18	41.03
1991	0.47	0.40	0.59	40.71	39.60

Note: Upto 1979 figures pertains to the EEC(9). From 1980 onwards all the 12 numbers are included.

Source: Calculations based on IMF, Direction of Trade Statistics, Year Book.

Table 4.1.4: Bilateral trade orientation: trade intensity indices

Year	Export Intensity Index	Import Intensity Index	Export Intensity Index	Import Intensity Index
	India with EEC	India with EEC	EEC with India	EEC with India
1974	0.5836	0.5110	0.3495	0.4304
1975	0.5356	0.5614	0.3719	0.4091
1976	0.6157	0.5071	0.4382	0.5172
1977	0.7189	0.6717	0.4100	0.5053
1978	0.6250	0.7225	0.4474	0.5057
1979	0.6831	0.7062	0.4017	0.4494
1980	0.5759	0.5940	0.3810	0.4714
1981	0.5253	0.6360	0.5085	0.5536
1982	0.6806	0.7116	0.4714	0.4659
1983	0.5225	0.6800	0.4097	0.3667
1984	0.5795	0.6826	0.4207	0.4111
1985	0.5774	0.7616	0.4755	0.3908
1986	0.5481	0.8256	0.4897	0.3488
1987	0.6420	0.8189	0.5913	0.4416
1988	0.6479	0.8408	0.5487	0.4500
1989	0.6589	0.8265	0.6476	0.4598
1990	0.6269	0.7079	0.4786	0.4505
1991	0.6089	0.7982	0.4608	0.4082
Growth Rate	0.1614	2.4262*	2.1736*	-0.7556

Note: The equation fitted is ln Y = a + bt, where 't' is the time 'y' the trade intensity index.
'*' indicates significant at 5 per cent level.

Source: Calculations based on IMF, Direction of Trade Statistics, Year Book (Different years).

Interestingly, all the indices are well below unity, suggesting under-representation of bilateral trade partners in each others' markets. Notwithstanding natural resistance to bilateral trade such as geographical distance the results indicate scope for further improvement in bilateral trade orientation. The Community's shares in India's exports and imports are lower than its share in global trade. Conversely, India's share in EEC exports and imports are lower than her share in world trade. However, the EEC's trade orientation ratios are systematically lower than India's indices with the EEC. Thus, India is relatively more under-represented in the EEC trade than the EEC in India's exports and imports. Further, when we consider the pattern of change in the indices, India's exports/EEC imports appear to be the weakest link in the two-way trade. While bilateral trade orientation with respect to the trade flow of Indian imports/EEC exports improved over the period as indicated by statistically significant trend increase in

India's import intensity index with E.E.C. and EEC's export intensity index with India, trade orientation through Indian exports/EEC imports has tended to stagnate at low levels. Our analysis of trade intensity indices, therefore, exposes the weakest link in Indo-EEC trade relations, viz., Indian exports to EEC/EEC imports from India.

A brief discussion on the determinants of bilateral trade orientation is in order here. Obviously, factors which influence trade in general, i.e., regardless of its direction, cannot be employed to explain the orientation of the same in particular directions. This is generally true of important determinants of exports, viz., external demand and competitiveness. Consider, for instance, the case of the import intensity index of EEC with India. An improvement in India's export competitiveness might positively influence her trade performance as well as her share in the Community imports. But the same need not improve the import intensity index because improved competitiveness would be reflected in India's share in world exports as well.[5] The same is the case of the effect of EEC demand on the same index. An increase in the Community demand for imports, while it may improve India's exports to the Community in the absolute sense, need not result in any increase in India's share in the Community imports. Coming to India's export intensity index with the EEC, general factors which influence supply of India's exports need not affect the EEC share in India's exports. Admittedly, an increase in EEC demand can, of course, increase the Community share in India's exports. But the same would also pull up the Community share in world imports.

In short, in order to explain changes in bilateral trade orientation, one needs to identify factors specific to the two-way trade between partners. In this connection, we may suggest two important factors that have a bearing on the orientation of trade between any two countries, viz., trade policy regimes of partners and commodity composition of trade. To illustrate, trade policy regimes can discriminate among directions of exports as well as among sources of imports. Such discriminatory policies, no doubt, would have an impact on trade orientation of countries.[6] Similarly, mismatches between commodity composition of trade can also influence trade orientation. For instance, change in commodity composition of import demand of one of the partners may not suit the commodity composition of exports of the others.[7]

Now, how would we explain the observed tendency of India's export intensity index with EEC and the Community's import intensity index with India to stagnate at low levels? Given the definition of the indices, competitiveness of Indian exports and the Community's demand for imports would not help us explain the observed phenomenon. Geographical distance between the trade partners and the influence of traditionally established trade links are two other important factors that deserve attention. However, development of transport and communication facilities should have over time reduced the significance of

the above deterrents to bilateral trade. In any case, distance and the legacy of traditional trade links have not inhibited improvement in the Community's export intensity index with India or India's import intensity index with the EEC. Coming to the role of trade policy, it is true that the foreign trade regime of India has been widely criticised for its alleged bias against exports. But, there is little evidence to argue that the policy regime has been particularly biased against her exports to the Community vis-a-vis other export destinations. At the same time, there is strong evidence for policy bias in the EEC against imports from India vis-a-vis imports from other sources. To state the obvious, the discrimination between members and non-members is inbuilt into the very constitution of all preferential trading arrangements including the EEC (Pomfret 1988:1-9). Further, the EEC is also known for discriminating between different groups of non-members. Significantly, India's position in the EEC's hierarchy of discriminatory arrangements, as we attempt to prove in Chapter 6, is among one of the less favoured groups of countries. Similarly, there could be a mismatch between the structure of the Community imports and the composition of India's exportables.

Discriminatory import policy of the Community and structural mismatch between the EEC demand and India's exports are plausible explanations for the poor orientation of India's exports to the Community. However, firm conclusions on the above issues can wait. For, we propose to take up them in more detail in the forthcoming Section and later Chapters.

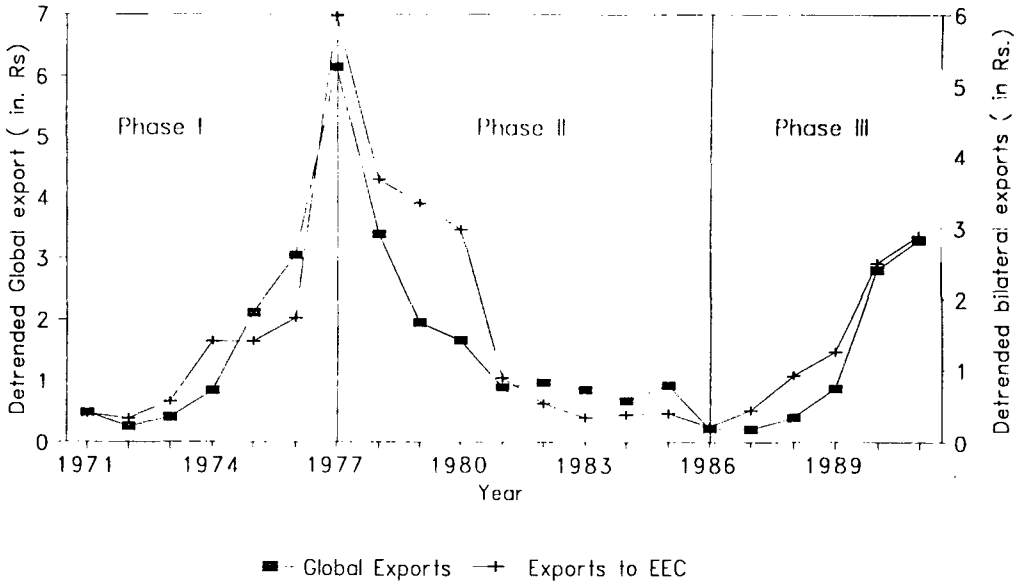
Section II
Trends in India's exports

Trends in India's exports to the EEC is examined to see whether there has been a diverse pattern over the period of the study. We have used the cyclicality approach to discern the phases in growth.[8] The graph 4.1 reveals three distinct phases in the growth of India's exports to the EEC in Indian Rupees, namely, an Increasing Phase (1970-71 to 1976-77), Declining Phase (1976-77 to 1985-86) and Recovery Phase (1985-86 to 1990-91). Accordingly, the study period has been divided into three sub-periods for which average annual growth rates are computed to examine the diverse pattern in growth of India's export to the EEC.

A cursory look at the graph 4.1 suggests that India's exports to the EEC have experienced a prolonged deceleration during the sub-period II (1976-77 to 1985-86) making it distinctly different from the two other sub-periods. The analysis of growth pattern by sub-periods has also confirmed that in terms of simple average annual growth rates, from around 32 per cent per annum during the sub-period I, the growth of

Indian exports to the EEC declined to a dismal rate of 4 per cent per annum during the sub-period II and picked up thereafter during the sub-period III, registering an average annual growth rate of 34 per cent.

Graph 4.1
Growth Phases in India's Exports



The data on exports in terms of current rupee values, however, should be interpreted with caution, for the period under consideration has been characterised by significant changes in the exchange rates as well as the rates of inflation. These problems may be overcome by considering the trends in the volume index and the foreign exchange value of the exports. However, we could not undertake the analysis in terms of volume because unit value and quantum indices are not available for the bilateral trade.[9] The foreign exchange values of India's exports to the Community in terms of U.S. dollars and S.D.Rs. are presented in Table 4.2.1.

Movements in the exchange rates of the rupee with the U.S. dollar and S.D.R., however, need not represent the same with the relevant European currencies. The world-wide movement towards floating exchange rate system makes the problem more complex.[10] Keeping this in view, we have constructed indices of nominal and real effective exchange rates of the rupee with the EEC currencies. For computing bilateral nominal and real effective exchange rates (hereafter BNEER and BREER respectively) we have employed the methodology developed by the Exim bank of India study undertaken by Pradhan (1992). Column 5 of Table 4.2.1 presents the trends in foreign exchange value of exports computed using the bilateral nominal effective exchange rate index.

Table 4.2.1: Trends in India's exports to the European Community

Year	Rupees Million	U.S. $ Million	SDRs Million	In terms of Bilateral Nominal effective exchange rate (BNEER)
1970-71	2787	372	372	3890
1971-72	3015	403	393	4122
1972-73	4061	529	480	5147
1973-74	6068	779	646	6943
1974-75	6970	878	724	7788
1975-76	8513	981	821	8990
1976-77	13925	1551	1345	15440
1977-78	13921	1621	1370	15534
1978-79	15566	1891	1492	16621
1979-80	17296	2135	1642	17216
1980-81	14101	1783	1385	14101
1981-82	13921	1552	1347	15571
1982-83	14150	1464	1340	16580
1983-84	16788	1624	1534	20453
1984-85	19456	1636	1630	23837
1985-86	18694	1528	1447	21833
1986-87	26324	2060	1704	23775
1987-88	37705	2908	2202	28392
1988-89	47292	3266	2455	32007
1989-90	66090	3970	3092	41194
1990-91	79183	4413	3187	40075
Sub-period Growth (average annual) Rate (%)				
1970-71 to 1976-77	32.15	28.26	25.30	27.51
1976-77 to 1985-86	3.93	0.45	1.26	4.61
1985-86 to 1990-91	33.81	24.20	17.50	13.40

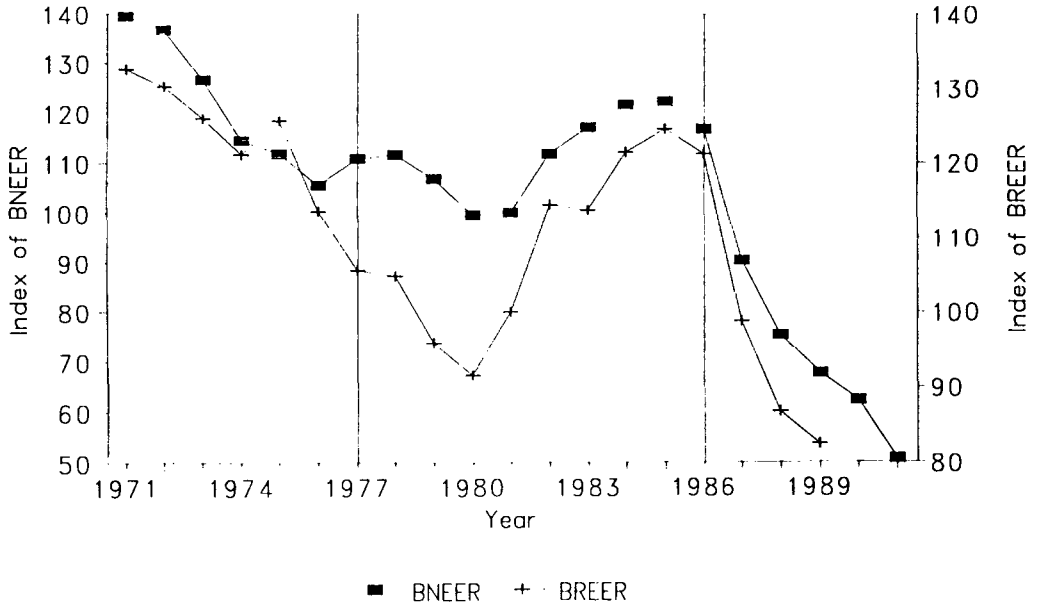
Notes: 1. Indian exports to the EEC here means her exports to the EEC (9). Further, the export figures do not include SITC 3 items.
2. BNEER refers to India's nominal effective exchange rate with the EEC.

Source: Data on exports are taken from Monthly Statistics of the Foreign Trade of India (MSFTI), Director General of Commercial Intelligence and Statistics, Calcutta, various issues. Exchange rate figures are from Table 4.2.2.

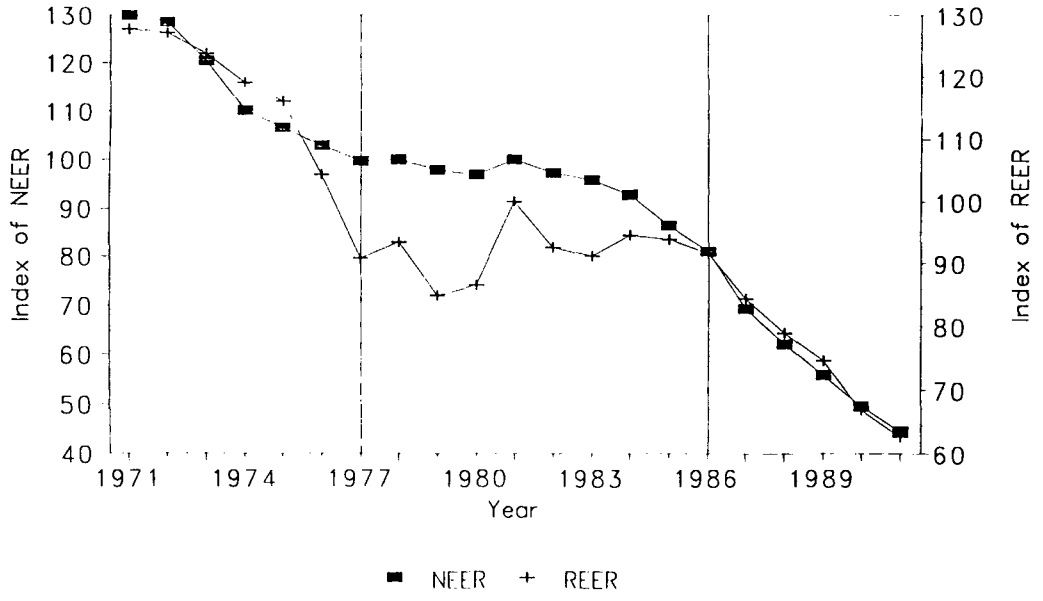
When compared to the growth rates in rupee value, the average annual growth rates in foreign exchange value of exports are generally lower for all the sub-periods, regardless of the criterion used for conversion. The only exception to the general rule is noteworthy. The average annual growth rate for the second sub-period has been higher when measured in terms of the nominal effective exchange rate as compared to its rupee counter-part. This is quite understandable given the fact that the rupee tended to firm up against the relevant European currencies during the period (See Table 4.2.2 and Graph 4.2). The difference in the growth rates apart, the growth phases identified are more or less the same with respect to all the series considered. The second sub-period of stagnation appears more vivid when data are presented in terms of the foreign exchange value.

In order to place the trends in Indian exports to the EEC in perspective, it would be appropriate to compare it with that of India's overall export performance. The comparison of the detrended time series presented in Graph 4.1 brings out striking similarities in the growth pattern; the three different phases identified with respect to India's exports to the Community coincide fairly well with the pattern of growth in India's aggregate export earnings.

Graph 4.2
Trends in India's BNEER and BREER



Graph 4.3
Trends in India's NEER and REER



Further, the average annual growth rates for the sub-periods (see Table 4.2.3) confirms the broad similarities in growth pattern. The different phases identified in terms of growth, however, appear more pronounced in the case of EEC. While the average annual growth rates of exports to the EEC were much higher than those of aggregate export earnings during the Ist and IInd phases, deceleration in the second phase was more pronounced in the case of exports to the EEC. The observed difference in sub-period growth rates would also help us explain changes in the relative share of the Community in India's aggregate exports, which after significant improvement in the first phase, declined in the second sub-period, only to regain the lost ground in the final phase.

A variety of factors influence the country's export earnings both at the aggregate and the bilateral level. For detailed discussions on determinants of India's exports, see Singh (1964:13-36), Nayyar (1976), and Wolf (1982:55-78). Further, the factors that determine export growth would have differential impact on individual items of trade. Therefore, a complete understanding of the export performance would require a systematic study of the relevant variables at a disaggregate level. Nevertheless, it would not be a futile exercise to look for important general factors that have a bearing on the overall export performance. Nayyar (1987) has tried to delineate some such important factors that shaped the trends in India'a global export earnings during the period between 1970-71 and 1984-85. Similarities in the growth pattern suggests that the factors identified to explain the trends in aggregate export earnings would be useful in understanding the trends in India's exports to the EEC as well. Consider for example, the impact

Table 4.2.2: Exchange rate of the Rupee

Year	Rupees per US dollar	Rupees per S.D.R.	NEER (1980=100)	REER (1980=100)	NEER with EEC BNEER (1980=100)	REER with EEC BREER (1980=100)
1970-71	7.50	7.50	129.92	127.74	139.58	132.62
1971-72	7.49	7.67	128.37	127.00	136.73	130.22
1972-73	7.68	8.46	120.41	123.68	126.74	125.96
1973-74	7.79	9.40	110.16	119.14	114.43	121.05
1974-75	7.94	9.62	106.71	116.08	111.74	125.61
1975-76	8.68	10.36	102.89	104.29	105.61	113.52
1976-77	8.98	10.35	99.83	90.93	110.88	105.65
1977-78	8.59	10.16	99.95	93.47	111.58	104.74
1978-79	8.23	10.43	97.93	84.94	106.78	95.79
1979-80	8.10	10.54	96.99	86.48	99.54	91.59
1980-81	7.91	10.18	100.00	100.00	100.00	100.00
1981-82	8.97	10.34	97.37	92.65	111.85	114.40
1982-83	9.67	10.56	95.80	91.10	117.18	113.72
1983-84	10.34	10.94	92.87	94.54	121.83	121.48
1984-85	11.89	11.93	86.46	93.89	122.52	124.55
1985-86	12.24	12.92	81.20	91.66	116.79	121.20
1986-87	12.78	15.45	69.46	84.50	90.32	98.75
1987-88	12.97	17.12	62.29	79.08	75.30	86.79
1988-89	14.48	19.26	55.86	74.66	67.68	82.44
1989-90	16.65	21.37	49.62	66.79	62.33	--
1990-91	17.94	24.85	44.34	62.63	50.61	--

Note:1. Effective exchange rates correspond to calendar years.

2. For computing BNEERs and BREERs, we have used the methodology developed by the Exim Bank of India study of Pradhan (1992) on effective exchange rate of the rupee. The formulae used for calculating the bilateral nominal effective exchange rate (BNEER) and real effective exchange rate (BREER) are as follows:

$$BNEER_t = \exp \Sigma_i W_i \log (100 \times E_{it}/E_{io})$$

$$BREER_t = BNEER_t \times (IP/FP)_t$$

$$FP = \exp \Sigma_i W_i \log P_i$$

where Eit and Eio are current and base period exchange rates; W_i's are trade weights, such that $\Sigma_i W_i = 1$; IP is the whole sale price index of India; FP is the index of wholesale prices of the Community obtained by a weighted geometric average of whole sale prices of India's major trade partners within EEC, with 1980=100; P_i is the wholesale price index of individual EEC country I; and exp is the exponential. The EEC countries selected for calculating BEER's are Belgium, France, Germany, Italy, Netherlands and the U.K. NEERs reported here are 18 country export-weighted indices. REERs are export incentives adjusted indices, calculated using the wholesale price indices.

Source: Exchange rate of the rupee with the U.S. dollar and S.D.R. are from RBI (1993). NEER and REERs are from Pradhan(1992).

Table 4.2.3: Trends in India's aggregate export earnings

Year	Rupees Million	U.S. $ Million	SDRs Million	In terms of Nominal effective exchange rate (NEER)
1970-71	15350	2047	2047	19943
1971-72	16080	2147	2096	20642
1972-73	19710	2566	2329	23733
1973-74	25230	3239	2685	27793
1974-75	33290	4193	3459	35523
1975-76	40360	4650	3894	41526
1976-77	51420	5726	4968	51333
1977-78	54080	6296	5323	54053
1978-79	57260	6957	5489	56075
1979-80	64180	7923	6092	62248
1980-81	67110	8486	6594	67110
1981-82	78060	8704	7553	76007
1982-83	88030	9107	8334	84333
1983-84	97710	9450	8931	90743
1984-85	117440	9878	9842	101539
1985-86	108950	8905	8431	88467
1986-87	124520	9745	8061	86492
1987-88	156740	12089	9155	97633
1988-89	202320	13970	10504	113016
1989-90	276810	16626	12954	137353
1990-91	325530	18142	13100	144340
Sub-period Growth (average annual) Rates (%)				
1970-71 to 1976-77	22.66	19.02	16.30	17.32
1976-77 to 1985-86	8.97	5.23	6.38	6.52
1985-86 to 1990-91	24.73	15.44	9.68	10.61

Source: For data on India's exports, Government of India, Economic Survey 1992-93.
Exchange rate figures are from Table 4.2.2.

of changes in world demand conditions. After a period of steady growth in global production and trade in 1970s, the international economy witnessed a near stagnation during the first half of 1980s. Figures for 1985 onwards, on the other hand, suggest a revival, though weak, in global economic activities and trade. The buoyant world economic conditions of the 1970s, would partly explain the unprecedented spurt in India's exports during the first sub-period. According to Nayyar (1987), the remarkable expansion in

world trade has helped the Indian exports in two important ways; first, by augmenting the demand for India's exportables and second, by facilitating better unit value realisation for her exports of primary products.

The global economic recession of the early 'eighties is argued to have just reversed the situation for India's exports by dampening the demand for exportables and softening the commodity prices. The recovery since 1985 would have once again shifted the world market conditions in a way favourable to Indian exporters. The above argument can very well be extended to the case of India's exports to the EEC, because the pattern of growth in output and trade in the Community economies has been broadly the same as the global economy.[11]

It should, however, be mentioned that the growth phases identified in India's aggregate as well as bilateral exports do not correspond very well with the turning points in world trade or the Community imports. The deceleration in India's export growth seems to have set in earlier than the global recession. But this only shows that the trends in Indian exports cannot be fully explained exclusively in terms of one factor, vis., the external demand conditions. A more satisfactory explanation might emerge as we incorporate other important factors into the analysis.

However, considering the perspective on competition and competitiveness outlined at the outset, it would be interesting to go beyond the level of demand and examine the changes in the structure of demand. In order to represent structural change in demand, we have constructed two series both for global exports and the EEC imports, viz., the share of manufactures [SITC 5 to 8 less (67+68)] in non-petroleum exports (SITC 0 to 9 less 3) and the share of chemicals, machinery and transport equipment (SITC 5 and 7) in non-petroleum exports.[12] As the data presented in Table 4.2.4 show, the period of our study has been characterised by a remarkable shift in the structure of global as well as the Community demand. There has been a trend growth in the share of manufacturers in general and in the share of SITC 5 and 7 in particular. More importantly, the structural change in demand appears to have been more sharp between 1975 and 1987. An answer to the question as to how the structural change in demand would have affected India would require a detailed analysis of the composition of her exports, which we intend to take up in the next Chapter. However, it would not be unrealistic to suspect that at least since 1976, the growth in global and the Community demand for products in which India specialises has not been as fast as the growth in world exports or EEC imports taken at the aggregate level. Incidentally, the above period of structural shift in external demand broadly corresponds with the second sub-period of stagnation in India's export earnings. Thus, changes in the level as well as the structure of global and the EEC demand appear to have contributed to the cyclical pattern in India's overall and bilateral export earnings.

Another important and widely cited factor that has a bearing on the trends in India's exports is the movements in the exchange rate of rupee. The data on the exchange value of rupee, viz., exchange rate with respect to U.S. dollar, S.D.R, nominal effective exchange rate indices and real effective exchange rate indices are presented in Table 4.2.2. Looking at the nominal rates one can delineate a sharp and consistent depreciation in the external value of rupee during the period between 1970 and 1976 (See also Graph 4.3).

Table 4.2.4: Structural change in world exports and EEC imports

(Millions of US dollars)

Year	World Exports	Share of Manufactures in world exports % (STRCTA)	Share of SITC 5 & 7 in world exports % (STRCTB)	EEC Imports	Share of Manufactures in EEC imports % (STRCTA)	Share of SITC 5 & 7 in EEC imports % (STRCTB)
1970	315100	61.06	39.52	115740	55.80	33.50
1971	348200	63.53	41.10	129100	59.02	34.79
1972	415900	64.28	41.50	152910	59.93	35.01
1973	576500	62.42	40.10	214310	59.10	34.49
1974	841500	61.87	40.53	292030	58.74	34.59
1975	875500	64.62	43.47	298171	61.23	36.23
1976	993100	65.75	43.89	341577	61.86	36.89
1977	1129500	66.55	43.85	384942	63.06	37.27
1978	1300100	67.60	44.26	455993	65.30	38.72
1979	1643900	66.73	43.38	596989	65.51	38.90
1980	1998600	66.39	43.01	711841	64.87	38.93
1981	1975600	68.10	44.77	630026	67.09	40.98
1982	1835600	68.88	45.66	586698	67.79	41.61
1983	1806600	68.07	44.97	576289	67.71	42.03
1984	1914200	70.00	46.54	583741	68.28	42.68
1985	1937200	70.16	47.06	610664	69.56	43.89
1986	2128300	73.14	48.43	725833	71.54	44.87
1987	2491100	73.84	48.55	879047	73.36	46.16
1988	2819200	73.44	48.67	981767	73.61	47.15
1989	3020100	73.21	48.18	1050665	73.75	47.67
1990	3415300		48.18	1266622		

Note: The Community's import data are for the EEC (9). For computing the share of manufactures (STRCTA) and the share of SITC 5&7 (STRCTB) we have taken world exports (SITCs 0 to 9) and EEC imports (SITCs 0 to 9) exclusive of petroleum products (SITC 3).

Source: UNCTAD, Handbook of International Trade and Development Statistics, Various Issues.

The story of depreciation, as the data on bilateral nominal effective exchange rate indices show has not been significantly different with respect to the exchange rates of rupee with the relevant European currencies (See Graph 4.2). Depreciation of the currency is expected to help the exports by increasing the international price competitiveness of the exportables and also by making the exports more attractive in comparison to domestic sales. But these effects of an exchange rate depreciation would depend a lot on the differential rate of inflation, i.e., between home and abroad. Therefore, a better indicator to study the effect of exchange rate policy would be the real effective exchange rates. The real effective exchange rates (REER) are the weighted averages of bilateral price-deflated nominal rates. The deflators used to derive the real effective exchange rates are the relevant wholesale price indices.[13]

Movements in real effective exchange rates between 1970 and 1976 have also been generally favourable to the Indian exporters. The depreciation of the rupee in terms of nominal rates and the relatively favourable price situation in India would have together given a competitive edge to her exportables. Thus, the real depreciation of rupee must have also contributed to the observed buoyancy in exports during the first sub-period. Coming to the second sub-period, the direction of exchange rate changes presents a mixed picture. During the period between 1976 and 1983, the REER index has been fluctuating without exhibiting any consistent decline or increase. Real appreciation of the currency in some years and the general climate of uncertainty regarding the movement of real exchange rate could have adversely affected the export business. That uncertainties regarding real effective exchange rate movements could have adverse consequences for exports is widely noted (UNCTAD 1989:132-133). As far as India's exports to the EEC are concerned, the sharp real appreciation of rupee vis-a-vis the EEC currencies between 1979 and 1984 must have had a dampening effect on the export growth (See Graph 4.2).

From the above discussion, it follows that the real effective exchange rate movements have also had a role in the cyclical pattern of growth in exports. A note of caution, however, may be added. The turning points in exports and the exchange rate changes do not match each other well. For instance, even though the sustained decline in bilateral real effective exchange rates has continued uninterrupted up to 1979, the deceleration in India's exports to the EEC has begun much earlier. A one to one correspondence between exchange rate changes and export growth, however, cannot be expected, because, as mentioned earlier, exports are influenced by many other factors. Nevertheless, the pattern of growth in external demand, changes in the structure of demand, exchange rate movements, and relative inflation rates, put together offer a meaningful explanation to the observed pattern of growth in India's exports.

While the factors discussed so far help us understand the inter-sub-period difference in the growth of exports, it remains to be explained why the three phases identified in terms of growth appear more

pronounced in the case of India's exports to the EEC. The following points may help us to explain the difference. First, assessed in terms of annual average growth rates in imports and per capita real gross domestic product, the global economic recession of early 1980s seems to have had a more severe impact on the EEC countries.[14] Second, as mentioned earlier, during the period between 1979 and 1984, the rupee tended to appreciate at a faster rate against the EEC currencies. The third point worth mentioning is with respect to the accounting of crude oil exports from India. The mismatch between domestic production and refining capacity resulted in a spectacular growth in the exports of crude oil from India during the period between 1981-82 and 1985-86. It was this transient phenomenon of crude oil exports that moderated the decline in Indian export earnings in early 1980s. While the export figures for the E.C.M. are reported exclusive of oil exports, which of course was not very significant, the aggregate export earnings for India is inclusive of the same. Fourth, silver stock was exported from India in large quantities in the early 1970s, when Indian silver prices were considerably below world prices. The EEC accounted for a more than average proportion of this export of non-ferrous metals from India.[15]

Determinants of growth in exports

It is widely acknowledged that there has been significant decline in India's share in world trade during 1950s and 1960s (Government of India 1984:8-9). As our comparison of long-term growth rates (Tab.4.2.5) shows, the active policy of export promotion practised since then does not seems to have reversed the trend towards marginalisation of the country in the international division of labour. Notably, the long term growth in India's aggregate and bilateral export earnings has been inadequate when compared to the same in world exports and EEC imports respectively. This has been so despite the trend depreciation in the real exchange value of the currency during the period. The fact that the long-term growth in India's exports has been lower than that of world exports or EEC imports is a matter of grave concern and demands more detailed analysis of the determinants of exports.

In what follows, we make use of the frame-work of multiple regression analysis to assess the relative importance of the determinants of India's exports. In our attempt to analyse the growth phases in India's exports, we have already identified some important factors that influence the country's export performance. The phase-wise analysis of the behaviour of relevant variables also helps us to conceptualise the nature of the relationship between India's exports and the explanatory factors.

To begin with, taking the cue from the phase-wise analysis, it is only reasonable to expect that the external demand would have a positive influence on exports. For the present exercise we have taken world exports

Table 4.2.5: Trends in India's exports, world exports EEC imports and exchange rates

Item	Growth Rate (%)
India's Aggregate Exports (1971-1991)	9.79
World Exports (1971-1991)	10.81
India's Exports to the EEC (1971-1991)	9.85
EEC Imports (1971-1991)	10.46
NEER (1971-1991)	-4.42
REER (1971-1991)	-2.86
BNEER (1971-1991)	-3.24
BREER (1971-1989)	-1.50

Note: The fitted equation is Ln Y = a + bt where 'Yi' is the variable and t is the time. All coefficients are significant at 5 per cent level.

and EEC imports as proxies for world demand and EEC demand respectively. After external demand, competitiveness figures as a prominent entry in the list of factors that influence the export performance. Since we are concerned with export performance at the aggregate level, the real effective exchange rate can be used to represent competitiveness.[16] In an attempt to capture the effect of the active export promotion policy followed during the period under consideration, we have used export incentives adjusted real effective exchange rates. The real effective exchange rate indices used in the present study are derived from the bilateral exchange rates expressed in the form of the foreign currency price of rupee (Foreign currency Units per hundred rupees). Consequently, a decline in the REER index would indicate a depreciation of the rupee and vice versa. Therefore, we postulate a negative relationship between the real effective exchange rate and exports.

The real effective exchange rates can capture, at best, only the price competitiveness. There are other equally or more important dimensions to competitiveness including the ability to influence the structure of demand as well as the capability to adapt the product composition according to the changes in the structure of demand. But, unfortunately, the mainstream literature on trade tends to focus almost exclusively on the price dimension of competition. This limitation of the mainstream literature on trade can, in fact, be traced to the legacy of the neo-classical school of economics which defines competition essentially as an intra-industry phenomenon. As competition is perceived as an intra-industry phenomenon, they tend to exclude inter-industry mobility of capital, or the ability of capital to redefine its area of

specialisation from the purview of what they refer to as competition. In sharp contrast, as we explained at length in Chapter 3, for classical economists, especially Marx, the concept of competition is inseparable from inter-industry mobility of capital. Therefore, viewed from the point of view of individual competitors, competitiveness is not just the ability to sell cheaply a given product or products but also the capability to innovate and change the area of specialisation. Among modern economists Schumpeter (1980:81-106) has also consistently emphasised in his works product innovation and diversification as important elements of capitalist competition. Coming to the theory of trade, product cycle theories (Vernon 1966, Hirsch 1975) and technology gap theories (Soete 1981, Freeman 1987:91-117) underline the importance of product structure.

In order to capture India's ability to adapt her product composition, we have introduced the structure of external demand as an explanatory variable. We have already seen that the period of our study has been one of remarkable change in the structure of world trade. It would be unrealistic to expect that India's exports have kept pace with the drastic changes in external demand.[17] We, therefore, expect a negative relationship between the structure of demand and India's exports.

In order to capture changes in the structure of external demand we have used two different indicators, viz., the share of manufacturers in world exports/EEC imports (STRCT-A) and the proportion of SITC 5 and 7 in world exports/EEC imports (STRCT-B). In both cases petroleum products (SITC 3) were deducted from the denominators.

The level of domestic demand is also widely held as an important variable that shape export performance (Govt. of India 1984:16). An increase in the pressure of domestic demand is generally expected to affect adversely the exports and *vice versa*. For the present study we have taken the All India Industrial Workers Consumer Price Index (CPI) to proxy the level of domestic demand. Coefficient of the consumer price index is expected to take a negative sign.

The relationship between exports and explanatory factors outlined in preceding paragraphs may be expressed in the form of following equation.[18]

$$\ln X_t = a + b \ln D_{t-1} - C \ln REER_t - d \ln STRCT_t - e \ln CPI_t + e$$

where X, D, REER, STRCT and CPI respectively are India's aggregate or bilateral exports (in terms of U.S. dollars), world exports or EEC imports, real effective exchange rates, structure of world exports or EEC imports, and the All India Industrial Workers' Consumer price index. As already mentioned, for

representing the structure of external demand, we used two alternative proxies, viz., STRCT-A and STRCT-B. Therefore, we have two alternative specifications of the postulated equation. Both the variants of the equation were estimated, using the ordinary least squares (OLS) method. The results are presented in Table 4.2.6.

Before getting into the results, it may be noted that the estimates do not suffer from the problem of multicollinearity. Consideration of space, however, does not allow us to report the covariance matrices here. Durbin-Watson statistics presented in the table show that the regressions run for India's global exports are free from the problem of autocorrelation.[19] However, when it comes to the regressions run for India's exports to the EEC, D-W statistic falls within the inconclusive region. Therefore, one cannot be sure that there is no possibility of autocorrelation. In any case, we are not using the estimates for the purpose of prediction. Further, as we substitute BREER indices with the incentives adjusted real effective exchange rate indices of India (REER), D.W. statistic is seen to improve to acceptable levels (See equation C). Here it may be noted that incentives adjusted real effective exchange rates of India with the EEC could not be computed due to data problems.[20]

The regression results, except for those related to the level of domestic demand, are generally in conformity with our *a priori* reasoning. First, the coefficients related to external demand variable in all the regressions are found to have significant positive sign. These results are in line with our phase-wise analysis of export growth; deceleration of world trade during the early 1980s must have had a dampening effect on India's exports. The regression estimates suggest that, other things remaining the same, deceleration in the world economy would tend to weaken one of the most important sources of growth of India's exports. It would be unrealistic to expect buoyant export growth when global economic activity and trade suffer from deceleration.

As expected, coefficients pertaining to real effective exchange rates are negative and significant in all the regressions. In other words, India's exports are responsive to price advantage rendered through real depreciation of the currency. However, a note of caution regarding the strategy of export promotion based on continuous real depreciation of the currency may be in order here. Desirability of such a strategy would depend on the impact of the same on other important macro economic variables as well. For instance, real depreciation of the currency is also expected to make imports costly and improve the balance of payments. But if the imports fail to respond and grow faster than exports, as seems to have happened in India's case during the period of our study, the country would be exposed to serious balance of payments difficulties (Sen and Das 1992, Sarkar 1992). The above scenario is more likely in cases where real depreciation of the currency is accompanied by liberalisation of imports.

Table 4.2.6: Determinants of India's exports

I. India's global exports
A. $\ln IAX_t = 12.44 + 0.479\ \ln WX_{t-1} - 1.063\ \ln REER_t - 1.823\ \ln STRCT\text{-}A_t + 0.368\ \ln CPI_t$ (3.395)* (7.108)* (5.237)* (2.398)* (3.183)* N = 19 R-bar^2 = 0.988 D.W. = 2.15 S.E. = 0.06 F = 374.27
B. $\ln IAX_t = 12.751 + 0.49\ \ln WX_{t-1} - 1.097\ \ln REER_t - 2.179\ \ln STRCT\text{-}B_t + 0.413\ \ln CPI_t$ (5.157)* (8.934)* (6.757)* (3.847)* (4.4)* N = 19 R-bar^2 = 0.992 D.W. = 2.35 S.E. = 0.05 F = 547.44
II. India's exports to EEC
A. $\ln IBX_t = 17.945 + 0.512\ \ln ECM_{t-1} - 1.953\ \ln BREER_t - 2.655\ \ln STRCT\text{-}A_t + 0.495\ \ln CPI_t$ (2.755)* (3.468)* (5.866)* (1.554) (1.616) N = 18 R-bar^2 = 0.934 D.W. = 1.31 S.E. = 0.139 F = 61.31
B. $\ln IBX_t = 14.361 + 0.482\ \ln ECM_{t-1} - 1.869\ \ln BREER_t - 2.287\ \ln STRCT\text{-}B_t + 0.645\ \ln CPI_t$ (3.707)* (3.39)* (6.207)* (1.822)** (1.892)** N = 18 R-bar^2 = 0.938 D.W. = 1.38 S.E. = 0.135 F = 65.09
C. $\ln IBX_t = 25.953 + 0.234\ \ln ECM_{t-1} - 2.955\ \ln REER_t - 3.278\ \ln STRCT\text{-}B_t + 0.637\ \ln CPI_t$ (5.819)* (1.75)** (7.804)* (2.915)* (2.17)* N = 19 R-bar^2 = 0.959 D.W. = 1.66 S.E. = 0.117 F = 106.28

Notes: IAX = India's aggregate exports; IBX = India's exports to the EEC; WX = World Exports; REER = 18 country export weighted, incentives adjusted real effective exchange rate of rupee; STRCT-A = share of manufacturers in world exports/EEC imports; STRCT-B = share of SITC 5 & 7 in world exports/EEC imports; CPI = All India industrial workers consumer price index; ECM = EEC imports; BREER = Bilateral real effective exchange rate of India with EEC.

* indicate significance at 5 per cent level.
** indicate significance at 10 per cent level.

Source: Tables 4.2.1 to 4.2.4

Similarly, deflationary policies associated with the strategy of real depreciation could adversely affect domestic economic growth. A more important argument against continuous real depreciation of the currency is related to the domestic resource cost of exports. Continued real depreciation of the currency would suggest sustained increase in the domestic resource cost of foreign exchange earned through exports. As we have argued in Chapter 3, trade under such a regime can also be argued to involve unequal exchange of values (see also, Sau 1993). Anyhow, long-term growth in the domestic resource cost of foreign currency cannot be taken as a sign of strength of the economy concerned. It is contextual here to

recall that despite the trend depreciation of the rupee during the period, the long term growth in India's aggregate and bilateral exports have been lower than the growth rates of world trade and the EEC imports.

As against the expected negative association between the level of domestic demand and exports, our results show a positive relationship. Further, except in one case, in all other regressions, coefficients related to CPI are statistically significant. The positive relationship might be due to the fact that the proxy selected, viz., CPI, is a poor representative for the pressure of domestic demand on exportables. Exportables of the country cannot be expected to have a significant weight in the commodity basket used for computation of CPI. In fact, as our estimates indicate, it would not be unrealistic to expect a negative association between CPI and the level of domestic demand for exportables. As the price of necessities goes up, consumers might tend to demand less from the costly shelf of exportables. Similarly, as the general cost of living index falls, consumers might tend to have more disposable income to spend on the relatively costly exportables. This is not an unlikely scenario, for most of the export quality products in India are luxuries for the ordinary consumer. We do not, however, claim that the results negate the general expectation of an inverse relationship between the level of domestic demand for exportables and the exports. It only questions the practice of taking the general price level as an indicator of the level of domestic demand for exportables. In fact, both can move in the opposite direction. Incidentally, the observed relationship between exports and the general price level casts some doubts on the efficacy of general deflationary strategies employed to achieve external balance.

Regardless of the indicator used, India's exports and structure of external demand are found to be negatively related in the regressions. Moreover, except in one case coefficients pertaining to the structure of demand are statistically significant. Further, the magnitude of coefficients related to structure are distinctly higher than those of other explanatory variables.

The regression estimates lend unequivocal support to our hypothesis that India's exports have generally failed to keep pace with the changes in the structure of external demand. In fact, during the period between 1970 and 1990, the share of manufactures has increased from 61 to 74 per cent in the Community imports. Similarly, the share of SITC 5 and 7 has increased during the same period from 39 to 48 per cent in world exports and from 34 to 48 per cent in the EEC imports. India's inability to adapt her product structure according to the above changes in demand must have had a dampening effect on her exports. Thus, while the increase in the level of domestic demand is having the expected positive effect on India's exports, change in its structure has not been very conducive. To conclude, structural adaptability or mobility in the international division of labour comes out as a crucial determinant of exports and their growth.

Conclusions

Our analysis of the two-way trade between India and the EEC suggests that there is ample scope for further improvement in mutual orientation of their trade. As of now, the bilateral partners are miserably under represented in each other's market. However, the gap in bilateral trade orientation is found to be more acute with respect to India's exports to the Community /Community imports from India. Thus, India's exports to the Community (Community imports from India) represent the weakest link in Indo-EEC trade relations.

Logically, factors which influence trade in general, regardless of directions, cannot be employed to explain the dynamics of orientation of the same in particular directions. Thus, in a way, definition of bilateral trade intensity ratios as used in the present study helps us to control for the effects of such general factors as India's competitiveness and the EEC demand, and concentrate on other important variables. In order to explain the observed poor orientation of India's exports to the EEC and the consequent inadequate orientation of the Community imports from India we have put forth two plausible explanations, viz., import policy bias of the Community and a possible incompatibility between the structure of the EEC demand and India's exports.

In the present Chapter, we have not considered the proposition on trade policy regime. But our analysis of growth in India's exports provides some empirical support to the second hypothesis. As our regression results show, while there is a positive relationship between the level of Community demand and India's exports, structural change in the Community demand has not been very conducive for India's exports. In fact, there is a strong and significant negative relationship between compositional change in the EEC imports and India's exports. The results, therefore, suggest that India's efforts to adapt her pattern of specialisation have not been adequate to match the structural change in the EEC import demand.

At a general level, our results highlights the overwhelming significance of the interface between compositional changes in external demand and changes in the structure of exports as a crucial determinant of growth in exports of countries. As such, they also expose the weakness of the mainstream approach, which ignores intersectoral mobility of participants from the purview of competition and competitiveness. Competitiveness is not just the ability to produce and sell cheap in given areas of specialistion, it necessarily encompasses the capability to adapt the areas of specialisation to the dynamic changes in demand.

Notes

1. The treaty of Rome establishing the European Economic Community was signed on March 25, 1957 by the original six, which included France, Italy, Germany, the Netherlands, Belgium and Luxembourg. The Community was effectively established on January 1, 1958, after completing the process of ratification of the treaty by the parliaments of the six member States. Formalities related to the formation of the Customs Union were successfully completed ahead of schedule in 1968. In 1973, Britain, Denmark and Ireland also joined the EEC. Greece was accessed in 1980. In 1986, with the entry of Spain and Portugal into its fold, the EEC membership rose to the present strength of 12. Reunification of Germanies in the early 1990s marked the latest phase of geographical expansion of the Community. Further, the EEC has entered into free trade arrangements with many other European countries, with the long-run objective of incorporating them into its fold (UNCTAD 1994: 114-137). Moreover, all along the period since 1957, the Community has also been strengthening the process of integration among member states. Implementation of the single European Act in 1992 which removed remaining barriers to free movement of goods, services, labour and capital within the Community, marked the latest phase in the process of strengthening of the integration process.

2. In fact, German unification, accession of Portugal and Spain, Community plans for 1992 and beyond, the slackening of the once buoyant trade of India with erstwhile socialist countries of east Europe, etc. seem to have increased the relative importance of the Community in India's external trade.

3. The proportion of India's trade deficit with the EEC to her overall balance of trade deficit exhibited wide fluctuations during the period studied. However, in most years, the proportion was much higher when compared to the EEC's share in India's exports. For instance, while the EEC share in India's exports in 1989-90 was 25.5 per cent, trade deficit with the EEC accounted for more than 60 per cent of her overall trade deficit (Monthly Statistics of the Foreign Trade of India, Vol. I & II, Calcutta, March Issues).

4. Trends in India's share in the EEC exports and imports were examined by fitting the equation $\ln Y = a + bt$, where t is the time and Y is the percentage share.

5. Notably, an improvement in India's competitiveness would tend to affect both numerator and denominator in the equation by which import intensity of the EEC with India is defined. Therefore, one cannot make an *a priori* judgement on the direction of change in the index.

6. For instance, the discriminatory trade policy regime of the Community is widely acknowledged to have a distorting influence on world trade flows (Krause 1968).

7. For instance, India may fail to adapt her export structure according to periodic changes in the commodity composition of the EEC demand. If that is true, India's export intensity index with the EEC or the EEC's import intensity index with India would also be affected. Obviously, as the EEC's share in world imports increases, India's share in the EEC may lag behind. We shall take up the question of the mis-match between structure of external demand and India's export structure in detail in Chapter 5.

8. The cyclicality method is a variant of the conventional approach to univariate time series analysis. Like the trend fitting, the cyclicality method is being increasingly used to estimate the cyclical movements in an univariate time series data for phasing out the growth pattern. The cyclical movements in growth is the detrended series, smoothened for irregular movements if any. In our case, we have not smoothened it in so far as the detrended India's Export to EEC time series exhibits little irregular fluctuations. For details of the analytics of the cyclicality method, see, Anandaraj (1992, 1995).

9. Volume and Unit value index numbers are available only for India's global exports. These indices would have, certainly, made our analysis of export performance more meaningful. But, it should be kept in mind that growth in volume can at times be highly misleading if our prime concern is trends in foreign exchange earnings through trade.

10. Under the Bretton Wood's system, where each country maintained a fixed parity with the U.S. dollar, the exchange rate of each country was, in effect, fixed against one another. With the emergence of generalised floating in the early seventies, bilateral rates started exhibiting divergent trends. So much so that, trends in bilateral rate with U.S. dollar need not represent the same with other currencies. Calculation of effective exchange rates (weighted averages of bilateral rates), therefore, becomes important.

11. Trends in EEC exports, imports and per capita real gross domestic product at market prices exhibit a sympathetic pattern vis-a-vis trends in the same aggregates for developed countries in general. This is easily discernible by a comparison of average annual growth rates (UNCTAD 1992). However, as the comparison of growth rates suggests, growth rates for the EEC were marginally better during the seventies and the post-1985 period, whereas, the effect of depression of the early 1980s appears to have been more severe on the Community.

12. SITC 3, as is well known has been a highly fluctuating component of international trade. Oil shocks have made it a highly volatile segment. Further, effects of fluctuations in the share of petroleum products on our structural ratios can be highly misleading.

13. Choice of the price index would depend on the purpose for which the real effective rates are constructed. If our concern is competitiveness, WPI may be preferable to CPI, for the former contains mainly tradables. For a detailed discussion on the choice of price index, see Pradhan (1992).

14. Same as note 11.

15. For instance in 1978-79, silver exports from India (SITC 681) to the EEC accounted for nearly 5 per cent of her total exports to the Community (See Appendix, Table A.5.1).

16. Real effective exchange rate would help us capture the cost/price dimension of competitiveness. A real depreciation in the value of the national currency would generally extend a price advantage to its exporters.

17. Interestingly, a recent study (Diwan and Chakraborty 1993) on India's external competitiveness has concluded that the country has not been able to adapt her production structure to the new techno-economic paradigm evolving at the international level.

18. For a variant of the model, see UNCTAD (1989) study on export growth of developing countries. However, the UNCTAD study does not incorporate the structure of external demand as an explanatory variable.

19. For equation 1, the null hypothesis of no autocorrelation can be accepted at 5% level. For equations 2 and 3, the null hypothesis is acceptable at 1% level. In these cases the results satisfy the D-W test condition that, if $du < d^* < (4-du)$, we accept the null hypothesis of no autocorrelation (Gujarati 1988:377-378).

20. Incentives adjusted real effective exchange rate indices are taken from the Exim Bank of India study by Pradhan (1992). Data on export incentives given on exports to particular destinations, however, are not available. Therefore, while estimating BREERs, we could not take care of the export incentives.

Chapter 5
STRUCTURAL MOBILITY AND COMPETITIVENESS
INDIA'S RESPONSE TO STRUCTURAL CHANGE IN EXTERNAL DEMAND

In preceding chapters, we highlighted inter-sectoral mobility of capital as a crucial attribute of competition. It has also been noted that the conventional, static, intra-industry models of market structure fail to capture the above dimension of competition. This, however, is not to underrate intra-industry aspects of competitiveness focused upon by the mainstream literature, viz., price, quality, delivery schedules, after-sale service, etc. These, undoubtedly, are extremely important dimensions of competition, at any given point in time, among capitals engaged in the production of a more or less homogenous product around which the industry is normally defined. But once we come out of the limits imposed by intra-industry models of market structure, and view competition as a dynamic process, another important dimension of competition and competitiveness becomes conspicuous: the ability of producers to switch their area of specialisation; the ability to be mobile within the division of labour. In order to distinguish it from other aspects of competition, we refer to the latter as structural competitiveness.

We have already seen that the structures of world demand and trade have been undergoing drastic changes over the period of our study. Now, how structurally adaptive has India been in the international division of labour? Has India been able to adapt her specialisation to the changes in external demand? Or, has it been the case that India tended to specialise more and more in areas that face stagnant or declining external demand conditions? Our analysis of the determinants of India's exports in the previous chapter has brought out an inverse relationship between structural changes in external demand and India's exports. In this chapter, we take up the issue in more detail by focusing mainly on compositional changes in India's exports.

The chapter is organised in two sections. In Section I, we bring out broad patterns of change in the commodity composition of India's exports, both at aggregate and bilateral levels. In Section II, we proceed to assess the structural change in India's export basket against the backdrop of changes in the composition of world trade/Community imports. In the process, we also identify mobility areas in India's exports, i.e, important product groups in her export basket, which face favourable external demand conditions.

Section I
Structural change in exports: an overview

The analysis of changes in the composition of India's exports to the Community is primarily based on the data published by the Director General of Commercial Intelligence and Statistics (hereafter DGCI&S), Calcutta. An alternative source of information on structure of bilateral trade would be the EEC export and import data published by the Eurostat (Sapir 1985, Sapir and Stevens 1989, Jagannathan 1993). However, considering familiarity with the data base and easy access, we have opted for the former source. A brief introduction to the data base used and its limitations may be in order here.

The Statistics of the Foreign Trade of India - Vol.I, Exports and Re-exports (hereafter SFTI) published by the DGCI&S provide annual data on exports by the country by commodity classification. However, publication of country-wise data on trade by the DGCI&S has not been regular and uniform till 1976-77 (DGCI&S 1978:39). This makes compilation of systematic time-series information on structure of exports to different destinations difficult. Further, the period under consideration involves three distinctly different systems of trade classification, viz., Revised Indian Trade Classification (RITC) which was in vogue from April 1965 to March 1977, Indian Trade Classification-Revision 2 (ITC-R2) between April 1977 and March 1987, and Indian Trade Classification based on Harmonious Commodity Description and Coding System [ITC (H.S.)] adopted from April 1987. In fact, the question of data comparability becomes almost an intractable problem when it comes to the ITC (H.S.). Incidentally, the DGCI&S has recently brought out detailed correlation tables to ensure comparability between ITC (H.S.) and ITC-R2 (DGCI&S, undated). But, as the correlation tables show, comparison between the two systems in almost all cases requires data at the lowest level of aggregation. For instance, in order to arrive at figures corresponding to most 3-digit groups of ITC-R2, one would require 8-digit level data from ITC (H.S.).[1] This problem, interestingly, cannot be overcome by going to higher levels of aggregation. To illustrate, in ITC-R2, 2-digit level data are sufficient to classify exports into different structural categories, viz., manufactures, non-manufactures, modern manufactures, etc. But in ITC (H.S.) one ought to have 8-digit data to arrive at the same aggregates.[2]

In short, for a systematic analysis of structure of exports using ITC (H.S.), there is no shortcut other than collection and analysis of data at the 8-digit level. But compilation and processing of data at the 8-digit level (10,910 8-digit codes) for different years and different destinations is easier said than done. Incidentally, this is likely to become an important constraint on future research in the area of trade. One solution would be to

make available to researchers computerised data at the lowest level of aggregation. Even then programming of the detailed correspondence table would be an unenviable task. In the present study, considering the unmanageable size of data involved, we have desisted the temptation to extend our detailed analysis of the structure of exports beyond 1987. Post-1987 data, however, can be used to discern broad trends in commodity composition, without insisting on precise comparability with the earlier period.

Our source of data on destination-wise exports (SFTI) do not provide data at the level of country groupings including the EEC. Country-wise data are available upto 1987 at 3-digit (239 groups) as well as 7-digit levels (5121 commodities). For our purpose, we have aggregated the 3-digit level data pertaining to member countries to arrive at the relevant Community figures. For the period since 1987, country-wise data are reported at 4-digit and 8-digit levels. But as seen earlier, 4-digit data of ITC (H.S.) are not adequate to arrive at figures corresponding to the 3-digit categories of ITC-R2, or at important structural aggregates. Finally, the U.N. publications are yet to adopt the harmonised system of trade classification. This makes international comparison of post-1987 Indian trade data almost impossible.

Structure in terms of broad aggregates

With a view to bringing out changes in the structure of India's exports to the EEC, we classified the exports into manufactures and non-manufactures. Manufactures, as defined in the present study include SITC 5,6,7 and 8 less SITC 68. In other words, manufactures include chemicals, 'basic' manufactures classified chiefly according to raw material, machinery and transport equipment and miscellaneous manufactures, excluding non-ferrous metals. This definition has been used because of its wide general acceptance (Nayyar 1978, AnjaliKumar 1988:5-6). Manufactured exports are further divided into traditional and non-traditional manufactures. Traditional manufactures are defined as 'basic' industries, which have existed in India for a relatively long period of time and, therefore, are restricted to two major product categories - textiles (SITC 65) and leather (SITC 61) (Anjali Kumar 1988:6). Non-traditional manufactures as defined in the study, therefore, consists of all manufactures other than SITC 65 and SITC 61.[3]

Table 5.1.1 presents percentage shares of important structural aggregates in India's exports to the EEC. The results, however, should be interpreted with caution, keeping in mind the limitations of the data base discussed earlier (see also notes to the Table). Notwithstanding limitations of the data base, following general

Table 5.1.1 Structure of India's exports to the EEC

(Share in per cent)

Category	1974-75	1978-79	1979-80	1981-82	1982-83	1984-85	1985-86	1986-87
Total Exports (SITCs 0-9)	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
A. Non-manufactures (SITCs 0-4 plus 68)	53.00	31.10	27.30	26.00	28.10	26.40	22.60	22.40
B. Manufactures (SITCs 5,6,7,8 less 68)	47.00	68.70	71.80	73.70	71.50	73.20	76.90	76.90
i. Traditional Mfs. (SITCs 61 and 65)	26.00	25.70	36.30	30.20	27.90	34.70	30.60	27.70
ii. Non-Traditional Mfs. (SITC 5, 6, 7, 8 less 68, 61 and 65)	21.00	43.00	35.50	43.50	43.60	38.50	46.30	49.20

Notes: All figures pertain to the EEC of 10 members. For 1978-79 and 1986-87 we have used '3' digit data for all product groups as well as all member countries (EEC 10) to arrive at structural aggregates presented in the table. Figures for 1979-89 to 1985-86 are based on a sample of important '3' digit product groups. Figures for 1974-75 are not based on annual data; data from April 1974 to Dec. 1974 have been used. The share of manufactures and non- manufactures need not add up to 100, because SITC 9 is excluded from both of them.

Source: Statistics of the Foreign Trade of India: Vol.I, Exports and Re-Exports, DGCI&S, Calcutta, Various Issues.

observations can be made. First, manufactures constitute an overwhelming proportion of India's exports to the EEC: In 1986-87 they accounted for more than three quarters of her exports to the Community. Second, the period between 1974-75 and 1986-87 has been characterised by a more or less continuous shift in the commodity composition of exports in favour of manufactures. Correspondingly, the share of non-manufactures has been witnessing continuous decline. Third, apart from year to year fluctuations, the share of traditional manufactures has not shown any consistent trend towards increase or decline. Fourth, non-traditional manufactures appear to have gained in terms of relative share over the period. This picture of structural change should be seen in the background of the fact that the category 'non-traditional manufactures' had only an insignificant presence in India's exports to the EEC in 1950s and early 1960s (Kalyankar 1975). Interestingly, as Table 5.1.2 clearly shows, the broad directions of structural change identified with respect to India's exports to the EEC are more or less similar to those of India's aggregate exports. Unlike many other underdeveloped countries India had a relatively diversified export basket even at the time of independence (Wolf 1982:31-41, Anjalikumar 1988:45-46). Coming to the period of our study, there has been a consistent shift in the composition of India's aggregate exports in favour of manufactures in general and non-traditional manufactures in particular. In fact, the process of structural change would appear more smooth once we account for the temporary aberration of the early 'eighties caused by crude oil exports from India.[4] Finally,

it may be noted that even though the pattern of structural change has been similar, relative contribution of structural categories differed significantly between the two sets of data.

Table 5.1.2: Structure of India's global exports

(Share in per cent)

Category	1960-61	1965-66	1970-71	1974-75	1979-80	1980-81	1982-83	1984-85	1985-86	1986-87
Total Exports (SITCs 0-9)	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
A. Non-manufactures (SITCs 0-4 plus 68)	55.50	52.10	47.80	50.50	40.20	40.80	48.40	47.20	42.00	37.20
B. Manufactures (SITCs 5,6,7,8 less 68)	44.50	47.90	51.90	49.30	59.50	59.00	51.40	52.70	57.90	62.50
i. Traditional Mfs. (SITCs 61 and 65)	36.40	36.50	27.70	23.10	22.90	20.30	14.90	17.30	17.60	17.20
ii. Non-Traditional Mfs. (SITC 5, 6, 7, 8 less 68, 61 and 65)	8.10	11.40	24.20	26.20	36.60	38.70	36.50	35.40	40.30	45.30

Note: Shares of manufactures and non-manufactures need not add upto 100 because SITC 9 is excluded from both the categories.

Source: Figures for 1960-61 and 1965-66 are from AnjaliKumar (1988:45-46). Data for 1970-71 to 1986-87 are from Monthly Statistics of the Foreign Trade of India - Vol.I, Exports & Re-Exports (MSFTI), DGCI&S, Calcutta, Various March issues.

Indian exports to the Community seem to have reached a higher stage in the ongoing process of structural evolution; relative contribution of manufactures and its sub-divisions are significantly higher in the case of India's exports to the EEC.[5]

Thus, the picture of structural change when considered in terms of broad structural aggregates is highly promising. The structural change outlined above would appear commendable especially when considered against the early structuralist writings, which attribute many disadvantages that developing countries face in international trade, viz., marginalisation in the network of international trade, long-term deterioration of terms of trade, instability in export earnings, etc., to the predominance of primary products in their export basket (Nurkse 1962, 1966:20-24, Prebisch 1971:48-84, Patel 1977). Most of these attributes that the structuralists attach to the primary commodities might be true when considered at the aggregate level. But not all the primary commodities need share the specificities generally associated with the primary commodities. The same is the case with manufactures. A more disaggregate level analysis of changes in commodity composition of exports is therefore called for.

Structural change: disaggregate level analysis

In order to identify products responsible for the observed structural change, first we listed out important 3-digit commodity groups in India's exports belonging to different structural aggregates (see Tabs. A.5.1 to A.5.6 in the appendix). Important commodity groups include all those groups which had a share of at least 0.2 per cent in India's total exports in either of the terminal years selected.[6] The next step has been to identify dynamic and declining commodity groups, i.e. groups which register significant gain or loss (0.2 percentage points or above) respectively in their relative share.[7] The dynamic and declining groups put together, would help us explain the structural change in India's exports.

Before we proceed further, two important caveats may be added. First, as export performance of individual groups are prone to year to year to fluctuations, change in share between time points need not correctly represent the long-term trend in all cases. This is especially so in the case of primary products characterised by highly unstable export performance. The limitation of the end point methodology will be felt more acutely if the focus is on individual products. However, we hope the margin of error to be less because our analysis is based on a sufficiently large number of products. Further, our focus here is not on individual products. Second, the 3-digit commodity groups may include individual items with highly diverging export performance. For instance, a commodity group we characterise as declining may have very dynamic individual items within it. This admittedly is a drawback, especially since we use the data to focus on structural adaptability of Indian exports.

Non-manufactures

Tables 5.1.3 and 5.1.4 present summary results of the disaggregate level analysis of structural change in India's bilateral and global exports respectively. The tables provide SITC codes of dynamic and declining product groups pertaining to different structural aggregates, as well as data on their relative contribution to India's exports. Detailed information on individual product groups and product description is available from tables A.5.1 to A.5.6 presented in the appendix.

To begin with India's exports of non-manufactures to the EEC, declining groups identified among them, viz., Meat, fresh, chilled, frozen (SITC 011), Vegetables, fresh, simply preserved (054), Sugar and honey (061), Tea and mate (074), Feeding Stuff for animals (081), Tobacco unmanufactured (121), Crude veg. materials

(292), and Silver, platinum, etc. (681) would take us a long way ahead in our attempt to explain the declining relative importance of non-manufactures in India's bilateral exports.

Table 5.1.3: Dynamic and declining product groups in India's exports to the EEC: summary results

Category	Dynamic Groups			Declining Groups		
	SITC Codes	Share in India's Exports (%)		SITC Codes	Share in India's Exports (%)	
		1978-79	1986-87		1978-79	1986-87
Non-Manufactures	036 042 057 071 075 263 273 281 424	4.46	11.41	011 054 061 074 081 121 292 681	24.49	9.33
Traditional Manufactures	612 651 654 659	7.15	13.72	611 652 653 658	18.29	13.90
Non-Traditional Manufactures	514 531 792 831 843 844 845 846 848 851 897	12.03	25.12	541 667 697 713 793 847 894 896	25.84	17.78
Total		23.64	50.25		68.62	41.01

Notes: All product groups which register an improvement in their relative share in India's exports to the EEC by at least 0.2 percentage points between 1978-79 and 1986-87 are included among dynamic groups. Declining groups are those which suffer a decline in their share by 0.2 percentage points or more.

Sources: Statistics of the Foreign Trade of India, Vol.I, Exports and Re-Exports, DGCI&S, Calcutta, Relevant issues.

As can be seen from the Table 5.1.3, their collective share in India's exports to the Community declined from around 24.5 per cent in 1978-79 to 9.3 per cent in 1986-87. Significantly enough, there have also been some notable exceptions to this general trend among non-manufactures. For instance, dynamic groups, viz., shell fish, fresh, frozen (SITC 036), Rice (042), Fruits, nuts, fresh, dried (057), Coffee and coffee substitutes (071), Spices (075), Cotton (263), Stone and gravel (273), Iron ore and concentrates (281), and other fixed vegetable oils (424) could improve their total share in India's exports to the EEC from 4.4 per cent to 11.4 per cent during the same period. But obviously, performance of these dynamic groups has not been adequate to offset the decline in other groups.

Commodity composition of non-manufactures in India's global exports also presents a similar mixed pattern (Table 5.1.4). Here again, the performance of individual groups varies significantly among non-manufactures, but stagnating and declining groups tend to dominate and pull down the collective share of non-manufactures in total exports. While the dynamic groups gained nearly 9 percentage points in total exports, the

Table 5.1.4: Dynamic and declining product groups in India's global exports: summary results

Category	Dynamic Groups			Declining Groups		
	SITC Codes	Share in India's Exports (%)		SITC Codes	Share in India's Exports (%)	
		1976-77	1986-87		1976-77	1986-87
Non-Manufactures	011 036 041 042 057 075 122 263 273 334	9.03	17.59	061 074 081 121 222 247 278 281 287 292 322 424 681 684	30.38	14.87
Traditional Manufactures	612 659	1.88	4.99	611 652 653 654 658	15.91	10.99
Non-Traditional Manufactures	541 553 667 727 728 736 759 831 843 844 845 846 848 896 897	12.13	32.73	661 671 672 673 676 678 691 694 695 713 842	12.65	1.70
Total		23.04	55.31		58.94	27.56

Notes: All product groups which register an improvement in their relative share in India's global exports by 0.2 percentage points, between 1976-77 and 1986-87 are included among dynamic groups. Declining groups are those which suffer a decline in their share by 0.2 percentage points or more.

Sources: Monthly Statistics of the Foreign Trade of India, Vol.I, Exports and Re-Exports, DGCIS, Calcutta, Relevant issues.

declining groups lost almost 16 points between 1976-77 and 1986-87. SITC Codes and product description pertaining to dynamic and declining product groups, are available from Tables A.5.4. However, special mention may be made of dynamic and declining groups common to bilateral and global exports. Product groups which appear to be dynamic in both the export baskets are shell fish fresh, frozen (SITC 036), Rice (042), Fruits, nuts, fresh, dried (057), Spices (075), Cotton (263), and Stone, sand, gravel (273). Common declining groups are Sugar and honey (SITC 061), Tea and mate (074), Feeding stuff for animals (081), Tobacco unmanufactured (121), Crude veg.materials (292) and Silver, platinum, etc. (681).[8]

Regarding the higher relative share of non-manufactures in India's global exports vis-a-vis her exports to the EEC, one can list many individual groups enjoying a higher share in her global exports. However, special

mention may be made of Iron ore and concentrates (SITC 281) and Petroleum products (334) which together accounted for around 8 per cent in India's global exports in 1986-87 as against less than 1 per cent in her bilateral exports.[9]

Traditional manufactures

Even though the pattern of change in commodity composition with respect to traditional manufactures has been broadly the same, unlike in India's global exports, dynamic groups appear to have had an upper hand in India's exports to the EEC (See Tables 5.1.3 and 5.1.4). This would explain why the proportion of traditional manufactures registered an increase in India's exports to the Community, between the time points chosen, as against a clear decline in her aggregate exports. In India's exports of traditional manufactures to the EEC, declining groups include Leather (SITC 611), Cotton fabrics, woven (652), Fabrics woven of man-made fibres (653) and Made-up articles, wholly or chiefly of textile materials (658). In her global exports, apart from above groups, Other woven textile fabrics (654) also figure among declining groups. Leather manufactures (612) and Floor coverings (659) are among dynamic groups in both export baskets. In addition to SITCs, 612 and 659, Textile yarn (651), Other woven textiles fabrics (654) are also among dynamics groups in India's exports to the EEC.

We have already seen that the traditional manufactures enjoy a higher share in India's exports to the EEC than in her global exports. This, as Tables A.5.2 and A.5.5 in the appendix show, may be explained in terms of the fact that important product groups among traditional manufactures like Leather (SITC 611), Leather manufactures (612), Textile yarn (651) and Floor coverings (659) enjoy a significantly higher share in India's exports to the EEC as compared to her global exports.

Another interesting dimension of change in the composition of traditional manufactures is the shift from leather to leather manufactures. This, in fact, can be interpreted as an upward movement in the relevant processing chain; from low value-added to high value-added products. The picture becomes clear as we incorporate other important links in the processing chain of leather, viz., Raw hides and skins (SITC 211), Raw furskin (212), Furskin, tanned or dressed (613), and Footwear (851). As Table 5.1.5 makes clear, there has been an encouraging upward movement across the processing stages. A similar shift towards higher stages of processing could be seen in the case of tobacco as well; the share of Tobacco manufactures (SITC 122) in total tobacco exports (SITCs 121 and 122) has been increasing in both export baskets.[10]

Table 5.1.5: Processing chain: leather

(Share in per cent)

Processing Stages	Share in India's Exports to the EEC		Share in India's Global Exports	
	1978-79	1986-87	1976-77	1986-87
Hides and Skins raw (SITC 211)	0.024	0.000	0.004	0.000
Furskins, raw (SITC 212)	0.013	0.000	0.011	0.000
Furskin, Tanned, dressed (SITC 613)	0.040	0.009	0.166	0.004
Leather (SITC 611)	10.014	8.268	4.810	3.757
Manufactures of Leather (SITC 612)	0.561	3.073	0.175	2.129
Footwear (SITC 851)	0.474	1.446	0.590	0.654

Notes: SITC 851 includes some non-leather products also.

Sources: For India's exports to the EEC, Statistics of the Foreign Trade of India (SFTI): Vol.I, Exports and Re-Exports, DGCI&S, Calcutta, relevant issues. For India's global exports Monthly Statistics of the Foreign Trade of India (MSFTI): Vol.I, Exports and Re-Exports, DGCI&S, Calcutta, relevant issues.

Unfortunately, a firm conclusion on the processing chain of cotton cannot be derived from our 3-digit level data. The relevant 3-digit groups are not exclusively devoted for cotton products. For instance, Textile yarn (SITC 651), Textile articles nes (658), etc., would contain products made of other natural as well as man-made fibres. Therefore, a clear picture on the cotton chain would require data at a more disaggregate level. However, consistent increase in the share of cotton and textile yarn in India's exports may be underlined. This certainly might not have been a favourable feature, if not an adverse one, for export of higher value-added products (e.g. Clothing) in the same processing chain. Incidentally, supply of cotton, yarn and fabrics at reasonable price has been widely recognised as a crucial determinant of apparel exports from the country (Jain 1988:674-5 and Anjalikumar 1988:122-3).

Non-traditional manufactures

As reported earlier, one outstanding feature of structural change in India's exports in recent years has been the commendable increase in the share of non-traditional manufactures. Naturally, dynamic groups among non-traditional manufactures must have had a clear advantage over their declining counterparts (See Tables 5.1.3 and 5.1.4). In India's exports to the EEC, dynamic groups, viz., Nitrogen function compounds (SITC 514), Synthetic dye, natural indigo, lakes (531), Aircraft, associated equipments and parts (792), Travel goods (831), Women's outerwear nonknit (843), Under garments nonknit (844), Outerwear knit nonelastic (845), Undergarments knitted (846), Headgear, non-textile clothing (848). Footwear (851), and Jewellery (897) could improve their collective share from 12 per cent in 1978-79 to 25 per cent in 1986-87.

In India's global exports also, the dynamic groups could more than double their share in total exports; i.e. from 12 per cent in 1976-77 to 33 per cent in 1986-87. Dynamic groups here include, apart from SITCs 831, 843, 844, 845, 846, 848 and 897 identified in the bilateral context, Medical and pharmaceutical products (SITC 541), Perfumery, cosmetics, etc. (553), Pearls, precious and semi-precious stones (667), Food processing machines (727), Other machinery for special industries (728), Metal working machine tools (736), Parts and accessories of office and automatic data processing machines (759) and Works of art, collectors' pieces and antiques (896).

There have also been some declining product groups among non-traditional manufactures. But, improvement in the share of dynamic items has been so overwhelming for the declining groups to make their presence felt in the aggregate share of non-traditional manufactures. It may be noted that the dynamic product groups identified among non-traditional manufactures have been in the forefront of India's export efforts, in terms of their contribution to growth in exports and structural mobility of the country.

Narrow specialisation

It is important to recall here that the definition of non-traditional manufactures as used in the present study has been rather broad; covering SITCs 5, 7, 8 and 6 less SITCs 61, 65 and 68. Significantly, the observed growth in non-traditional manufactures has not been that broad-based as the widely used definition would indicate. Buoyancy in non-traditional manufactures appears to have come from a rather narrow range of products, leaving wide areas of potential export growth unexploited or under-represented.

In India's exports to the EEC, a handful of commodity groups, viz., Pearls, precious and semi-precious stones (SITC 667), Travel goods (831), Clothing (84), Footwear (851), Jewellery (897) and Works of art, antiques etc. (896) accounted for more than 82 per cent of her exports of non-traditional manufactures in 1986-87. Further, Travel goods, Clothing, Footwear and Jewellery among themselves would also almost fully explain the growth in the share of non-traditional manufactures; while dynamic groups among non-traditional manufactures in general gained 13 percentage points in total bilateral exports, the products listed above accounted for 11 percentage points! Apropos India's global exports, important product groups, viz., Pearls, etc. (SITC 667), Clothing (84), Travel goods (831), Footwear (851), Works of art, antiques etc. (896) and Jewellery (847) accounted for more than 70 per cent of the total in 1986-87. Here again, growth in the share of non-traditional manufactures has come from a very limited number of product groups. Out of 21 percentage points gained by dynamic items, 17 have come from Clothing and the Pearls group.

India's performance in other areas of export potential, viz., Chemical and related products (SITC 5), Machinery and transport equipments (7), Paper, paper board, paper pulp, (64), Iron and steel (67), etc. has been rather lack-lustre (Table 5.1.6).

Here, we do not overlook marginal improvement in the share of Chemicals, and Machinery and transport equipments in India's exports. Our intention is also not to underrate the significance of fast growing groups belonging to above broad heads already identified as dynamic groups. Notwithstanding individual exceptions, overall performance in the areas of Chemicals, Machinery and transport equipments, etc. have been inadequate as compared to their relative importance in world/EEC market. For instance, while SITC 7 accounted for 29 per cent of the EEC imports in 1986, share of the same in India's exports to the Community was as low as 2.43 per cent (See Table 5.1.6). Moreover, share of SITC 7 has registered a decline in her exports to the EEC from 5.2 per cent in 1978-79 to 2.43 per cent in 1988-89. In short, given the present pattern of specialisation, many important and dynamic areas of world trade/EEC imports are miserably underrepresented in India's exports.

Illusion of export diversification

As mentioned earlier, India is widely held to have a fairly diversified export basket. Structural change in the recent past, especially growth of non-traditional manufactures, might even re-inforce this view. But, the disaggregate level picture of structural change in India's exports outlined above suggests a possible

Table 5.1.6: Product composition of manufactured exports

(Share in per cent)

Division Code	Product Description	Share in India's Exports to EEC		Share in EEC Imports		Share in India's Global Exports		Share in World Exports	
		1978-79	1986-87	1978	1986	1976-77	1986-87	1976	1986
51	Organic chemicals	0.22	0.73	2.07	2.63	0.22	0.39	1.68	2.18
52	Inorganic chemicals	0.12	0.22	1.11	1.09	0.39	0.25	0.74	0.93
53	Dying, tanning, colouring Materials	0.31	1.18	0.45	0.57	0.65	0.61	0.52	0.56
54	Medical pharm products	1.41	1.02	0.80	1.03	0.47	1.30	0.80	1.08
55	Essential oils, perfume materials	0.14	0.36	0.44	0.56	0.37	0.63	0.40	0.53
56	Fertilisers, manufactured	0.00	0.00	0.37	0.40	0.00	0.00	0.39	0.40
57	Explosives,pyrotechnic products	0.00	0.00	0.02	0.03	0.03	0.01	0.03	0.03
58	Artificial resins, plastic products	0.00	0.20	1.83	2.53	0.08	0.09	1.50	1.91
59	Chemical products, nes...	0.08	0.15	0.88	1.16	0.10	0.26	0.81	1.05
SITC 5		*2.28*	*3.86*	*7.97*	*10.00*	*2.31*	*3.54*	*6.87*	*8.67*
61	Leather, Leather manufactures	10.62	11.35	0.46	0.53	5.15	5.89	0.35	0.42
62	Rubber manufacturers nes...	0.04	0.13	0.70	0.79	0.45	0.69	0.67	0.73
63	Cork, wood manufactures	0.07	0.15	0.65	0.53	0.23	0.15	0.53	0.43
64	Paper, paper board, pulp etc.	0.00	0.01	1.91	2.36	0.13	0.05	1.52	1.84
65	Textile yarn, fabrics	15.07	16.39	3.73	3.49	14.20	11.32	3.26	3.10
66	Non-metallic mineral mfs.	19.41	13.55	3.30	2.23	6.94	16.41	1.95	2.07
67	Iron and steel	0.34	0.04	3.71	3.27	7.76	0.45	4.48	3.42
69	Manufacturers of metal, nes...	1.86	1.52	1.97	2.04	2.57	1.32	2.16	2.08
71	Power generating machinery	0.71	0.47	1.62	2.00	0.72	0.70	2.21	2.36
72	Machinery for particular industries	3.01	0.38	5.47	2.94	0.72	1.50	3.80	3.53
73	Metal working machinery	0.22	0.20	0.60	0.71	0.36	0.56	0.94	0.93
74	General industrial machinery	0.30	0.21	2.87	3.13	0.56	0.63	3.62	3.51
75	Office machines, data processing	0.00	0.08	1.88	4.05	0.05	0.51	1.19	3.51
76	Telecommunications, Sound recording	0.13	0.05	1.71	2.14	0.20	0.10	2.33	3.11
77	Electrical machinery	0.14	0.36	3.36	4.43	1.37	1.42	3.12	5.05
78	Road vehicles	0.34	0.48	7.07	7.94	1.48	1.31	7.78	10.39
79	Other transport equipment	0.35	0.20	1.98	1.48	0.34	0.24	3.28	2.55
SITC 7		*5.20*	*2.43*	*26.56*	*28.82*	*5.80*	*6.97*	*28.27*	*34.94*
81	Sanitary, plumbing, fittings etc.	0.00	0.00	0.26	0.26	0.05	0.02	0.19	0.21
82	Furniture and parts	0.02	0.02	0.86	0.86	0.09	0.02	0.51	0.72
83	Travel goods	0.48	1.35	0.16	0.18	0.13	0.57	0.13	0.17
84	Articles of apparel	12.06	21.22	2.93	3.28	6.50	11.31	1.90	2.76
85	Footwear	0.47	1.45	0.71	0.83	0.59	0.65	0.57	0.72
87	Professional, scientific instruments	0.04	0.18	1.12	1.64	0.08	0.15	0.01	1.64
88	Photographic apparatus etc.	0.24	0.08	1.16	1.18	0.19	0.22	1.18	1.34
89	Miscellaneous manufactures	3.41	3.36	2.61	3.19	2.02	2.77	2.14	3.20

Sources: For India's bilateral and global exports, same as Table 5.1.5. For EEC imports and world exports U.N. Yearbook of International Trade Statistics, Vol. II, relevant issues.

concentration of her exports in a narrow range of products. Further, some recent studies on India's exports, especially those undertaken in the context of Indo-EEC trade have noted a trend towards export concentration (Sapir 1985, Sapir and Stevens 1989, Jagannathan 1993:89-118).

In a way, dynamic product groups already identified may be considered as areas, where India's exports tend to crowd together. In her exports to the EEC, 24 groups identified as dynamic ones (i.e. out of 239 groups of the ITC-R2) have more than doubled their combined share in total exports from 24 per cent in 1978-79 to nearly 50 per cent in 1986-87. Adding to the fear of export concentration, the gains made by the dynamic groups have been very unequally distributed. In fact, out of 26 percentage points gained by the dynamic groups, nearly 10 percentage points have come from Clothing (SITC 84) alone (See Table 5.1.9). According to 1986-87 figures, Clothing alone accounted for little over 21 per cent of India's exports to the EEC. Moreover, it is well known that India's Clothing exports has also not been very broad-based (Rajaraman 1990, Chatterjee and Mohan 1993). More disaggregated data would be required to delineate the pattern of specialisation within the division, Clothing. But our 3-digit level data base itself suggests a very high degree of specialisation. For instance, one product group, Women's Outwear nonknit (SITC 843) alone covered nearly 50 per cent of India's clothing exports to the EEC in 1986-87. Another individual product group with overriding significance is Pearls, precious and semi-precious stones (SITC 667). It accounted for about 13 per cent of India's exports to the Community in 1986-87. However, SITC 667 is not included among dynamic product groups in our analysis.[11] Other important areas of export concentration are Shell fish, fresh frozen (SITC 036), Fruits, nuts, fresh dried (057), Leather manufactures (612), Textile yarn (651), Other woven textile fabrics (654) and Floor coverings (659). (See Table 5.1.9).

Coming to India's global exports, the 27 dynamic groups have improved their combined share from 23 per cent in 1976-77 to 55 per cent in 1986-87. Here again, performance of dynamic groups varied significantly among them. While all the dynamic groups together gained 32 percentage points, Pearls, precious and Semi-precious stones (10 points), Clothing (7 points), Petroleum products (3 points), Leather products (2 points), Rice (1.5 points) and Floor coverings (1.16 points) claimed a gain of nearly 25 percentage points in India's total exports (See Table 5.1.10). Export of petroleum products from India, we know, has been a transient phenomenon. But for few such exceptions, dynamic product groups identified in India's global and bilateral exports have been performing fairly consistently over the years. Therefore, these dynamic groups, especially products prominent among them may be considered as constituting the centre of gravity of a possible export concentration in India's exports.

Evidence presented so far in terms of growing weight of certain groups does not allow us to draw firm conclusions on export concentration. The observed increase in the share of individual product groups identified might be the result of just a trade-off: a shift in the pattern of specialisation from certain concentrated areas to the new dynamic products. But this ambiguity can easily be overcome by using more dependable measures of export diversification. For our purpose, we have employed a widely used (Yeats 1979:42, UNCTAD 1992) measure that define concentration/ diversification on the basis of absolute deviations of a country's commodity export shares from the share of those commodities in world trade. Thus, the diversification index may be written as:

$$S_j = \left(\sum_{i=1}^{n} |h_{ij} - h_i|\right)/2$$

where h_{ij} is the share of each 3-digit commodity 'i' in total exports of country 'j' (India) while 'h_i' is the share of commodity 'i' in world exports/Community imports. The index measures the extent that India has diversified against World/EEC demand structure. It ranges between zero and 1 with the latter indicating the most extreme concentration.

The concentration ratios presented in Table 5.1.7 provide unequivocal support to our hypothesis on export concentration. We have calculated concentration ratios mainly at three levels; incorporating all '3' digit product groups, with manufactures alone, and finally for manufactures excluding the odd group in India's exports, viz., Pearls, precious and semi-precious stones (SITC 667). The results may be interpreted as follows. First, the level of export concentration is distinctly higher in India's exports to the Community as compared to her global exports. Second, in India's global as well as bilateral exports, the ratios show notable increase between the respective end-points. The level of concentration is generally lower when manufactures are taken separately. But, interestingly, the increase in concentration appears to have been faster with respect to manufactures *vis-a-vis* total exports. This, however, need not surprise us, for we have seen how exports of manufactures from India have been getting crowded into a narrow range of products. In short, it may be safely concluded that, despite the country's broad industrial base, India has been specialising increasingly in a narrow range of products.[12]

Table 5.1.7: Export diversification indices

Level	India's Exports to the EEC		India's Global Exports	
	1978-79	1986-87	1976-77	1986-87
All '3' digit groups	0.766	0.769	0.664	0.679
Manufactures alone	0.752	0.763	0.616	0.674
Manufactures less SITC 667	0.748	0.756	0.609	0.656

Notes: Concentration/diversification index has been calculated using the following formula.

$$\text{Concentration index} = \left(\sum_{i=1}^{n} |h_{ij} - h_i|\right)/2$$

where h_{ij} is the share of commodity i in total exports of India and $_ih$ is the share of commodity i in total world exports/ EEC imports. The value of the index would then range between zero and one, with the latter representing the most extreme concentration.

Sources: Same as Table 5.1.6.

As mentioned at the outset, problems related to data comparability make the extension of our analysis to the post-1987 period difficult. Nevertheless, a 2-digit level analysis of exports suggests that major conclusions drawn so far are generally true for the more recent period as well (see Table 5.1.8 and Appendix Table A.5.7). It needs to be cautioned, however, that the definitions of structural aggregates used here are not comparable with those of the earlier period.[13] But they can very well be used to discern the broad direction of change in the commodity composition of trade. First of all, the observed movement in the structure from non-manufactures to manufactures appears to have continued through the period between 1986-87 and 1990-91.

Similarly, the share of non-traditional manufactures has also continued to improve over the period. For reasons cited earlier, we have not been able to extend our 3-digit level analysis to the post-1987 period. Therefore, we have not also been able to assess the performance of dynamic and declining product groups identified in the earlier analysis. However, growth in the relative share of Articles of leather (HS chap.42), Clothing (61,62,63), Footwear (64), Articles of iron and steel (73), Inorganic chemicals (28), Organic chemicals (29), Pharm products (30), Electrical machinery (85), etc., indicate continued good performance of dynamic items identified earlier (see Appendix A.5.7). Further, relatively better performance of dynamic

items of modern sectors,viz., Chemicals and allied industries, Machinery, transport equipment, etc., would suggest some decline in the level of export concentration. Nonetheless, extreme dependence on the narrow range of products, viz., Leather and leather products, Textile and Clothing and the Pearl's group continues (see Table 5.1.8). Further, the problem of narrow specialisation is found more pronounced in India's exports to the Community.

Table 5.1.8: Structure of India's Exports 1987-88 to 1990-91

H.S. Sections	Product Description	India's Exports to the EEC			India's Global Exports	
		1987-88	1988-89	1990-91	1987-88	1990-91
1	Live Animals, Animal products	2.32	2.76	3.14	4.23	3.61
2	Vegetable products	9.91	9.30	5.87	14.57	9.73
3	Animal or Veg. Fats & Oils	0.11	0.09	0.38	0.14	0.27
4	Prepared Foodstuffs, Beverages, Tobacco	1.41	1.24	2.67	2.71	3.23
5	Mineral products	1.78	2.12	1.71	9.11	7.54
6	Chemicals & Allied Industries	4.71	5.46	6.49	4.70	7.86
7	Plastics & Rubber	0.40	0.52	0.47	0.78	1.21
8	Hides & skins, Furskins, Leather prds.	12.96	11.44	12.99	5.58	5.39
9	Wood cork and articles thereof	0.12	0.09	0.04	0.02	0.08
10	Paper & paper Board	0.10	0.09	0.06	0.21	0.19
11	Textiles and Textile Articles	41.55	34.00	38.53	26.49	27.44
12	Footwear, Headgear, Umbrellas	4.48	3.77	5.10	2.88	2.86
13	Stone, Cement, similar materials	0.25	0.28	0.30	0.31	0.43
14	Pearls, precious, semi-precious stones	12.72	19.34	14.21	16.76	16.21
15	Base Metals and Articles	2.17	4.08	2.70	2.41	4.08
16	Machinery, Electl. and Electl.Equips & parts	1.50	1.67	1.74	4.70	5.23
17	Transport Equipment	0.75	0.95	1.03	1.62	2.22
18	Instruments & Apparatus	0.17	0.19	0.21	0.63	0.46
19	Arms and Ammunition	0.00	0.00	0.00	0.00	0.00
20	Miscellaneous Manufactures	0.42	0.37	0.37	0.30	0.35
21	Works of Arts, etc.	0.01	0.01	0.01	0.01	0.00
	Others *(Chapters 98 and 99)*	2.13	2.22	1.96	1.74	1.60
	Non Manufactures *(Sections 1 to 5)*	15.53	15.51	13.72	30.76	24.38
	Traditional Manufactures *(Chapters 42,50 to 60)*	24.87	20.53	23.72	14.94	16.02
	Non-Traditional Manufactures	59.60	63.96	62.51	54.30	59.60
	Total	100.00	100.00	100.00	100.00	100.00

Note: India's exports to the EEC cover all the 12 members.

Sources: For India's global exports, MSFTI, Vol.I Exports and Re-exports. DGCI & S, Calcutta, various issues.
For India's exports to the EEC, SFTI - Vol.I, Exports and Re-exports, DGCI&S, Calcutta, various issues.

Revealed comparative advantage and export concentration

Specialisation, if it is according to the principles of comparative advantage, need not worry those, who subscribe to the mainstream theories of trade. Free international trade should naturally lead to higher levels of division of labour and hence specialisation. Such specialisation and trade cannot but benefit the partners and maximise global welfare. If so, India cannot be blamed for specialising in the dynamic areas identified in the present study, because in doing so she seems to have followed the signals of comparative advantage.

At the theoretical level, the concept of comparative advantage is defined in terms of autarkic prices. However, since economic data are based on events in the world of trade, it is nearly impossible to derive true indices of comparative advantage based on pre-trade prices. As a response, economists have developed different proxy measures to represent the underlying comparative advantage. In the present study, we have used Bela Balassa's export performance ratio/revealed comparative advantage index (RCA) (Balassa and Bauwens 1988:4-7, Vollrath 1991)). Accordingly, RCA has been computed using the following formula.

$$RCA = (X^i_a / X^i_t) / (X^w_a / X^w_t)$$

where subscript 'a' refers to any specific commodity, subscript 't' refers to all trade commodities and subscripts 'i' and 'w' stand for the reference country and the world respectively. The same equation has been adapted to use in the context of India's exports to the EEC by replacing share of 'a' in world exports (denominator in the equation) with share of 'a' in EEC imports. The country can be interpreted to have comparative advantage (disadvantage) in a product 'a' if this ratio is greater (less) than unity.

RCA indices pertaining to all important 3-digit groups are presented in Appendix Table A.5.1 to A.5.6. Here we shall confine our discussion to the dynamic groups. As Table 5.1.9 shows, in India's exports to the Community, all but two relatively insignificant groups (SITCs 514 and 792) had RCA above unity in 1986-87. More importantly, all the 24 dynamic product groups improved their respective RCA indices between 1978-79 and 1986-87. Similarly, in India's global exports, 22 out of 27 dynamic groups had an RCA index higher than unity in 1986-87 (see Table 5.1.10). Further, 24 out of 27 dynamic groups registered an improvement in the RCA index between 1976-77 and 1986-87.

Table 5.1.9: Dynamic product groups in India's exports to the EEC: revealed comparative advantage

Group Code	Product Description	Share in India's Exports (%)		Revealed Comparative Advantage Index	
		1978-79	1986-87	1978-79	1986-87
036	Shell fish fresh, frozen	0.78	2.35	6.86	10.74
042	Rice	0.17	0.52	1.36	6.03
057	Fruits, nuts, fresh, dried	0.98	2.89	0.87	3.02
071	Coffee and substitutes	1.30	1.92	1.20	1.95
075	Spices	0.62	1.02	13.75	20.33
263	Cotton	0.07	0.68	0.24	3.53
273	Stone, sand, gravel	0.21	0.81	1.77	7.56
281	Iron ore, concentrates	0.09	0.77	0.19	2.04
424	Fixed veg. oil non soft	0.24	0.45	1.09	3.33
612	Leather etc. manufactures	0.56	3.07	10.10	37.39
651	Textile yarn	0.87	2.61	0.85	2.47
654	Other woven textile fabric	1.28	2.25	5.28	10.32
659	Floor coverings, etc.	4.44	5.79	9.09	16.78
514	Nitrogen functn. compounds	0.04	0.47	0.12	0.84
531	Synthetic dye, nat.indigo, lakes	0.28	1.12	1.52	5.46
792	Aircrafts ass. eqpts. parts.	0.00	0.20	0.00	0.17
831	Travel goods, hand bags.	0.48	1.35	3.00	7.49
843	Womens' outerwear not knit.	4.48	10.15	6.28	12.34
844	Under garments not knit	4.92	5.17	25.40	27.98
845	Outer wear knit, non-elastic	0.12	1.22	0.19	1.50
846	Under garments knitted	0.38	1.21	1.20	3.39
848	Headgear, nontextl clothing	0.69	2.27	2.17	7.42
851	Footwear	0.47	1.45	0.67	1.74
897	Gold, Silver ware, Jewellery	0.17	0.51	1.10	2.51
	Total of all dynamic groups	23.64	50.25		

Notes: All product groups which register an improvement in their relative share in India's exports to the EEC by atleast 0.2 percentage points between 1978-79 and 1986-87 are included among dynamic groups.

Sources: Same as Table 5.1.6.

Therefore, if RCA can be taken to represent comparative advantage/disadvantage, it can be shown that the areas where India tends to increasingly specialise are not ones, where she lacks comparative advantage. But RCA is widely known to suffer from some limitations; it need not always correctly represent the real comparative advantage or the pattern of factor endowments. One often cited reason is the influence of government policies including trade barriers (Vollrath 1991). One way to overcome this difficulty would

Table 5.1.10: Dynamic product groups in India's global exports: revealed comparative advantage

Group Code	Product Description	Share in India's Exports (%)		Revealed Comparative Advantage Index	
		1976-77	1986-87	1976-77	1986-87
011	Meat fresh, chilled, frozen	0.41	0.60	0.46	0.72
036	Shell fish fresh, frozen	3.34	3.94	13.59	11.21
041	Wheat etc. unmilled	0.01	0.29	0.01	0.49
042	Rice	0.12	1.59	0.52	11.56
057	Fruits, nuts, fresh, dried	2.29	3.07	3.49	4.15
075	Spices	1.46	2.21	22.11	30.33
122	Tobacco manufactured	0.11	0.32	0.57	1.22
263	Cotton	0.76	1.68	1.57	7.83
273	Stone, sand, gravel	0.17	0.58	2.56	7.08
334	Petroleum products, refin.	0.36	3.31	0.09	1.17
612	Leather etc. manufactures	0.18	2.13	3.88	28.16
659	Floor coverings, etc.	1.70	2.86	6.03	11.07
541	Medical Pharm products	0.47	1.30	0.59	1.20
553	Perfumery, Cosmetics, etc.	0.19	0.39	1.45	1.69
667	Pearls, prec-semi-p stones	5.60	16.07	6.70	19.47
727	Food machry non-domestic	0.10	0.46	0.15	3.24
728	Oth. machy for spcl industries	0.14	0.35	0.33	0.33
736	Metalworking mach.tools	0.31	0.53	0.49	0.73
759	Office, data mach pts, acces	0.01	0.36	0.03	0.27
831	Travel goods, hand bags.	0.31	0.57	0.94	3.39
843	Womens' outerwear not knit.	1.30	6.03	3.11	8.08
844	Under garments not knit	1.71	2.28	11.70	12.76
845	Outer wear knit, non-elastic	0.50	1.10	1.03	1.60
846	Under garments knitted	0.28	0.55	1.45	1.97
896	Works of art etc.	1.07	0.59	0.48	2.16
897	Gold, Silver ware, Jewellery	0.23	0.64	1.13	1.51
Total of all dynamic groups		23.04	55.31		

Notes: All product groups which register an improvement in their relative share in India's global exports by atleast 0.2 percentage points between 1976-77 and 1986-87 are included among dynamic groups.

Sources: Same as Table 5.1.6.

be to complement the RCA indices with an assessment of factor orientation of exports. A detailed analysis of factor orientation is beyond the scope of the present study. However, some general remarks on factor intensity of important product groups is in order. For this we may use Leamer's (1984) aggregates which classify traded commodities according to factor orientation as a reference point (Sachdev 1991). According to Leamer's classification Chemicals (SITC 5) and Machinery (SITCs 71, 72, 73, 86 and 95)

are capital and skill intensive products. But as our analysis of dynamic and declining product groups shows, India does not have many dynamic groups falling under above categories. Further, capital and skill intensity would definitely vary among Chemicals as well as Machinery, and India's dynamic product groups in these broad categories are likely to be of relatively low capital and skill intensity. Following the same classification scheme SITCs 66, 82, 83, 84, 85, 89, 91, 93 and 96 may be treated as labour intensive manufactures. Significantly, most of the dynamic product groups among manufactures in India's global as well as bilateral exports belong to this group of labour intensive manufactures. In fact, it would not be wrong to observe that India's manufactured exports are dominated by labour intensive products.

Following Leamer, Sachdev (1991) characterises SITCs, 61, 62, 65, 67, 69 and 81 as capital intensive manufactures. It is also true that some dynamic groups in India's exports, especially Leather manufactures (SITC 612) and Floor coverings (SITC 659) belong to the above category. But in our opinion, a detailed analysis of India's specialisation within such product groups would suggest that her areas of specialisation are not as capital intensive as global characterisation in this regard would indicate.[14] All other dynamic groups in India's exports belong to the category of non-manufactures, using, probably land and labour more intensively than capital.

For sure, the foregoing sweeping remarks can hardly replace a detailed and indepth analysis of factor orientation of exports. All the same they facilitate a very general observation: that India's dynamic exports are dominated by products which use the abundant factor, labour, more intensively.

Export concentration, import penetration and vulnerability to protectionism

'Theoretically Optimum' policies need not always be so in praxis. It is one thing to specialise strictly according to the principles of comparative advantage and an entirely different one to ensure market for products in which you thus specialise. In our analysis, India is seen to specialise broadly according to the principles of comparative advantage, but the areas where she tends to increasingly specialise are characterised by very high degree of import penetration in developed country markets and hence are also highly prone to protectionist policies.

Studies on 'political economy of protectionism' have established a strong relationship between the degree of import penetration and the level of protection granted to industries (Cable 1983:47-50, Athukorala and Hazari 1988, UNCTAD 1989:221). Import penetration ratio for a specific industry is defined as the share of imports in apparent consumption (production plus imports minus exports) of that industry. Thus

defined, import penetration ratio indirectly reflects the impact of import competition on production, employment, wages and profits of the industry affected. In the area of manufactures, overall degree of market penetration of developing countries into the developed markets is still small, i.e. only about three per cent of total consumption. But the level of penetration is high in certain product sectors, notably in sectors with relatively high unskilled or semi-skilled labour intensity. This sector specific nature of import competition from developing countries, it is argued, has generated considerable pressure for industrial adjustment and the adjustment problem in turn have also resulted in strong protectionist measures.

Import penetration studies are generally based on OECD compatible trade and production data base (COMTAP) tapes. The above data base would have facilitated a comprehensive and disaggregated study of import penetration of developing countries/India into the EEC market. Unfortunately, we could not manage to get the above data set. However, available studies based on the cited source provide valuable insights.

UNCTAD regularly publishes special studies on import penetration in its Handbook of International Trade and Development Statistics. Data presented in Table 5.1.11 are drawn from the above source. Import penetration of developing countries into the EEC with respect to manufactures and its most components remains insignificantly low. Strikingly, the case of clothing stands apart: not only that it marks higher levels of penetration but has also registered significant improvement over time. Further, Clothing in the cited study, as it is a broad aggregate, includes Leather and leather manufacturers (SITC 61) Travel goods (83), Clothing proper (84) and Footwear (85). What an unfortunate coincidence! As we know by now, these high import penetration areas correspond very well with high growth areas in India's exports.

The UNCTAD special studies do not provide information at desired level of disaggregation. Data presented in Table 5.1.12 would, however, help us fill in the gap to some extent. The Table lists selected industrial sectors recording the highest levels of import penetration ratios in the EEC, United States & Canada and Japan. In each case, the top 15 sectors in terms of import penetration are given. The data are self-explanatory and require no further elaboration. It suffice to note that many of the dynamic areas around which India's exports tend to crowd together (e.g. Leather manufactures, Jewellery and related articles, Footwear, Wearing apparel, Canning and preserving fruits and vegetables) are among top import penetration areas in developed markets.

Table 5.1.11: Imports as a percentage of apparent consumption in EEC, United States-Canada and Japan

Product Description	EEC				United States and Canada			Japan		
	1980-81	1985-86	1987-88	1989-90	1980-81	1985-86	1989-90	1980-81	1985-86	1989-90
All Products										
External Imports (a)	17.31	14.93	13.80	14.77	9.14	10.86	12.12	13.07	9.34	9.86
Imports from LDCs (b)	7.57	5.55	4.60	4.91	5.11	4.29	5.23	7.90	4.67	4.14
Primary Products										
External Imports (a)	44.11	34.05	28.33	30.52	25.11	14.08	16.97	65.64	52.83	50.65
Imports from LDCs (b)	30.11	20.72	16.14	17.85	22.33	10.66	13.43	48.19	34.33	29.12
Manufactures										
External Imports (a)	11.53	11.43	11.73	12.69	6.54	10.41	11.52	4.97	4.58	6.53
Imports from LDCs (b)	2.74	2.78	2.96	3.21	2.31	3.43	4.25	1.69	1.43	2.11
Food Beverages & Tobacco										
External Imports (a)	4.91	3.80	3.70	3.62	3.32	3.28	3.09	4.48	3.61	5.60
Imports from LDCs (b)	2.19	1.99	1.88	1.92	1.32	1.15	1.16	1.23	1.04	1.33
Textiles										
External Imports (a)	12.64	10.48	11.23	12.01	4.72	7.86	7.58	4.53	4.84	6.91
Imports from LDCs (b)	4.95	4.33	4.98	5.43	2.08	3.26	3.48	2.04	1.92	2.74
Clothing										
External Imports (a)	23.87	22.89	26.89	30.77	18.65	33.42	40.81	12.78	15.33	28.47
Imports from LDCs (b)	14.24	16.14	19.70	22.36	14.35	24.83	29.88	6.84	8.86	14.49
Wood Products, paper and printing										
External Imports (a)	14.24	11.88	12.08	12.60	1.57	2.82	2.99	4.52	3.60	5.63
Imports from LDCs (b)	1.74	1.49	1.60	1.72	0.78	1.23	1.41	0.81	0.78	1.73
Rubber										
External Imports (a)	6.99	6.48	7.37	7.99	7.05	8.99	10.83	2.06	2.05	3.81
Imports from LDCs (b)	1.11	1.40	1.89	2.26	1.23	2.67	2.91	0.51	0.28	0.67
Chemicals										
External Imports (a)	9.48	9.46	8.92	9.56	4.26	5.92	5.99	6.09	6.54	6.97
Imports from LDCs (b)	1.59	1.61	1.43	1.59	0.76	1.12	1.13	0.86	1.06	1.22
Petroleum & Coal products										
External Imports (a)	9.78	13.03	9.68	9.17	5.02	7.94	8.14	8.87	10.27	15.73
Imports from LDCs (b)	4.69	5.76	3.99	3.59	4.66	5.54	5.74	7.79	7.73	13.10
Non-Metallic products										
External Imports (a)	3.40	2.91	2.99	3.25	4.10	6.60	7.17	0.88	1.42	2.61
Imports from LDCs (b)	0.44	0.52	0.66	0.77	0.75	1.70	2.11	0.22	0.58	0.98
Ferrous and Non-Ferrous Metals										
External Imports (a)	9.91	6.78	6.70	5.57	5.01	6.06	5.48	4.88	3.86	5.53
Imports from LDCs (b)	2.56	1.78	1.76	2.11	1.35	1.58	1.62	1.77	1.65	2.45
Transport Equipment										
External Imports (a)	11.32	9.40	9.19	10.86	10.00	12.89	12.65	2.59	2.39	3.65
Imports from LDCs (b)	1.10	0.84	0.90	1.07	0.34	0.79	1.65	0.20	0.09	0.12
Machinery and Other manufactured goods										
External Imports (a)	19.76	23.34	24.46	26.21	11.37	19.97	24.15	5.14	4.59	6.88
Imports from LDCs (b)	2.49	3.30	4.34	4.83	3.48	6.23	8.59	0.86	0.88	1.69

Notes: Apparent consumption is defined as gross output plus external imports minus external exports. In the case of EEC, external imports include imports from non-EEC countries only. External exports are defined in an analogous way to external imports.

Sources: Handbook of International Trade and Development Statistics, UNCTAD, Various Issues.

Table 5.1.12: Developed market-economy countries: selected industrial sectors according to the highest levels of import penetration ratios **(Per cent)**

Description	Developing Countries Import penetration		World Import penetration	
	1985 ratio	1975-85 increment	1985 ratio	1975-85 increment
United States				
Manufact.prod.leather (excl.foot)	38.9	26.5	47.4	30.1
Manufact.of footwear (excl.plastic)	35.4	26.3	52.1	28.3
Manufact.of wearing apparel (excl.foot)	24.2	16.4	29.1	19.3
Jewellery and related articles	20.5	9.3	49.1	19.2
Watches and clocks	19.3	9.5	49.5	19.0
Cordage, rope and twine industries	16.3	-0.9	19.9	-10.6
Sporting & athletic goods	15.8	11.8	26.8	14.0
Grain mill products	15.0	0.8	15.7	1.1
Pottery, china and earthware	14.2	11.9	41.7	17.2
Sugar factories & refineries	13.8	-8.8	16.5	-10.3
Manuf. industries n.e.c.	11.4	7.8	16.5	9.3
Electrical appliances & housewares	9.2	8.2	20.0	14.2
Radio, telecommunications equip. app.	9.0	3.4	23.3	10.5
Electrical apparatus & supplies n.e.c.	7.0	5.4	14.2	10.0
Office, computing & accounting machine	6.9	1.6	11.7	4.7
EEC				
Jewellery and related articles	-	-	-	-
Grain mill products	26.8	7.9	28.0	7.5
Manufact.of leather (excl.plastic)	24.9	18.6	30.1	20.8
Manufact.of veget.and animal oils and fats	24.7	15.6	30.6	5.7
Manufact.of wearing apparel (excl.foot.)	21.3	10.3	29.6	13.9
Tanneries and leather finishing	17.5	13.5	24.8	7.3
Watches and clocks	17.1	14.5	63.5	30.8
Fur dressing and dyeing industries	15.5	-7.6	34.8	-12.8
Sporting and athletic goods	14.8	9.6	33.9	16.6
Canning and preserving fruits & vegetables	12.2	5.7	17.2	5.6
Non-ferrous metal basic industries	9.9	-1.5	27.8	1.1
Spinning weaving & finishing textiles	8.2	4.2	18.9	9.0
Sawmills, planning & other wood mills	6.5	2.1	22.6	2.1
Office, computing & accounting machines	6.5	4.1	59.7	31.5
Radio, T.V., tele-communications equip. app.	6.0	4.0	28.7	14.8
All manufacturers	4.2	1.9	14.8	6.9
Japan				
Jewellery and related articles	21.0	-0.7	35.8	-0.9
Manufact.of wearing apparel (excl.foot.)	11.8	5.6	14.3	6.0
Spinning weaving & finishing textiles	9.1	5.5	14.5	5.6
Grain mill products	8.2	1.8	8.6	1.1
Non-ferrous metal basic industries	8.1	1.6	18.7	2.2
Manufact.of footwear (excl.plastic)	7.8	3.7	10.6	4.3
Sugar factories & refineries	7.5	-26.6	12.9	-30.8
Sporting and athletic goods	6.3	4.5	13.6	-0.4
Fur dressing and dyeing industries	6.0	-30.8	21.0	-49.5
Tanneries & leather finishing	5.8	-1.0	11.0	1.6
Slaughtering, preparing & preserving meat	5.3	1.5	21.2	-2.1
Canning & preserving fruits & vegetables	4.9	1.9	7.6	2.2
Sawmills, planning & other woodmills	3.0	1.4	11.1	3.4
Basic industrial chemicals (excl. fert.)	2.7	1.8	14.8	6.4
Iron and steel basic industries	1.7	1.4	2.6	1.8
All manufactures	2.0	0.2	5.4	0.5

Notes: The import penetration ratio for a specific industry is defined as the share of imports from a particular source in the apparent consumption (production plus imports minus exports) of that industry. For the EEC, intra-trade among EEC countries is excluded in the computation of the import penetration ratios. Given the unavailability of data for some countries, the calculation include data for only seven countries (Belgium, Luxembourg, France, Germany, Federal Republic of Italy, Netherlands and the United Kingdom)

Source: UNCTAD (1988), Protectionism and Structural Adjustment, TD/B/1196/Add.1, p.52.

Now, given the widely acknowledged relationship between import penetration and level of protection extended to industries, it may be concluded that many dynamic areas of India's exports are vulnerable to protectionist policies. Further, vulnerability of India's exports to protectionism appears to have been increasing over time. We fear so for following reasons. First, the share of high risk areas like Clothing and Leather manufactures has been increasing in India's exports over time. Second, the pressure of import competition in these areas measured in terms of import penetration has also been aggravating over the same period.

Section II
Structural adaptability

In Section I, we have outlined broad contours of change in the commodity composition of India's exports. In the present section we shall try to put the same in the background of structural change in global as well as EEC demand. As already mentioned, structure of world/EEC demand has been undergoing drastic changes over time. Let us now see how India could respond to the changes in external demand conditions and redefine her role in the international division of labour.

Tables 5.2.1 and 5.2.2 would give a broad idea on the direction of change in EEC/world demand and India's efforts to cope up with that change. For constructing these tables we classified 3-digit product groups in EEC imports/world exports into different categories in terms of change in their relative share, viz., 'most dynamic groups', 'moderately dynamic groups', 'marginally dynamic groups' and 'declining groups'. See for a similar study (Buigues and Goybet 1989).[15] And the data presented clearly bring out the structural weakness/backwardness of India's exports.

The share of declining sectors (sunset groups) have been higher in India's export earnings vis-a-vis their share in EEC imports/world exports. For instance, the declining groups accounted for 51 per cent in India's exports in 1986-87 as against 33 per cent in total EEC imports. Similarly, declining groups covered 52 per cent of India's global exports in 1986-87 as against 37 per cent in world trade. Conversely, the share of dynamic groups (sunrise groups) has been relatively lower in her bilateral and global exports. It may also be noted that the share of 'most dynamic groups' has been distinctly lower in India's export basket. While the 'most dynamic groups' claimed 26.46 per cent of the EEC imports in 1986-87, their share in India's exports to the Community was only 2.34 per cent. Likewise, the 'most dynamic groups' accounted for only 12 per cent in India's global exports in 1986-87 as against 34 per cent in world trade. Thus, in a relative sense, India's export basket appears to have been over burdened/dominated by declining (sunset) product groups which tend to get marginalised in the network

Table 5.2.1: Structural change in EEC demand and India's exports to the EEC

Category	No. of groups	List of groups (SITC codes)	Share in EEC Imports		Share in India's Exports to the EEC		Change in Share	
			1978	1986	1978-79	1986-87	EEC imports	Indian exports
Most Dynamic Groups (with share increase of 0.2% or above)	19	714 598 778 971 541 772 898 582 748 641 763 874 776 583 931 781 759 341 752	18.48	26.46	1.89	2.34	7.98	0.45
Moderate Dynamic Groups (with a share increase of 0.1% or above but below 0.2%)	20	782 773 736 513 749 936 515 843 792 684 851 951 872 713 728 642 845 893 764 514	10.73	13.29	7.09	16.74	2.56	9.65
Marginally Dynamic Groups (with a share increase $\geq$ but less than 0.1%)	90		28.43	27.62	25.91	29.87	2.79	3.96
All Dynamic Groups (with share change $\geq$ 0)	129		54.04	67.37	34.89	48.95	13.33	14.06
All Declining Groups (with share change <0)	108		45.96	32.63	65.11	51.04	-13.33	-14.06

Note: Classification of product groups into different categories is on the basis of the change in their shares in the EEC imports.

Source: Same as Table 5.1.6

Table 5.2.2:Structural change in world demand and India's global exports

Category	No. of groups	List of groups (SITC codes)	Share in India's exports		Share in World exports		Change in Share	
			1976-77	1986-87	1976	1986	Indian exports	World exports
Most Dynamic Groups (with share increase of 0.2% or above)	27	771 641 845 821 893 684 897 714 583 778 541 898 843 772 764 874 792 763 931 341 728 784 971 776 759 752 781	5.01	12.16	20.13	33.84	7.16	13.71
Moderate Dynamic Groups (with a share increase of 0.1% or above but below 0.2%)	20	699 775 842 894 553 511 642 036 515 726 034 713 872 774 598 882 851 514 582	8.28	7.36	7.19	9.64	-0.92	2.44
Marginally Dynamic Groups (with a share increase $\geq$ but less than 0.1%)	79		25.72	27.99	16.35	19.10	2.27	2.75
All Dynamic Groups (with share change $\geq$ 0)	126		39.01	47.51	43.67	62.58	8.50	18.90
All Declining Groups (with share change <0)	111		61.00	52.49	56.32	37.42	-8.50	-18.90

Note: Classification of the product groups into different categories is based on the change in their shares in the World exports.

Source: Same as Table 5.1.6

of international trade. It is in this sense we characterise India's export basket as structurally weak or backward.

Our results would imply that EEC/world demand for product groups in which India specialise has been growing at a lower pace than EEC/world trade in general. A look at the proportion of dynamic groups in India's exports in the initial year of our analysis would make the point very clear. For instance, the share of dynamic groups in India's exports to the Community was only 35 per cent in 1978-79 as against 54 per cent in total EEC imports. Obviously, other suppliers to the EEC market (taken together) were in a better position to negotiate the structural change in demand that would come during the next decade. Thus, the pattern of specialisation in the initial year was relatively disadvantageous for India. In our opinion, this is likely to have been the case for many underdeveloped economies. Incidentally, culturally dominant developed countries may be able to influence the pattern of change in world demand by popularising/imposing their style of living, tastes, preferences, etc. on culturally subjugated societies. Therefore, their domestic production structures, and their evolution, are likely to be suited to take on the challenge of shifts in world demand, for they themselves determine the pattern of change to a significant extend, whereas underdeveloped economies are constrained to follow the trends set by the cultural hegemons.

Notwithstanding the observed unfavourable specialisation of India, her export basket cannot be referred to as structurally stagnant or degenerating. We could have characterised her export basket as structurally stagnant or degenerating had the share of declining groups remained the same or increased in her exports. There may be many structurally docile economies which increasingly specialise in areas facing declining demand conditions. But that has not been the case of India. As our data clearly show there has been a welcome shift in her specialisation; from areas facing declining to dynamic demand conditions (see Columns 8 and 9 in Tabs. 5.2.1 and 5.2.2). Significantly, even the share of 'most dynamic groups' increased in her exports. This undoubtedly is a positive feature of India's specialisation in world trade and needs to be underlined. Importance of structural adaptability, as we have explained at length elsewhere, needs no further elaboration.

Even though the proportion of sunset areas in India's export basket is seen to have been declining, the decline, it needs to be noted, has not been impressive when compared to the rate at which the share of sunset areas has been declining in EEC imports or world exports. While the proportion of sunset areas declined by around 29 per cent in EEC imports, the corresponding figure for India's exports has just been 22 per cent. Similarly, while the share of sunset areas declined by around 34 per cent in world exports, it declined only by 14 per cent in India's global exports. In short, three important observations may be

drawn from the above analysis. First, India's export basket is found to be structurally weak owing to the continued dominance of sunset areas. Second, as the decline in the share of sunset areas indicates, there are some welcome signs of structural adaptability in her exports. Third, India's efforts to get out of the sunset areas., i.e., her efforts to be structurally mobile, has not been adequate when compared to the pace at which the structure of external demand has been changing over time.

Mobility areas

Let us now try to identify the mobility areas in India's exports, i.e., product groups responsible for the observed structural dynamism in India's exports. Product groups which improve their share in India's exports as well as in world exports/EEC imports may be broadly referred to as mobility areas. Obviously, all product groups which increase their share in world trade/EEC imports cannot be included among mobility areas. A cursory examination of products belonging to 'most or moderately dynamic groups' in Table 5.2.1 and 5.2.2 would make the point clear. First of all, non-manufactures are very poorly represented among these fast growing product groups! For instance, in the case of EEC imports, out of 39 'most or moderately dynamic groups' only three groups (SITCs 036, 341 and 684) belong to non-manufactures. In world exports out of 47 'most of moderately dynamic groups' only 4 are (SITCs 034, 037, 341 and 684) non-manufactures. Further, traditional manufactures (SITCs 61 and 65) are completely absent in the list of 'most and moderately dynamic product groups'. Thus, fast growing areas are mainly non-traditional manufactures dominated by product groups belonging to Chemicals (SITC 5) and Machinery (SITC 7). In most of these areas India does not possess proven comparative advantage (see Tables A.5.1 to A.5.6). In short, a more realistic approach to identify mobility areas would be to begin our search from dynamic product groups in India's export basket.

The dynamic product groups in India's exports identified in Section I around which her exports crowd together represent the direction of structural change in her export basket. In other words, they represent India's efforts to re-orient her role in the international division of labour. Therefore, product groups among them facing dynamic demand conditions should explain the observed structural dynamism in India's exports to a significant extent. Tables 5.2.3 and 5.2.4 provide information as to how the dynamic groups in India's exports perform in terms of their relative importance in world trade/EEC imports. Dynamic groups in India's exports, which also improve their share in world trade, could be treated as mobility areas.

In India's exports to the EEC, the list of mobility areas include Shell fish fresh, frozen (SITC 036), Spices (075), Leather manufactures (612), Textile yarn (651), Nitrogen function compounds (514), Synthetic dye

Table 5.2.3: Dynamic product groups in India's exports to the EEC and the EEC demand

Product Groups (SITC Code)	Share in India's Exports		Share in EEC Imports		Share change in world exports	Growth rate in World exports
	1978-79	Share change 1978-79 to 1986-87	1978	Share change 1978-1986	1980-81 to 1989-90	1980-90 %
036	0.78	1.57	0.11	0.10	0.12	11.00
042	0.17	0.35	0.12	-0.04	-0.11	-1.90
057	0.98	1.91	1.12	-0.17	-0.01	5.40
071	1.30	0.61	1.09	-0.11	-0.28	-4.20
075	0.62	0.39	0.05	0.00	-	-
263	0.07	0.61	0.30	-0.11	-0.12	0.80
273	0.21	0.60	0.12	-0.01	-	-
281	0.09	0.68	0.49	-0.11	-0.15	0.90
424	0.24	0.21	0.22	-0.08	-0.06	-0.50
612	0.56	2.51	0.06	0.03	0.05	13.40
651	0.87	1.74	1.02	0.04	0.03	5.40
654	1.28	0.98	0.24	-0.02	0.07	8.70
659	4.44	1.35	0.49	-0.02	0.01	5.10
514	0.04	0.42	0.37	0.18	0.23	11.90
531	0.28	0.84	0.18	0.02	0.07	9.00
792	0.00	0.20	1.04	0.12	0.46	9.40
831	0.48	0.87	0.16	0.12	0.05	8.60
843	4.48	5.67	0.71	0.11	0.31	11.80
844	4.92	0.25	0.19	-0.01	0.09	10.50
845	0.12	1.10	0.65	0.17	0.31	11.80
846	0.38	0.83	0.31	0.04	0.15	11.50
848	0.69	1.59	0.32	-0.01	0.12	10.60
851	0.47	0.97	0.71	0.12	0.22	8.70
897	0.17	0.34	0.15	0.05	0.12	10.00

Note: Product description is available from Table 5.1.9
Source: Same as Table 5.1.6

natural indigo, lakes (531), Aircraft and associated equipment (792), Travel goods, hand bags (831), Women's outerwear nonknit (843), Under garments notknit (844), Outerwear knit nonelastic (845), Undergarments knitted (846), Headgear, nontextile clothing (848), Footwear (851) and Gold, Silverware, Jewellery (897). These product groups whose imports into the EEC tend to grow at a faster pace than the Community's aggregate imports have improved their collective share in India's exports by nearly 18 per cent. Thus they play a commendable role in India's endeavour to be structurally mobile. It may also be noted that majority of these mobility areas are also high import penetration areas in the Community market. This is generally true of clothing, leather manufactures and gold, silverware, jewellery, etc. Thus, we may conclude that important mobility areas in India's exports to the EEC are prone to protectionist policies.

Table 5.2.4: Dynamic product groups in India's global exports and world demand

Product Groups (SITC Code)	Share in India's Exports		Share in World Exports		Share change in world exports	Growth rate in World exports
	1976-77	Share change 1976-77 to 1986-87	1976	Share change 1976-1986	1980-81 to 1989-90	1980-90 %
011	0.41	0.20	0.89	-0.04	0.04	5.80
036	3.34	0.60	0.25	0.11	0.12	11.00
041	0.01	0.28	1.01	-0.42	-0.32	-0.40
042	0.12	1.47	0.23	-0.09	-0.11	-1.90
057	2.29	0.79	0.66	0.08	-0.01	5.40
075	1.46	0.74	0.07	0.01	-	-
122	0.11	0.21	0.19	0.07	0.14	12.60
263	0.76	0.93	0.48	-0.27	-0.12	0.80
273	0.17	0.41	0.07	0.02	-	-
334	0.36	2.95	3.90	-1.05	-1.81	-0.30
612	0.18	1.95	0.05	0.03	0.05	13.40
659	1.70	1.16	0.28	-0.02	0.01	5.10
541	0.47	0.83	0.80	0.28	0.33	9.80
553	0.19	0.20	0.13	0.10	0.13	12.90
667	5.60	10.47	0.84	-0.01	0.06	3.80
727	0.10	0.36	0.71	-0.57	0.03	8.40
728	0.14	0.21	0.43	0.64	0.03	8.80
736	0.31	0.22	0.64	0.08	0.10	7.20
759	0.01	0.35	0.44	0.89	0.93	18.00
831	0.13	0.44	0.13	0.03	0.05	8.60
843	1.30	4.73	0.42	0.33	0.31	11.80
844	1.71	0.57	0.15	0.03	0.09	10.50
845	0.50	0.60	0.48	0.21	0.31	10.80
846	0.28	0.28	0.19	0.09	0.15	11.50
848	0.09	0.50	0.19	0.08	0.12	10.60
896	1.07	0.45	0.14	0.09	0.18	12.90
897	0.23	0.41	0.20	0.22	0.12	10.00

Note: For product description see Table 5.1.10

Source: Same as Table 5.1.6

Mobility areas in India's global exports include shell fish fresh, frozen (SITC 036), Fruits, nuts, fresh, dried (057), Spices (075), Tobacco manufactured (122), Stone, sand and gravel (273), Leather manufactures (612), Medical, pharm. products (541), Perfumery, cosmetics, etc. (553), Other machinery for special industries (728), Metal working machine tools (736), Office and data processing equipments and parts and accessories thereof (759), Travel goods, handbags (831), Women's outwear nonknit (843), Undergarments nonknit (844); Outerwear knit nonelastic (845), Undergarments knitted (846), Headgear, nontextile clothing (848), Works of art, etc. (896) and Gold, silverware, jewellery (897). These product

groups characterised by dynamic world demand conditions are in the forefront of India's endeavour to redefine her role in the international division of labour in response to structural change in world trade. Here again, many of the mobility areas happens to be high import penetration areas in developed country markets. Thus, vulnerability to protectionism appears to be a threat for mobility areas in India's global exports as well.

Finally, it may be cautioned that identification of mobility areas in the present study has been based on an end-point analysis. The list of mobility areas need not remain exactly the same as we change the end-points. But, as tables 5.2.5 and 5.2.6 clearly suggest, this limitation of the end point methodology does not seem to have distorted our results. In spite of the changes in end points, the mobility areas identified continue to represent prominent products in India's bilateral and global exports. Similarly, as the data

Table 5.2.5 Mobility areas and world demand: India's exports to EEC

Product Groups (SITC Code)	Share in Indian Exports to EEC			Growth in World Exports				
	1978-79	1985-86	1986-87	1980-88	1980-89	1980-90	1980-91	1980-92
036	0.78	2.20	2.35	13.10	11.30	11.00	11.10	10.70
075	0.62	1.54	1.02	6.80	4.90	3.20	3.30	3.00
612	0.56	3.13	3.07	10.50	11.10	13.40	14.40	14.80
651	0.87	1.57	2.61	5.60	5.10	5.40	5.10	5.20
514	0.04	0.26	0.47	12.20	11.90	11.90	11.30	11.10
531	0.28	0.77	1.12	8.50	8.10	9.00	8.20	8.40
792	0.00	_	0.20	6.50	8.30	9.40	10.80	10.10
831	0.48	1.18	1.35	11.70	8.70	8.60	7.90	8.70
843	4.48	10.22	10.15	11.80	11.40	11.80	12.00	11.90
844	4.92	5.36	5.17	10.30	10.90	10.50	11.00	11.90
845	0.12	0.74	1.22	11.20	10.60	10.80	11.00	10.60
846	0.38	0.97	1.21	11.00	11.00	11.50	12.30	12.50
848	0.69	1.74	2.27	11.60	11.00	10.60	9.60	9.40
851	0.47	1.09	1.45	8.80	7.90	8.70	8.00	7.70
897	0.17	0.51	0.51	9.40	9.60	10.00	9.30	9.90
All groups	100.00	100.00	100.00	4.20	4.50	5.20	4.80	5.00

Note: Growth rates are compounded annual average growth rates.

Source: For India's exports, same as Table 5.1.5. For world trade, handbook of International Trade and Development Statistics, UNCTAD, Various Issues.

Table 5.2.6 Mobility areas and world demand: India's global exports

Product group (SITC code)	Share in India's exports			Growth in world exports				
	1976-77	1985-86	1986-87	1980-88	1980-89	1980-90	1980-91	1980-92
036	3.34	3.44	3.94	13.10	11.30	11.00	11.10	10.70
057	2.29	2.49	3.07	4.30	4.40	5.40	5.90	5.70
075	1.46	2.57	2.21	6.80	4.90	3.20	3.30	3.00
122	0.11	0.30	0.32	9.70	10.30	12.60	11.40	11.80
273	0.17	0.53	0.58	5.70	6.80	7.70	8.00	7.90
612	0.18	2.26	2.13	10.50	11.10	13.40	14.40	14.80
541	0.47	1.45	1.30	9.10	8.40	9.80	9.80	10.60
553	0.19	0.41	0.39	11.30	11.50	12.90	12.40	13.30
728	0.14	0.24	0.35	7.20	7.70	8.80	8.30	7.80
736	0.31	0.53	0.53	5.60	6.60	7.20	5.80	4.70
759	0.01	0.17	0.36	20.20	18.30	18.00	17.40	16.80
831	0.13	0.45	0.57	11.70	8.70	8.60	7.90	8.70
843	1.30	5.46	6.03	11.80	11.40	11.80	12.00	11.90
844	1.71	2.17	2.28	10.30	10.90	10.50	11.00	11.90
845	0.50	1.12	1.10	11.20	10.60	10.80	11.00	10.60
846	0.28	0.34	0.55	11.00	11.00	11.50	12.30	12.50
848	0.09	0.38	0.59	11.60	11.00	10.60	9.60	9.40
896	1.07	1.36	1.51	8.60	11.20	12.90	6.50	5.60
897	0.23	0.84	0.64	9.40	9.60	10.00	9.30	9.90
All groups	100.00	100.00	100.00	4.20	4.50	5.20	4.80	5.00

Note: Growth rates are compounded annual average growth rates.

Source: For India's exports, same as Table 5.1.5. For world trade, handbook of International Trade and Development Statistics, UNCTAD, Various Issues.

clearly show, all the mobility areas identified in India's export basket, with the exception of spices (SITC 075), which witnessed some fluctuations, enjoy more or less consistently buoyant demand conditions in the world market. Global trade in mobility areas has been consistently growing at a faster pace than world trade in general[16]. In other words, mobility areas represent the very few items in India's exports, which were enjoying a favourable shift in the structure of world demand.

Conclusion

We have begun the present chapter by underlining the importance of structural adaptability as an important aspect of competition and competitiveness. When analysed in terms of broad aggregates Indian exports present a very promising picture of structural transformation. During the period of our study there has been a commendable shift in the composition of her exports; from non-manufactures to manufactures in general and non-traditional manufactures in particular. This has been found true in India's global exports as well as in her exports to the Community.

The disaggregate level analysis, however, brings out certain disturbing features underlying the apparently positive structural change in her exports. Contrary to our expectation, structural transformation from non-manufactures to manufactures and non-traditional manufactures has not really helped India 'diversify' her exports. Instead, we see an unwelcome crowding together of exports into a narrow range of products.

Significantly, the observed dependence on a narrow range of products is a matter of grave concern, for it has made India's exports highly prone to protectionist policies. We argue so because dynamic product groups around which India's exports tend to cluster together happen to be high import penetration areas in developed markets including the EEC. In fact, increasing dependence on areas characterised by growing import penetration would suggest that vulnerability to protectionism of India's exports has been increasing over time.

Export concentration in high import penetration areas is a convenient apology for protectionist policies pursued by the developed countries. However, for practical reasons, it calls for diversification of exports into less risk areas. It needs to be reiterated, however, that areas of export concentration in India's export basket are not ones, where she lacks comparative advantage. As our analysis in terms of RCA indices show, the pattern of changes in commodity composition of exports seems to have broadly followed the signals of comparative advantage. Further, most of these high growth areas in India's export basket are characterised by dynamic world/EEC demand conditions. Thus, although they are vulnerable to protectionist policies, they are important sources of structural adaptability in India's exports.

With a view to focus on structural adaptability, in section 2 we have tried to compare structural change in India's exports with the same in world exports/EEC imports. The results clearly bring out structural weakness/backwardness of India's exports. Her export basket is dominated by sunset areas, ie., areas which tend to get marginalised in the network of international trade. Moreover, fast growing areas of

world trade/EEC imports are very poorly represented in India's export basket.

Notwithstanding the continued dominance of sunset areas, and the adverse specialisation that it implies, we see some measure of structural dynamism left in India's export basket. This is evident from the shift in specialisation from areas facing declining to dynamic demand conditions. However, India's effort to move out of sunset areas has not been adequate when compared with the pace at which the pattern of word\EEC demand has been changing over time. Finally, we have tried to identify product groups responsible for the observed structural dynamism, ie., mobility areas in India's exports. Last but not least, the mobility areas in India's exports, as they are characterised by high import penetration in developed markets, are also vulnerable to protectionist policies. Therefore, the question remains as to whether or not the mobility areas in Indian exports are constrained by protectionist policies.

Notes

1. Feeding stuff for animals (SITC 081) of the ITC-R^2, for example, is distributed into twelve 4-digit categories in ITC (HS), viz., H.S. 1213, 1214, 1802, 2301, 2302, 2303, 2304, 2305, 2306, 2307, 2308 and 2309 (DGCI & S, undated). Further, these 4-digit categories cannot be clubbed together to arrive at figures corresponding to SITC 081 because all of them are not exclusively composed of feeding stuff for animals.

2. The difficulty arises due to the fact that many 4-digit categories under ITC-(HS) include both manufactures and non-manufactures.

3. The definition of traditional manufactures, obviously is a rather narrow one. Further, as a corollary of the narrow definition of traditional manufactures, we have a very broad definition of non-traditional manufactures covering SITCs, 5, 6, 7, and 8 less SITCs 61, 65 and 68. But all product groups belonging to non-traditional manufactures, especially those which dominate India's exports, viz., clothing, pearls, precious and semi-precious stones cannot be treated as modern manufactures in terms of their position in international product cycle or their technological or organisational sophistication.

4. The observed marked rise in the share of non-manufactures during early eighties can be almost fully attributed to the transient phenomenon of petroleum exports from India. For instance, in 1984-85, the share of petroleum and products thereof (SITCs 333 and 334) in India's global exports was as high as 15 per cent.

5. It should be kept in mind that data on India's exports to the EEC are reported exclusive of petroleum products. Therefore, our structural ratios for bilateral trade do not take care of petroleum exports to the EEC, if any. But distortion arising out of this anomaly in structural ratios, if any, would be confined to the early 1980s.

6. Terminal years are 1978-79 and 1986-87 for India's exports to the EEC and 1976-77 and 1986-87 for her global exports. It may be noted that 1976-77 to 1986-87 is the period for which data on India's exports are reported according to the ITC-R^2 system. For India's exports to the EEC, 1978-79 is the earliest year for which we have disaggregated data. The terminal years selected are normal years at least in two important respects: first, they are not unduly affected by the world trade recession of early 1980s; second they are free from the disturbances caused by the transitory export boom of petroleum products from India of early 1980s.

7. The decision to use change in share as the criterion to compare and classify product groups into dynamic and declining categories has not been arbitrary. Share analysis help us study dynamics of individual products in the broader background of export structure, whereas analysis in terms growth rates of individual sectors would have an isolationist aspect to it. Share analysis, however, is not free from limitations. It would tend to underestimate growth/decline in sectors with lower weight in total and vice versa.

8. Silver exports from India has been a purely temporary feature confined mainly to mid-seventies. Similarly, sugar exports from India are known for their wide fluctuations. Other product groups exhibit more or less stable decline over time.

9. Data on relative contribution of important product groups are available from Tables A.5.1 and A.5.2 presented in the Appendix

10. For instance, in India's global exports, the share of tobacco manufactures (SITC 122) in total tobacco exports (SITCs 121 and 122) rose from 5.4 per cent in 1977-78 to 21.5 per cent in 1986-87. However, tobacco exports to the EEC continue to be dominated by unmanufactured tobacco.

11. The proportion of SITC 667 in India's exports to the EEC tended to fluctuate over time. The year 1986-87 was probably one of the years when it touched the lowest points. But as data for later years show, its share has tended to improve later.

12. The observed increase in export concentration between the end-points selected do not permit us to conclude that there has been a secular trend towards higher levels of concentration. In fact, as we shall see later, change in the commodity composition since 1987-88 suggest some decline in the level of concentration. Further,

UNCTAD (Handbook of Trade and Development Statistics, various issues) data on export diversification/concentration exhibits a mixed pattern of year to year change for India with no trace of sustained increase or decline. But even this is surprising, given the structural change in India's exports, especially the sharp growth in the share of non-traditional manufactures.

13. Take, for instance, the definition of non-manufactures. ITC (H.S) section 1 to 5, cover most of the non-manufactures. But non-manufactures scattered among other sections are not captured by this definition. However, a precise definition of the same would require specification at the 8-digit level. The same problem naturally is carried over to the definition of manufactures as well. Incidentally, a more dependable break-up of India's global exports into manufactures and non-manufactures is available from Economic Survey, Government of India; but definition of manufactures used is not given.

14. Production of Leather articles (SITC 612) and Floor Coverings (659) in India owe more to traditional craftsmanship than to intensive use of automatic machinery. Similarly, in India, handloom and powerloom sector plays a very important role in the production of textile fabrics.

15. Buigues and Goybet (1989) classify industries into different groups in terms of rate of growth of domestic demand (apparent consumption) in OECD countries. On the basis of the above classification, they assess export specialisation of the EEC, Japan and USA. In the present study, instead of rate of growth in apparent consumption we have used change in relative share of product groups in world trade/EEC imports to identify strong and weak demand areas. Incidentally, change in apparent consumption need not always get reflected in international trade flows.

16. Due to space constraint we could not give more combinations of time points. In fact, figures for some alternative end points are available in Tables A.5.1 to A.5.6 in the appendix. Changes in time points do not at all affect our conclusions.

Chapter 6
PATTERN OF TRADE BARRIERS, STRUCTURAL MOBILITY AND UNEQUAL EXCHANGE: EMPIRICAL FINDINGS

In Chapter 5, we have identified important mobility areas in India's exports and observed that they are highly prone to the protectionist policies of the developed countries. Now the task is to see whether or not the mobility areas are characterised by concentration of trade barriers in developed countries, especially the EEC. In other words, the proposition that trade barriers act as mobility barriers is put to an empirical scrutiny in the present Chapter.

Trade policies, which discriminate among suppliers and deny equal opportunity, would certainly limit the freedom (of choice of the area) of specialisation within the division of labour. Such limits on the freedom of specialisation might also constrain structural mobility of participants, depending on the nature of the commodity with which the policy measure is associated. It may be recalled that by structural mobility we mean essentially the ability to adapt the nation's specialisation to structural changes in external demand. Thus viewed, unequal treatment with respect to a commodity facing fast and consistently growing demand may be considered a barrier to structural mobility.

Trade policy regimes discriminate among nations using either direct or indirect methods. Direct discrimination includes arrangements, which discriminate among suppliers (producers) according to their country of origin. Differential rates of tariffs on suppliers of the same product according to their country of origin is an example. Direct discrimination can be further divided into two types. The first type involves discrimination in favour of domestic (national) sources *vis-a-vis* foreign sources. In the second type, on the other hand, the discrimination is among different groups of foreign countries. Free trade areas, customs unions, common markets, etc., are good examples of the second category of direct discrimination.

In the case of indirect discrimination, unequal treatment among nations arises as a derived effect of commodity-wise or product-wise discrimination (Riedal 1987, Pomfret 1988:2). Discrimination among commodities would invariably have an unequal effect on nations depending on their areas of specialisation. Nations specialising in products, which face a hostile treatment, would find the policy regime highly discriminatory.

Although indirect (commodity-wise) discrimination is an important form of discrimination among countries, it does not seem to have received the attention it deserves. For instance, there is hardly any study inquiring as to whether or not commodity-wise discrimination employed by other countries adversely affects India's export performance. One main reason for this negligence appears to be the difficulties involved in its analysis. Analysis of trade barriers even at the level of individual products might bring out the essentials of direct discrimination, whereas, an evaluation of indirect discrimination would require a fairly detailed examination of the structure of trade and trade barriers. However, it is important to note that the commonly adopted method of analysis, which considers individual products and tariffs separately and ignores the structure of trade barriers, can be highly misleading.[1] Take, for instance, the hypothetical case of a developing country, which specialises almost exclusively in a narrow range of products eligible for the Generalised System of Preferences (hereafter GSP). Analysis of individual tariffs would suggest that the country enjoys a tariff preference vis-a-vis her non-GSP competitors. But it may not be correct to conclude so if the average trade weighted GSP tariffs paid by the country is higher than the average of all MFN rates charged by the preference giving country.[2]

The subject matter of the present Chapter is organised in four Sections. In Section I, we attempt a brief overview of the EEC's trade policy regime focusing mainly on the question of direct discrimination. In Section II, we analyse the structure of trade barriers and examine the possibilities of indirect discrimination. The discussion on the level of discrimination, whether at the level of individual commodities or at the level of all trade flows, would not help us clinch the issue of the effect of trade barriers on structural mobility. It would require a fairly clear answer to the question as to which sectors face more or less discrimination. We take up the above question and the issue of the effect of trade barriers on structural mobility in Section III. Section IV examines the question of implications of barriers to structural mobility. It attempts to provide empirical support to the theoretical proposition put forth in Chapter 3, that countries whose structural mobility is constrained would also be subjected to unfavourable unequal exchange.

Section I
Trade policy regime of the EEC: an overview

The EEC is notorious for its highly discriminatory trade policy regime. The Community countries perpetrate both direct and indirect discrimination among their trade partners. Let us first take up the question of direct discrimination.

A country committed to the principle of non-discrimination among foreigners need not have more than one schedule for tariff purposes, often referred to in the literature as the MFN schedule. The MFN tariff rate would be the same for all foreign suppliers of a given product. If so, the MFN rate would give an idea on the level of protection granted to domestic producers vis-a-vis foreigners.[3] Similarly, if there is more than one tariff schedule, the share of trade which face MFN rates to total trade, or alternatively the proportion of trade subjected to non-MFN treatment can be taken as a broad indicator of discrimination among foreign suppliers (Pomfret 1988:3-5).

In its capacity as a preferential trading arrangement, the EEC is known to discriminate between its members and non-members. But it needs to be emphasised that the Community's discrimination is not restricted to this two-way division. It employs a more detailed discriminatory arrangement, wherein non-members are further divided into several groups for finer differential treatment.

Table 6.1.1 gives a general idea on the relative importance of MFN and non-MFN trade of the Community. However, before we start interpreting the data, a note of caution is warranted. First of all, the estimates suffer from obvious biases in so far as negative discrimination reduces trade, while positive discrimination stimulates trade. Further, our analysis is based exclusively on tariff treatment. It may be noted that the non-tariff barriers, which play an equally or more important role in the EEC policy, more often than not would have a discriminatory effect among suppliers (Neven and Roller 1991).

For classifying the EEC trade into MFN and non-MFN, we have employed two alternative definitions of the MFN trade. According to a recent trade policy review of the EEC (GATT 1993:35): "The vast majority of the Community's trading partners qualifies for some sort of preferential treatment. Among GATT contracting parties, the EEC has no more than a handful of purely MFN suppliers; the United States, Japan, Canada, Australia and New Zealand". Our first definition of the MFN trade, which may be interpreted as a narrow one, covers only the 'purely MFN suppliers' listed above.

The share of MFN trade computed using the first definition is likely to be an underestimate because the EEC's preferential arrangements with some specific groups of non-member countries do not cover all tariff lines. For instance, the EEC's free trade agreements with EFTA countries do not cover agricultural products, especially products covered by the Common Agricultural Policy (hereafter, CAP). However,

trade within the limits of CAP need not be counted as MFN trade because CAP in itself is also a highly discriminatory arrangement.

Further, the EEC's GSP scheme covers only a fraction of the Community's trade with the beneficiaries. The broader definition used here includes, apart from trade with purely MFN sources, trade with GSP beneficiaries not eligible for such benefits as well.[4] This estimate, it should again be cautioned, is likely to be on the higher side because a significant share of non-GSP exports from developing countries to the EEC encounter other non-MFN, discriminatory regimes such as CAP and Multi Fibre Agreement (hereafter MFA).

Notwithstanding the limitations of our estimates, the orders of magnitude are striking. Sourcing of the EEC imports is highly biased in favour of non-MFN suppliers. This conclusion is found true with respect to both the alternative definitions of MFN trade used. Non-discriminatory (MFN) trade represents only a minority (only around 20 per cent even when the broader definition is used) in the EEC trade flows.

Non-discrimination Vs. hierarchy of privileges

Table 6.1.1 also gives us an idea regarding the distribution of the EEC's non-MFN imports among various groups of countries which receive different levels of preference/discrimination, starting from the most preferred lot of fellow members of the Community to the most discriminated against group of countries which receive worse than MFN treatment.

The complex hierarchy of preferences/discrimination makes traders' calculation of their competitive position as well as studies on the EEC's trade policy regime extremely difficult. Even a seemingly narrow margin of preference would have a significant effect on the importer's profit margin and hence on his decision regarding sourcing of imports. To reproduce a numerical illustration (UNCTAD 1993:18-19): "For example, an importer might sell an import shipment for US $1000. The net profit might be a small share of the proceeds, say US $100. If the importer can save just 1 per cent of the final proceeds through a preferential tariff reduction (U.S. $10), profits would be increased from US $100 to US $110; this amounts to a 10 per cent increase in profits. Thus, relatively small preferential margins can have relatively large effect on importers' profits". Therefore, it is extremely important to generate a clear idea on the

Table 6.1.1: Hierarchy of privileges and distribution of trade

	Type of preference/participants	Share of imports (per cent)	
		1985	1989
1	World including intra-community trade	100.00	100.00
2	Intra-community Belgium-Luxembourg, Denmark, France, Germany, Greece, Ireland, Italy, Netherlands, Portugal, Spain and U.K.	52.66	57.16
3	Free Trade Area Agreements Austria, Finland, Ireland, Norway, Sweden and Switzerland	9.46	9.68
4	Association/ Cooperation Agreements (a) Mediterranean Countries: Algeria, Egypt, Jordan, Lebanon, Syria, Morocco and Tunisia	2.42	1.32
	(b) Cyprus, Malta, Turkey, Yugoslavia and Israel	1.40	1.62
5	Lome Convention (ACP) Countries	3.01	1.49
6	Generalised System of Preference (GSP) Countries (including India)	11.54	8.95
7	India	0.34	0.39
8	MFN Sources (a) Purely MFN Sources U.S., Canada, Australia, Japan and New Zealand	13.03	13.91
	(b) Purely MFN Sources plus imports from GSP countries not eligible for GSP benefits	22.26	21.07
9	Others Countries and areas not specified and countries not eligible for MFN treatment	6.48	5.87

Notes: 1. The EEC here means the Community of 12 members: It does not include East Germany which was later re-unified with its western part.

2. In order to arrive at figures for the trade of GSP beneficiaries not eligible for GSP benefits, following the GATT review of the Community's trade policies (GATT 1993), we have assumed that only 20 per cent of their exports to the EEC have actually qualified for the GSP benefits.

3. The category 'Others' include, apart from countries and areas not specified in the source, countries which were not eligible for MFN treatment, such as U.S.S.R., North Korea, Mongolia, Eastern Germany, Bulgaria, Albania, Hungary, South Africa, etc.

Source: Computations based on IMF, Direction of Trade Statistics,Year book 1992.

country's relative position in the hierarchy of privileges as well as on the magnitude of the preference margin vis-a-vis other suppliers.

India is a beneficiary of the Community's scheme of generalised system of preferences. The GSP is supposed to extend special preference to developing countries *vis-a-vis* their competitors from developed nations. However, a close look at the hierarchy of trade preferences bring out an entirely different picture: The GSP beneficiaries including India are more discriminated against than preferred to their main competitors. Let us illustrate the point in more detail.

Intra-community sources

In the EEC pyramid of preferential arrangements, fellow Community members rank first, as the most preferred group. The EEC is widely acknowledged as the most successful of all preferential trading blocs in the world, especially with respect to the objective of free intra-bloc trade (GATT 1993:24-47). The history of the European movement towards economic integration and free intra-bloc trade is well documented to be discussed here in any detail (Pollard 1974, European Commission 1988). With the completion of the internal market programme in 1992, the movement for free intra-bloc trade has achieved all its important objectives. As of now, there exists practically no important barrier to intra-community movement of goods, services, capital and labour (GATT 1993:28-33).

As Table 6.1.1 shows, the intra-Community trade accounted for about 57 per cent of the EEC's total imports. In other words, developed member country producers who supply 57 per cent of the EEC demand, receive much better treatment when compared to the MFN suppliers or even GSP beneficiaries including India. Further, this preferred component of the EEC imports has been almost consistently growing over the years (Sapir 1993). The above growth in the share of intra-trade acquires added importance when considered against the growing weight of the Community in the network of world trade.

Estimates of the EEC's post-Tokyo Round average MFN tariffs range around 7.8 per cent (Erzan and Karsenty 1987:5). Thus, the intra-Community sources, i.e., around 57 per cent of the EEC's total imports, in general received a preference margin of about 7.8 per cent over MFN suppliers. The above figure of preference margin, undoubtedly is an under-estimate for it does not take care of the non-tariff barriers. We shall take up the question of the preference margin that the intra-Community sources enjoy vis-a-vis

the GSP sources at a later stage, i.e., when we reach the bottom line of the pyramid of privileges where the GSP beneficiaries are placed.

Free Trade Area Agreements

The second position in the hierarchy of privileges goes to the group of countries with which the Community has Free Trade Area Agreements. This group consists mainly of the EFTA partners, viz., Austria, Finland, Ireland, Norway, Sweden and Switzerland. Their industrial products are given free access, i.e., almost the same status as the EEC members, to the EEC market (UNCTAD 1994a:118). However, agricultural products covered by the CAP are largely exempted from the free trade agreements. As Table 6.1.1 indicates, they account for about 9.7 per cent of the EEC imports. Thus, interestingly, the EEC members and their EFTA cousins, all of which together account for nearly 67 per cent of the EEC imports enjoy more preferential access compared to the MFN as well as the GSP sources. It is also important to note the reciprocal nature of the free trade agreements between the EEC and the EFTA partners.[5] By virtue of reciprocity, the EEC members are guaranteed free access in the EFTA market. Ironically enough, it follows from the above that countries like India enter the EFTA markets also as a less privileged lot, placed well behind the EEC and the EFTA countries in the order of preferences.

Mediterranean, African, Caribbean and Pacific

For the third position in the ladder of preferences, there appears to be two different groups of claimants as they enjoy more or less same level of privileges, viz., the group of countries with which the EEC has Association or Cooperation agreements and the Lome convention (ACP) countries. Between 1975 and 1977, the EEC concluded cooperation agreements with seven Mediterranean countries of Arab Mashraq and Maghreb, i.e., Algeria, Egypt, Jordan, Lebanon, Morocco, Syria and Tunisia (European Commission 1984:28-29). The Cooperation agreements provide for free access for industrial products, raw materials and traditional agricultural exports to the EEC with no reciprocal obligations (GATT 1993:36, UNCTAD 1994a:118-119). However, some CAP products, refined petroleum products, certain textile items, etc., are excluded from the free access list.

The Community extends similar privileges to Turkey, Malta, Cyprus, Israel and Yugoslavia by way of Association agreements. Although the provisions of Association agreements vary in detail, they extend free access, with the condition of reciprocal treatment, for industrial products (GATT 1993:36-46). The above list of countries having Association or Cooperation agreements with the EEC contributed around 3 per cent of the Community's total imports.

The Lome convention provides a comprehensive frame-work for financial aid, technological cooperation and trade between the EEC and 69 developing countries of Africa, Caribbean and the Pacific region (European Commission 1985:35-37). Our concern, here, however, is limited to the status of trade related privileges. The Lome agreements (Lome IV since March 1990) grant trade preferences that virtually allow for duty free entry of industrial exports, without any quantitative limits (GATT 1993:44-46). Regarding agricultural products ACP countries are given higher privileges compared to MFN and GSP sources. In fact, in principle, all developing countries including the ACP and the Mediterranean Countries are eligible for the EEC's GSP benefits. But the ACP and Mediterranean Countries, as they get better treatment under their respective agreements with the EEC, do not generally seek the GSP benefits (European Commission 1985:50).

The Generalised System of Preferences

The EEC holds the credit for introducing the UNCTAD sponsored GSP Scheme ahead of all other GSP donors in 1971. The original intent of the GSP scheme was to foster industrialisation of developing countries by making it easier for them to export their semi-manufactured and manufactured products to the industrialised countries (European Commission 1990:1-3). Towards this end the GSP schemes were supposed to extend either duty-free or preferential access to manufactured products from developing countries. However, as it is widely known, the EEC's GSP scheme ranks at the foot of the Community's hierarchy of preferences (GATT 1993:44). All the group of countries discussed so far, viz., the EEC members, the EFTA partners, the countries with which the EEC has Cooperation or Association Agreements and the ACP countries enjoy better privileges than the GSP beneficiaries.

Here, we may digress to mention another group of countries, mainly of the erstwhile Soviet bloc, which used to receive worse than MFN treatment. As they were not contracting parties of the GATT, they were not entitled for the MFN treatment. However, the significance of this category of rank outsiders is on the

decline as most of them are in the process of entering the GATT\WTO fold. Interestingly, some of these transition economies, as the EEC's recent bilateral agreements with them suggest, are also likely to move further up in the EEC system of privileges.[6]

Coming back to the GSP beneficiaries, it is important to note that the Community's scheme is fraught with many limitations. First, the scheme itself is inferior to those enjoyed by the more preferred suppliers who account for about 70 per cent of the EEC imports. Second, the scheme gives preference, if any, only in relation to the purely MFN suppliers who constitute only a minority among the EEC sources of imports. Third, as we have already mentioned, only around 20 per cent of the imports from the GSP beneficiaries actually receive the benefits. Fourth, there are many products where the GSP rates are lower than the corresponding MFN duties but the MFN sources offer no competition whatsoever.[7] Fifth, with respect to many products, the GSP concessions are suspended beyond rigid quantitative limits.[8] In such cases, as reported by many studies, the scheme would not have exerted much influence on the trade flows (Stuven 1993:238-257). Last but not least, nearly 50 per cent of the GSP products are subjected to NTBs in the EEC (Clark 1991:5).

Finally, what is the average preference margin that the more preferred sources, especially the EEC and EFTA countries enjoy vis-a-vis the GSP beneficiaries? Similarly, what is the average margin of preference of GSP beneficiaries over purely MFN sources? Obviously, these questions cannot be settled at the level of direct discrimination, ie., without considering the structure of trade and distribution of barriers because the preference margin would vary from one trade flow to another. One possible way out would be to calculate the average level of tariff (ie., the rate of duty per unit of import) paid by different groups of, or individual, countries. For instance, an estimate of trade weighted average of all tariffs, including those on GSP and non-GSP products, paid by the GSP beneficiaries would help us answer the question posed above. Such an estimate would have also taken care of the problem of indirect or commodity wise discrimination. But, reliable estimates on the average trade-weighted tariffs paid by the GSP beneficiaries are not available. This, however, does not preclude us from making some important general observations on the relevant preference margins.

First of all, it is obvious that there would be a positive preference margin for intra-Community sources as also for other more preferred sources over the GSP beneficiaries. We maintain so for the following reasons. There is not even a single trade flow where the GSP beneficiaries are given better access than

the EEC and EFTA countries. Of course, there are many products for which the EEC maintains zero MFN or GSP duties wherein the question of discrimination does not arise. But there are also large number of trade flows where the GSP sources are discriminated against. The above conditions, and the fact that the EEC and EFTA countries are not made to pay any duty would ensure that the average preference margin would be positive against the GSP sources.

Coming to the GSP margin over purely MFN suppliers, the picture is not very clear. If we confine ourselves to direct discrimination, and ignore indirect discrimination, we would tend to conclude that GSP beneficiaries are preferred to the MFN sources. No doubt, the GSP tariffs on products eligible for such benefits are lower than corresponding MFN rates. But this, as opined earlier, would not guarantee that the average tariff paid by the GSP beneficiaries (GSP and non-GSP products included) are lower than the average of all MFN rates. The trade weighted average tariff paid by the GSP beneficiaries would depend on the distribution of the EEC tariffs as well as the GSP beneficiaries' trade across tariff lines. Here, it may be noted that many GSP and no-GSP products in which developing countries specialise face higher than average MFN rate in the EEC. Therefore, an *a priori* conclusion on the issue whether GSP beneficiaries pay higher or lower duty as compared to the average MFN rate is almost impossible.

Section II
Distribution of trade barriers

It is by now clear why the structure/distribution of trade barriers is of inevitable importance for studies on protectionism. Analysis of the distribution of trade barriers, however, is fraught with difficulties related to availability and management of relevant statistics. Since problems related to the data base on trade barriers are widely reported and known, it would be superfluous to attempt an account of the same here (Yeats 1979:64-74,104-127). The data base problems are so enormous that it is virtually impossible for individual scholars, without institutional and financial support, to undertake any fresh analysis of the same. However, the UNCTAD data base on trade measures and various studies initiated by the same institution provide valuable information on trade policy measures of developed countries including the EEC. Further, the GATT has recently started publishing trade policy reviews of contracting parties incorporating extensive information on commercial policy developments. The above two sources, supplemented with available studies on trade policy issues, would help us drive our arguments home.

As the broad objective of the study is to examine whether trade barriers constrain mobility of underdeveloped countries in the international division of labour, we try to extend our analysis, as far as possible, beyond the EEC to include other important developed countries also. Trade policy measures may be broadly classified into tariff and non-tariff barriers. To begin with we may consider the case of the lesser evil, viz., the tariff protection.

Distribution of tariffs

It is a widely known fact that the role of tariffs as an instrument for protecting domestic production from import competition has declined in favour of other more subtle non-tariff measures. Average tariff rates on manufactured products in developed market economy countries have been reduced through the GATT sponsored Multinational Tariff Negotiations (MTNs), from around 40 per cent at the end of world war II to nearly 5 per cent in the Tokyo Round (UNCTAD 1993:8). Moreover, the recently concluded Uruguay Round Agreement is expected to effect further reductions in tariffs. The widespread reduction of tariffs in industrial countries is an important reason why studies on India's exports generally tend to dismiss the role of tariff protection as a constraint on her export performance (Wolf 1982:74, Rajiv Kumar, et.al. 1988:83). It is also reasoned in this regard that India and other under-developed countries receive concessions (GSP) *vis-a-vis* the low level of MFN tariffs. The above arguments and the consequent indifference towards tariff protection appear to be the products of a sheer neglect of the structure of tariffs. A simple overview of the distribution of tariffs, as we undertake below, is enough to expose the weakness of such arguments.

It is true that tariffs in industrial countries have been drastically cut; but it is also equally true that high tariffs persist in many product lines. Table 6.2.1 presents a frequency distribution of post-Tokyo MFN tariff rates in EEC, Japan and USA. Admittedly, in all three markets there is a major concentration in intervals of zero to five, and five to ten per cent. But the proportion of tariff lines facing rates above ten per cent is too substantial to be ignored. Further, the share of tariff lines with rates above 10 per cent is relatively high in the EEC. In fact, the majority of tariff lines in the EEC for which rates are not available could also be counted as high tariff lines because they belong to the food sector where very high variable levies persist (Erzan and Karsenty 1987:9). Thus, about 33 per cent of all tariff lines in the EEC face import duties above 10 percent. It follows from the above that the illusion of averages, as it may hide

valuable details, should not make one complacent to the question of tariff protection. Now the question remains as to whether the high tariff lines are of major concern to developing countries.

Table 6.2.1: Frequency Distribution of post-Tokyo MFN Tariff Rates in EEC, Japan and USA

Post Tokyo MFN tariff rates	EEC			Japan			U.S.A.		
	No of lines	Percentage of all lines	Cumulative percentage	No of lines	Percentage of all lines	Cumulative percentage	No of lines	Percentage of all lines	Cumulative percentage
Zero %	334	8.6	8.6	566	11.9	11.9	967	16.8	16.8
Above zero to 5%	929	24.0	32.6	1680	35.3	47.2	2013	35.0	51.8
Above 5% to 10%	1326	34.3	66.9	1691	35.5	82.7	1796	31.3	83.1
Above 10% to 15%	560	14.5	81.4	407	8.6	91.3	463	8.1	91.2
Above 15% to 20%	142	3.7	85.1	175	3.7	95.0	291	5.1	96.3
Above 20% to 25%	81	2.1	87.2	98	2.1	97.1	80	1.4	97.7
Above 25% to 30%	20	0.5	87.7	42	0.9	98.0	26	0.4	98.1
Above 30% to 40%	12	0.3	88.0	56	1.2	99.2	35	0.6	98.7
Above 40%	16	0.4	88.4	35	0.7	99.9	23	0.4	99.1
Not available	448	11.6	100.0	5	0.1	100.0	52	0.9	100.0
All	3868	100.0	100.0	4755	100.0	100.0	5746	100.0	100.0

Notes: Of 448 tariff lines of the EEC for which tariff information was not available, 425 were in the foodsector, most pertaining to variable levies with no fixed component. The remaining 23 tariff-lines were manufactures.

Source: UNCTAD (1988a) Protectionism and Structural Adjustment, Statistical Information Annex, TD/B/1160/Add1 Tab. I.7.

As Table 6.2.2 shows the tariff structure in developed countries is highly biased against broad SITC heads such as All food items, Manufactures other than chemicals, Textile yarn and fabrics, Clothing and Footwear. It is highly likely that there is a concentration of high tariff lines under the above heads. Further, it may be noted that underdeveloped countries possess proven comparative advantage in many product lines falling under the heads cited above. It is contextual here to refer back to our estimates of India's revealed comparative advantage in the previous Chapter. India can rightfully claim to possess comparative advantage in such products, especially in those belonging to SITCs 65, 84, and 85 where high tariff lines tend to concentrate. In fact, significantly large number of dynamic product groups identified in Chapter 5 in India's exports to the EEC (14 out of 24) and India's global exports (12 out of 27) belong to the above high tariff areas. Further India has favourable comparative advantage in almost all such lines.[9]

That India has higher stakes in high tariff areas is further clear from the structure of her exports presented in Table 6.2.2. Notably, the high tariff areas are of higher weightage in her export basket as compared to the industrial countries. It may also be noted that the underdeveloped countries have a higher market share in developed countries in high tariff sectors such as Food, Textiles and Clothing (see Table 6.2.3).

Table 6.2.2: Post-Tokyo Tariffs applied by developed market economy countries against different groups of countries

SITC	Product Coverage	World	Developed Market Economy Countries	Developing countries	Share in World Exports	Share in EEC Imports	Share in India's Global Exports	Share in Indian Exports to EEC
0+1+22+4	All food items	6	5.6	6	10.92	12.89	24.37	17.64
0	Food and live animals	6.2	6.3	6.1	8.95	10.6	22.35	15.4
22	Oil seeds/ nuts	0.1	0.1	0.4	0.44	0.62	0.26	0.12
4	Animal/Veg. Oils	4.1	2.4	5	0.44	0.47	0.26	0.47
2 (less 22+27+28)	Agri. Raw- materials	0.5	0.5	0.5	3.25	3.61	3.51	2.85
27+28+67+68	Ores and Metals	2.2	2.8	1	7.07	7.39	6.43	1.99
67	Iron and Steel	5.2	5.9	3.1	3.42	3.27	0.45	0.04
68	Non-ferrous metals	2.1	3	1.1	1.9	2.18	0.2	0.02
3	Fuels	0.6	0.9	0.7	11.28	11.89	3.36	0
5	Chemicals	5.5	6	3.7	8.24	10	3.53	3.86
6 to 8 less 67+68	Manuf. other thanChemicals	6.1	5.7	7.7	56.37	52.2	58.51	73.19
61	Leather	4	5.1	3.1	0.42	0.53	5.89	11.35
65	Textile Yarn & Fabrics	10.5	11.9	8.2	3.1	3.49	11.32	16.39
84	Clothing	16.9	14.8	17.2	2.76	3.28	11.31	21.22
85	Footwear	11.4	9.8	11.7	0.72	0.83	0.65	1.45
0 to 9 less 3	All Items excluding fuels	-	-	-	88.72	88.11	96.64	100
0 to 9	All Items	3.7	4.5	3	100	100	100	100

Notes:1. Developed Countries included are Austria, Canada, EEC (10), Finland, Japan, Norway, Switzerland and U.S.A.

Source: For data on tariff UNCTAD (1988 b): Trade and Development Board, Thirty-second session, Official Records, Annexes. For data on trade, Appendix Table A.5.1 and A.5.4

Interestingly enough, the fact that underdeveloped countries receive GSP or other forms of preference would not alter our observation that the distribution of tariffs in industrial countries is biased against products of interest to developing countries. The tariff rates presented in Table 6.2.2, as they are trade weighted applied rates, do take care of the preferential schemes as well (UNCTAD 1988b:36). In fact, as shown in Table 6.2.2, average applied rates against developing countries are higher than those against their developed country competitors in sectors like All food items, Manufactures other than chemicals, Textiles, Clothing and Footwear. It would suggest that at least in the above sectors, and notably in such an important general category as Manufactures less chemicals, imports from developing countries concentrate in high tariff lines. Alternatively, and more realistically put, high tariffs tend to persist, in spite of the much talked about MTN Rounds, against many product lines where underdeveloped countries tend to specialise and have proven comparative advantage.

That high tariffs in developed countries tend to concentrate against products of interest to developing countries is not a matter of controversy. Almost all important studies on post-Kennedy and post-Tokyo Round tariffs have underlined the above pattern (Yeats 1979, Erzan and Karsanty, 1987, UNCTAD 1988b,

Greenaway 1983). This, however, it needs to be cautioned, should not be interpreted to say that all lines of their specialisation encounter such hostile treatment. In fact, as Table 6.2.2 shows, many important heads of their trade, viz., Oil seeds and nuts, Agricultural raw materials, Ores and metals, Non-ferrous metals and Fuels face lower than average level of duties. Further, the product lines which face lower than average tariffs appear to have higher weightage in the overall exports of underdeveloped countries. It should be so because the average applied tariffs on All items (SITC 0 to 9) is lower for developing countries as compared to their developed counterparts.

This, by no means, reduces the importance of our observation that many crucial items of developing countries' exports face higher than average tariffs. Similarly, the conclusion that the overall average tariffs against developing countries is lower need not be true in the case of all individual countries. Countries which specialise more in high tariff areas might even be facing higher than average tariffs. Therefore, a clear picture on average level of tariffs paid by individual countries would require country-specific estimates. Unfortunately, due to data problems already mentioned, we have not been able to undertake such a task for India. Incidentally, given the structure of India's exports, which show high concentration in product categories like, Textiles, Clothing, Footwear, etc., it would be a worthwhile exercise to undertake.

Our discussion so far has been based on tariff averages of selected developed countries. Table 6.2.3 testifies that the picture is not significantly different when the EEC is taken separately. Here again, high tariffs are reported in areas where developing countries enjoy higher market share. The Table also gives tariff averages (not trade weighted) for USA and Japan as well as data on market share of developing countries in different lines of specialisation.

Table A.6.1 in the appendix presents the picture of tariff protection in the EEC at a more disaggregate level. Taking 7.8 as the mean tariff (See Table 6.2.3), we have identified product groups facing higher than average import duty in the EEC, viz., Fabrics and similar products, Made-up articles and related products, Clothing and clothing accessories, Plastics, Motor vehicles, Footwear, Fruit and edible nuts, fresh or dried, Fruit, prepared or preserved, Vegetables, fresh or dried, Vegetables, prepared or preserved, Coffee, Coffee and tea extracts, Spices, Cocoa and Cocoa preparations, Vegetable oils, Cut flowers, plants, vegetable materials, Beverages and spirits, Fish, fresh, chilled or frozen, Fish, salted in brine or dried, Fish, prepared or preserved, Crustaceans, Unmanufactured Tobacco and Manufactured Tobacco.

Table 6.2.3: Post-Tokyo MFN Tariff averages and share of imports from developing countries in EEC, Japan and USA, 1984

Sector	EEC		Japan		USA	
	Tariff average (per cent)	Share of developing countries in total imports (percent)	Tariff average (percent)	Share of developing countries in total imports (percent)	Tariff average (percent)	Share of developing countries in total imports (percent)
Food *(SITC 0+1+22+44)*	13.8	55.4	19.5	36.2	7.1	55.6
Agr.raw materials *(SITC 2-(22+27+28)*	3.3	30.5	2.3	39.4	1.7	21.0
Mineral Fuels *(SITC 3)*	3.4	65.1	3.0	88.9	1.0	68.8
Ores and metals *(SITC 27+28+67+68)*	4.0	31.2	3.9	46.1	3.8	23.8
Manufactures *(SITC 5 to 8 less 67+68)*	7.0	20.3	6.7	27.9	6.7	28.0
of which Chemicals (SITC 5)	4.2	14.1	6.0	16.6	5.9	15.6
Machinery,Trans.equipment *(SITC 7)*	4.7	10.2	4.6	15.3	3.5	19.1
Textiles &Clothing *(SITC 65+84)*	10.5	60.6	10.5	75.6	10.3	70.0
Other Manufactures *(SITC (6+8) - (65+67+68+ 84))*	5.2	19.0	6.1	31.0	6.2	41.1
All Sectors *(SITC 0-9)*	7.8	40.0	8.0	58.3	6.2	36.9

Notes: Tariff averages are arithmetic averages of post-Tokyo MFN tariffs.

Source: Erzan Refik and Karsenty Guy (1987): Products Facing High Tariffs in Major Developed Market Economy Countries, Seminar paper No. 401, IIES, Stockholm.

Due to lack of comparability between GATT tariff study categories and Indian trade classification, we have not been able to estimate the relative shares of these high tariff areas in India's exports to the EEC. Notwithstanding the absence of precise quantitative estimates, a cursory comparison using product description itself is revealing. It appears that except for cocoa and its preparations, Cut flowers, Beverages and Spirits, Plastics and Motor vehicles, all other tariff categories identified above appear in the list of important product groups in India's exports to the EEC (See Appendix Tables A.5.1 to A.5.3).

The observed bias in the structure of tariffs in the EEC should be understood against the background of the pyramid of privileges that the Community maintain. In order to prove that the trade policy regime of the EEC is biased against countries like India, we need not go to the extent of an analysis of indirect or

product-wise discrimination. This is so because, as we have seen in Section I, majority of the EEC imports enjoy complete free access in the Community market. The observed bias in the tariff structure, therefore, suggests that even among the minority to which the EEC tariffs are applicable, the underdeveloped countries like India are in a disadvantageous position because high tariffs affect their exports more than others, especially the purely MFN suppliers.

Now, how would one explain the concentration of high tariffs against exports of developing countries? That it is so because developing countries specialise more in high tariff areas is the type of explanation we often come across in the literature (Sapir 1985, Laird and Nogues 1989:247). The policy prescription also immediately follows; that the developing countries should search for and specialise in areas where their developed brethren are more receptive. The above line of reasoning, while serving as a convenient apology for the neo-mercantilist policies of the west, also amounts to suggesting that developing countries should specialise according to the whims and fancies of policy makers in developed countries. It may be true that, given the unequal balance of economic power among nations, the developing countries are left with no other practical option. But the implicit suggestion that the pattern of specialisation in underdeveloped countries should be guided by the trade policy decisions of developed countries does not have any economic rationale whatsoever.

Notably, the high tariff areas are dominated by labour intensive manufactures in which underdeveloped countries are supposed to have natural or acquired comparative advantage. Therefore, a more objective explanation to the observed concentration of high tariffs against products of interest to developing countries would lie in the one-sidedness of hitherto MTN Rounds. This bias of the multinational trade liberalisation process is evident from Table 6.2.4 which presents pre and post-Kennedy Round average tariffs, and average percentage reductions in the Kennedy Round for SITC Sections 1 to 8 and for important SITC two digit divisions.

Table 6.2.4 highlights two important dimensions of the distribution of tariffs in developed countries. First, the uneven distribution of pre and post-Kennedy Round tariffs and the obvious bias against products of importance to developing countries. Second, the uneven pattern of tariff reductions: while items of primary importance to developed countries like, Chemicals, Machinery, Transport equipments, Instruments, etc., experienced deepest reductions, products in which underdeveloped countries are generally held to have comparative advantage, viz., Clothing, Textiles, Oils and Fats, Food stuffs etc.,

experienced lower than average cuts. Interestingly, the story of Tokyo Round reductions also has not been significantly different (Helleiner 1980:62-103, Deardorf and Stern 1983).

The non-tariff barriers

We have seen how tariffs, contrary to the general expectations, continue to distort international flow of goods, especially exports of developing countries. But what we see in tariffs constitutes only the tip of the iceberg of the problem of new protectionism. Contemporary trade policy regimes use NTBs much more extensively than tariffs for insulating domestic production from external competition (Cassing 1983). In fact, as far as protectionism against developing countries is concerned, the proliferation of NTBs in the developed countries seem to have more than compensated for the GATT sponsored multinational tariff cutting exercises.

NTBs, by their nature are less transparent as also far less amenable for quantitative analysis than tariffs (Walter 1971). Tariffs, in their advalorem form provide a clear measure of the intensity of restriction on trade it entails and hence, also facilitate comparative analysis, whereas NTBs provide no such obvious measure of intensity of trade restriction.[10] This property of NTBs makes it particularly difficult to undertake comparative analysis of their importance across sectors or countries. One way out often cited and widely used in the literature is the inventory approach initiated by the UNCTAD (Yeats 1979:112-127). The inventory approach, it may be noted, is not designed to compare intensity of trade restriction entailed by the NTBs. Instead, they provide different indicators of NTB prevalence, which if cautiously interpreted, would provide some idea on the relative incidence of NTBs.

Here, we introduce two such important NTB prevalence ratios, which appear in the subsequent discussion on the distribution of NTBs in developed countries. The first is a frequency ratio, which simply registers the relative frequency with which countries impose NTBs; it counts the number of a country's import flows covered by NTBs and divides this sum by the total number of import flows for that country (Nogues et. al 1986). The same ratio can be calculated for different sectors. One obvious shortcoming of the frequency index is that it gives equal weight to all the trade flows. The second indicator, namely, the trade coverage ratio, uses information on value of trade, and therefore, gives a better indication of NTB intervention. The trade coverage index is defined as the ratio of the value of trade covered by NTBs to total value of trade. The trade coverage ratio, on its part, is also not free of limitations. Going by the

6.2.4: Profile of Kennedy round Reductions in Tariffs
(Combined MFN tariff averages of EEC, U.S., U.K. and Japan)

SITC	Description	Average tariff rates (ad valorem c.i.f. basis)		
		Pre-Kennedy Round percentage	Post-Kennedy Round percentage	Percentage reduction in Kennedy Round
0	Food Stuffs	n.a.	n.a.	n.a.
	Supported items	n.a.	n.a.	n.a.
	Other Food stuffs	12.8	10.6	17
1	Beverages and Tobacco	50.3	43.4	14
2	Crude materials	3.2	2.2	31
26	Textile fibres	5.7	4.2	26
28	Ores and Scrap	0.9	0.6	38
Other 2	2 excl. 26 and 28	3.3	2.1	35
3	Mineral fuels	3.7	2.9	20
32	Coal	2	1.1	48
33	Petroleum	3.9	3.2	17
Other 3	Gas	3.7	2.3	36
4	Oils and fats	13.8	12	13
5	Chemicals	16.3	8.3	49
6	Semi-Manufactures and manufactures by material	11.9	8.3	31
65	Textiles	21.3	16.9	21
67	Iron and Steel	8.9	6.4	27
68	Non-ferrous	6.3	4.2	34
Other 6	6, excl. 65, 67, 68	12.2	7.4	39
7	Machinery and transport	13.1	7.4	44
71	Machinery, non-elec.	11.1	6.3	44
72	Electrical machinery	16.2	9.4	42
73	Transport equip.	14.1	8	44
8	Miscellaneous manufactures	20.3	13.8	32
84	Clothing	27.4	23.1	16
86	Instruments, etc.	20.7	12.4	40
Other 8	8, excl. 84 and 86	16.8	10.1	40
5 to 8	Total Manufactures	14	8.7	38
2 to 8		10.5	6.7	36
Total excl supported foodstuffs		11.6	7.9	32

Notes: 1. The averages for the four customs areas have been combined by weighting the figures for each individual area in proportion to its 1965 non-preferential imports in SITC Sections 5 to 8.2. Tariff averages were computed using combined 1965 imports of all OECD countries as weights.

Source: UNCTAD (1968), The Kennedy Round Estimated Effects on Tariff Barriers, TD/6/Rev.1, U.N., New York.

definition, a low coverage ratio would suggest that imports are not much affected by the NTBs. But, it should be kept in mind that successfully implemented NTBs would also reduce trade. For instance, an import prohibition may result in total elimination of trade. The trade coverage ratio in this case, consequently, would also be zero. A practical solution, therefore, is to provide information on both the ratios.

As Table 6.2.5 clearly suggests, there is a striking similarity between the distribution of NTBs and the structure of tariffs. The structure of NTBs, is as biased, if not more, against developing countries as that of tariffs. Nearly 16 per cent of all trade flows into the selected developed market economy countries were subject to one or more NTBs in 1989. But the proportion of trade flows affected by the NTBs was relatively higher with respect to All food items, Food and live animals, Oil seeds and nuts, Ores and metals, Iron and steel, Textiles, Clothing and Footwear. Note that some of these sectors were also among the high tariff areas. It would mean that products affected by high tariffs also tend to encounter high level of NTB protection. The trade flows affected by the NTBs, as the import coverage ratios show, accounted for about 23 per cent of the value of all imports in 1989. But, All food items, Food and live animals, Iron and Steel, Manufactures, Textiles, and Clothing show above average import coverage of NTBs. The case of Clothing, as it shows the highest trade coverage, deserves special mention. Nearly 70 per cent of the Clothing imports into the selected developed countries were subjected to one or more NTBs. That developing countries have high stakes in the areas severely affected by NTBs requires no detailed explanation.

Table 6.2.5 is also suggestive of a possible increase in the trade coverage of NTBs employed by the developed countries. In fact, Fuels, Oil seeds and Footwear exhibit a distinctly different pattern of change over time. The above three sectors have witnessed substantial decline in NTB incidence measured in terms of both the ratios. In all other sectors, the proportion of trade affected by the NTBs appear to have registered some notable increase between 1981 and 1989. But, paradoxical as it may sound, frequency ratio pertaining to the latter group does not show any such visible growth over time. How would one explain the apparent paradox? Obviously, the value of imports through the NTB affected trade flows should have increased faster than the NTB free flows.

Table 6.2.5: Frequency and Import Coverage Ratios of NTBs applied by Developed Countries

(percentages)

Product Groups	Frequency Ratios					Import Coverage Ratios				
	1981	1983	1985	1987	1989	1981	1983	1985	1987	1989
All Products	15.9	16.2	17.3	17.4	15.9	22.9	23.1	20.1	21.7	22.3
Fuels	20.1	20.6	14.8	14.5	13.3	41.3	41.4	15.7	15.7	15.7
All except fuels	15.9	16.1	17.3	17.4	16.0	19.4	20.1	20.8	22.7	23.4
All Food Items	40.2	40.6	40.9	40.9	40.3	35.0	36.1	38.7	36.4	36.8
Food and live animals	43.4	43.9	44.3	44.3	43.7	39.3	40.6	42.9	41.2	41.7
Oil seed and nuts	20.0	20.0	16.2	16.8	16.8	4.6	4.6	3.5	3.7	3.7
Animal/Veg. oils	13.7	13.7	13.7	13.3	12.9	8.1	8.1	8.1	9.2	9.1
Agri. raw materials	12.3	12.4	13.0	13.2	12.4	4.0	12.1	4.6	13.1	12.8
Ores and metals	14.0	14.3	15.8	17.3	16.2	16.6	16.6	20.0	21.7	21.6
Iron and steel	27.4	27.5	30.5	33.3	32.1	42.3	38.1	51.9	56.5	56.3
Non-ferrous metals	2.7	3.1	3.7	4.2	2.8	2.8	6.6	2.9	3.6	3.5
Chemicals	6.0	6.3	7.1	7.1	5.9	11.8	11.8	12.0	13.0	12.5
Manufactures	14.1	14.4	15.7	15.7	14.1	19.3	19.6	20.3	22.6	23.7
Leather	10.3	10.3	11.6	11.7	10.5	11.0	11.0	15.5	15.5	14.3
Textiles	33.1	33.6	34.8	36.6	34.7	38.8	40.1	41.8	42.1	42.9
Clothing	55.4	56.3	55.4	55.6	55.4	66.0	68.5	69.0	69.2	69.2
Footwear	75.1	67.4	66.6	66.6	65.9	81.5	34.6	22.4	22.3	22.2

Notes:1. The ratios have been computed using 1986 import trade weights.

2. NTBs here include certain para-tariff measures, import deposits and surcharges, variable levies, anti-dumping and countervailing actions, quantitative restrictions (including prohibitions, quotas, non-automatic licensing, state-monopolies, voluntary export restraints under MFA and similar textile agreements) import surveillance, automatic licensing and price control measures.
3. Developed countries include Austria, Canada, EEC (10), Finland, Japan, New Zealand, Norway, Switzerland and U.S.A.
4. For definition of product groups in terms of SITC sections and divisions, See Table. 6.2.6

Source:UNCTAD (1989a): Protectionism and Structural Adjustment, Addendum, TD/B/1240/Add.I, 14. December.

The above pattern of change is possible if the NTB-affected areas faced more dynamic demand conditions than other sectors. Or else the NTB affected flows might be characterised by very weak import-competing industries which tend to loose market to more competitive external suppliers. It would also appear in this context that the NTB wall has been more porous than what is generally expected. Contextually, there are many studies which try to explain how successful exporters use counter-strategies to overcome the limits imposed by barriers (Yoffe 1983).

That NTB-affected trade flows grew faster than NTB-free flows lend support to our hypothesis that trade barriers concentrate against areas which face dynamic demand conditions and hence act as mobility

barriers. However, firm conclusions on the question of mobility can wait, for we intend to take up the issue at a later stage.

Our discussion so far has been based on a rather broad definition of NTBs which include a wide array of non-tariff measures (see Notes to Table 6.2.5). The broad definition and the NTB incidence ratios based on it tend to lump together highly restrictive measures with measures which have little or no effect on trade. In order to overcome this defect, the UNCTAD has recently started publishing trade coverage ratios for different sets of NTBs; broad definition of NTBs, narrow definition of NTBs and quantitative restrictions. The NTB coverage ratios for different sets of NTBs presented in Table 6.2.6 would help us ascertain that our conclusion remains more or less unaltered even when alternative definitions are used.

Table 6.2.6: Import coverage ratios by type of NTBs applied by developed countries

(percentages)

SITC	Product Coverage	All NTBs (Broad)		NTB Coverage by type of NTB (NTBs Narrow def.)		Quantitative Restrictions	
		1981	1989	1981	1989	1981	1989
0+1+22+4	All food items	35.0	36.8	30.0	31.0	22.4	23.4
0	Food and live animals	39.3	41.7	33.3	34.8	24.6	26.0
22	Oil seeds/ nuts	4.6	3.7	4.6	3.5	3.7	2.6
4	Animal/Veg. Oils	8.1	9.1	7.0	8.5	2.9	3.9
2 (less 22+27+28)	Agri. Raw- materials	4.0	12.8	2.9	2.8	2.9	2.8
27+28+67+68	Ores and Metals	16.6	21.6	12.1	16.0	5.3	15.0
67	Iron and Steel	42.3	56.3	31.7	43.9	11.2	40.7
68	Non-ferrous metals	2.8	3.5	0.7	0.5	0.7	0.5
3	Fuels	41.3	15.7	13.7	13.6	13.3	13.3
5	Chemicals	11.8	12.5	8.9	9.1	8.6	8.7
6 to 8 less 67+68	Manuf. other than Chemicals	19.3	23.7	13.1	13.0	12.7	12.5
61	Leather	11.0	14.3	2.4	1.2	2.4	1.2
65	Textile Yarn & Fabrics	38.8	42.9	35.7	36.7	35.7	36.7
84	Clothing	66.0	69.2	59.7	62.6	59.7	62.6
85	Footwear	81.5	22.2	40.9	4.6	40.9	4.6
0 to 9 less 3	All Items excluding fuels	19.4	23.4	14.0	14.3	12.4	13.1
0 to 9	All Items	22.6	22.3	14.0	14.2	12.5	13.1

Notes: 1. Ratios have been computed using 1986 import trade weights.

2. The 'broad' group of NTBs includes all NTBs considered for Tab. 6.2.6. The 'narrow' group of NTBs excludes from the 'broad' group, para-tariff measures, import deposits, anti-dumping and countervailing actions, automatic licensing and import surveillance measures.

Source:UNCTAD (1989a): Protectionism and Structural Adjustment, Addendum, TD/B/1240/Addl. I, 14, December.

The NTB incidence ratios presented in Table 6.2.5 and Table 6.2.6 have been computed considering all import flows into the selected developed countries. Ratios computed for import flows from developed and developing countries separately, as presented in Table 6.2.7 would help us see which group of countries are more affected by the NTBs deployed by the developed countries. The import coverage ratios calculated for broad and narrow group of NTBs for all items less fuels unequivocally prove that the NTBs affect developing countries more than the trade among developed countries. The bias is more manifest with respect to the general category of Manufactures excluding chemicals, Textile yarn and fabrics and Clothing. In view of the wide range of the Common Agricultural Policy (CAP) it is only reasonable to assume that the problem of NTBs is more severe in the case of the EEC taken separately. Studies on NTBs confirm that the EEC use them more extensively than other developed countries (Shepherd 1981, Laird and Nogues 1989).

Table 6.2.7: Import Coverage of NTBs, by Country Groupings, Applied in 1989 by Developed Countries

(percentages)

SITC	Product Coverage	World		NTB Coverage in Imports from Developed Countries		Developing countries	
		Broad	Narrow	Broad	Narrow	Broad	Narrow
0+1+22+4	All food items	36.8	31.0	43.4	36.3	30.0	25.2
0	Food and live animals	41.7	34.8	53.0	43.7	32.5	27.2
22	Oil seeds/ nuts	3.7	3.5	3.0	2.7	3.4	3.4
4	Animal/Veg. Oils	9.1	8.5	15.6	14.5	4.0	3.5
2 (less 22+27+28)	Agri. Raw- materials	12.8	2.8	15.7	2.0	7.0	3.0
27+28+67+68	Ores and Metals	21.6	16.0	23.8	18.0	15.9	10.5
67	Iron and Steel	56.3	43.9	57.1	44.0	50.8	38.7
68	Non-ferrous metals	3.5	0.5	2.2	0.4	6.6	0.0
3	Fuels	15.7	13.6	22.3	19.6	10.2	9.0
5	Chemicals	12.5	9.1	12.4	9.6	12.3	6.6
6 to 8 less 67+68	Manuf. other than Chemicals	23.7	12.9	21.8	9.5	28.4	22.3
61	Leather	14.3	1.2	14.3	1.5	13.4	0.6
65	Textile Yarn & Fabrics	42.9	36.7	23.4	16.0	64.6	58.6
84	Clothing	69.2	62.6	42.5	21.9	77.1	74.9
85	Footwear	22.2	4.6	21.5	0.3	19.6	5.8
0 to 9 less 3	All Items excluding fuels	23.4	14.3	22.0	11.5	26.1	20.5
0 to 9	All Items	22.3	14.2	22.0	12.0	21.1	16.9

Notes: 1. Ratios have been computed using 1986 import trade weights.

2. The 'broad' group of NTBs includes all NTBs considered for Tab. 6.2.6. The 'narrow' group of NTBs excludes from the 'broad' group, para-tariff measures, import deposits, anti-dumping and countervailing actions, automatic licensing and import surveillance measures.3 The group of developed countries is the same as in Tab. 6.2.5.

Source: UNCTAD (1989a): Protectionism and Structural Adjustment, Addendum, TD/B/1240/Addl. I, 14, December.

A more disaggregate level analysis of NTBs than what has been presented so far would have added strength to our conclusions. Admittedly, the observations made at the level of all developing countries taken together and broad commodity groups need not be true for individual countries or commodities taken separately. But available evidence suggest that the Indian case is unlikely to be an exception. First of all, India's export structure, especially with respect to her exports to the EEC, has been dominated by the sectors identified as highly NTB affected. All the same, it is possible that within such broad product groups, India tends to specialise in particular trade flows not much affected by NTBs. But Table A.6.2 presented in the Appendix clearly shows that there is no room for such wishful thinking.

The data arranged in Table A.6.2 have been drawn from GATT (1989) which provides information on tariff treatment and non-tariff measures applicable to products of interest to developing countries in developed countries. Products of interest to developing countries in the EEC case have been selected on the basis of two criteria; (1) existence of a non-tariff measure (2) the floor value at the tariff line level ($ 1,000,000 or more in 1985) or the percentage share (30 per cent) of imports from developing countries in total imports. Considering the space constraint, from the EEC table we have drawn only those items in which India rank among the top five suppliers to the EEC market. Admittedly, it is not a representative sample of import flows from India which face NTBs.[11] However, the data amply prove that India's specialisation, at the disaggregated level, is not particularly free of NTBs deployed by the EEC. Interestingly, the distribution of the selected 76 trade flows in Table A.6.2 among SITC groups confirms our aggregate level identification of sectors with high NTB incidence. Of the 76 trade flows, 59 (i.e. 78 per cent) belonged to the sectors which we have already identified as most NTB affected, viz., All food items (34 per cent), Textiles (20 per cent) and Clothing (24 per cent). In fact, in many of these trade flows, imports from India were subjected to several non-tariff measures, i.e., multiple stacking of obstacles.

Section III
Barriers to structural mobility

From our discussion in Section I and II, it is clear that in developed markets, especially in the EEC, exporters from the developing countries are at a disadvantage. For, they face discrimination *vis-a-vis* their competitors from the industrial nations. The above observation, notwithstanding its merit otherwise, does not help us say anything clear on the effects of trade barriers on structural mobility. For instance, take the

case of an underdeveloped country, which encounters very low average duty on her exports. The fact that her exports face very low average tariff might be due to the higher weightage of low mobility areas in her export basket. The country, in fact, might be facing high tariffs in her mobility areas, which for the same reason would be of very low weight in her exports. Therefore, for commenting on the effect of trade barriers on structural mobility, it is important to know which sectors are subjected to more or fewer restrictions.

That India is one among the least preferred sources of imports of the EEC does not mean that she is discriminated or equally discriminated in all lines of specialisation. Now, which are the areas, where India and other underdeveloped countries are accorded free or equal access? Are they products facing declining demand and therefore tend to get phased out of the international division of labour? Similarly, which are the areas where the underdeveloped countries are denied equal opportunity? Are they by any chance products facing dynamic demand conditions? These questions are important to pursue the issue of structural mobility, as also to know the kind of role the international forces try to assign to the underdeveloped countries in the division of labour.

A priori reasoning suggest that the degree of discrimination would be higher in product lines facing dynamic demand conditions. As we have tried to illustrate in Chapter 3, the rate of return on capital is likely to be higher in sectors facing dynamic demand conditions and lower in sectors being phased out of circulation. We visualise such a scenario, not so much due to the specificities of demand but for the simple reason that due to lack of upward mobility, capital would tend to crowd together in sectors facing declining social demand, whereas, in sectors facing dynamic demand, higher rates of return are likely to persist because investment and production would tend to lag behind the rising demand.

In sectors facing declining demand, since they are also likely to be characterised by low rates of return, developed country producers may not be interested to compete. As such, the demand for protection would also be less in such sectors whereas, in areas facing favourable demand conditions, as they are likely to be characterised by a reasonable rate of return, the developed countries are likely to have strong presence, either in the form of export competition or import competing production. It is true that in many such sectors facing highly dynamic demand conditions, they may need no protection whatsoever; technological barriers, capital requirements, intellectual property rights, etc., would pre-empt entry of underdeveloped countries into such frontier areas. But in sectors, where such entry barriers do not operate effectively (e.g.

Textiles, Clothing, Leather products), the developed countries might resort to commercial policies to protect their relatively weak import competing industries. In short, within the range of product-lines in which the underdeveloped countries specialise in the international division of labour, they are likely to face more restrictions in sectors, which face relatively dynamic demand conditions. In what follows we would examine how far the above proposition is empirically true.

Escalation of trade barriers

There is no dearth of evidence to prove that tariffs in developed countries increase or escalate with the level of processing (Yeats 1979:79-103, Dunkan and Lutz 1983). Table 6.3.1 is self-explanatory in this respect. In the majority of cases the tariffs increase as we move up from lower to higher stages of processing. According to the theory of effective protection, tariff escalation would ensure higher effective protection to the processed products than what is indicated by the nominal rates.[12] Thus, the widely noted escalation of trade barriers eminently proves the point that commercial policy regimes of developed countries restrict mobility of underdeveloped countries from raw materials to processed products.[13]

The above restriction on mobility from raw materials to processed goods, in our opinion, would at a general level amount to restriction on mobility from sectors facing declining to dynamic demand conditions. There are many reasons why economists, especially those belonging to the structuralist school, consider mobility from raw materials to processed goods desirable. For one, it is expected to increase the potential for employment of the productive forces. Another important reason emanates from the movement of prices. Raw materials are supposed to be characterised by high short-run price fluctuations as well as long run deterioration in the terms of trade (Sarkar 1983:2-28). Interestingly, the short-run fluctuations in prices as well as the long-term deterioration in the terms of trade are related to the specificities of the demand that the commodities face.

It is widely maintained that raw materials in general face relatively low price and income elasticities of demand (Marquez and McNeilly 1988). Commodities facing low income elasticity of demand, it is only logical to expect, would tend to get marginalised in the international division of labour. In other words, they are likely to face unfavourable demand conditions. For a recent study on raw materials demand, and causes for its decline, see UNCTAD (1994b). Thus, the empirical evidence on escalation of trade barriers

tend to support our contention that trade barriers restrict mobility from sectors facing declining to dynamic demand conditions.

Table 6.3.1: Tariff escalation across processing chains

Processing Chain	Processing Stage	GSP Tariff rate (per cent) (Advalorem or equivalent advalorem)		
		USA	EEC	JAPAN
Vegetables	Fresh	5.6	11.4	5.0
	Prepared	6.2	11.8	13.0
Fruits	Fresh	5.2	10.6	12.1
	Prepared	9.0	20.3	22.2
Meat	Bovine	4.5	-	25.0
	Sheep & Goat	1.4	-	0.0
	Pig	0.4	0.0	2.9
	Meat, salted	0.5	18.7	9.4
	Meat, prepared	0.8	17.0	15.9
Coffee	Raw	0.0	6.3	0.0
	Roasted, ground	0.0	10.3	13.3
	Extracts, preparations	0.0	12.3	20.7
Tea	In bulk	0.0	0.0	8.5
	For retail	0.0	0.0	18.0
	Extracts, preparations	0.0	6.5	22.0
Cocoa	Beans	0.0	3.0	0.0
	Paste	0.0	11.0	7.5
	Butter	0.0	12.0	0.0
	Powder	0.0	16.0	15.0
	Chocolate	0.9	8.5	22.3
Spices	Unground, Unprocessed	0.2	3.0	0.5
	Ground, processed	1.0	3.6	0.0
Plaiting materials	Raw	1.4	0.0	4.0
	Plaits	0.5	0.0	0.7
	Basket work	3.2	0.0	0.0
Oil seeds	Oil Seeds	3.1	0.2	1.6
	Vegetable oils	2.7	8.7	6.3
	Fatty acids	3.5	1.3	1.1
	Margarine	4.7	16.3	20.6
Tobacco	Unmanufactured	52.1	16.1	0.0
	Manufactured	98.1	50.9	8.4
Tropical Fruits	Fresh, dried	7.0	4.1	5.7
	Preserved	8.2	20.9	36.4
	Prepared, Juices	0.0	20.5	22.5

Processing Chain	Processing Stage	GSP Tariff rate (per cent) (Advalorem or equivalent advalorem)		
		USA	EEC	JAPAN
Tropical nuts	Unshelled, crude	0.0	0.0	0.0
	Shelled, prepared	6.5	8.8	16.7
Wood	In the rough	0.0	0.1	0.0
	Simply worked	0.0	0.0	0.6
	Veneres, plywood	1.1	0.0	3.1
	Wood articles	1.3	0.0	0.0
Fish	Unprocessed	0.2	9.2	6.5
	Semi & processed	3.1	12.0	8.5
Forestry	Raw Materials	0.0	0.2	0.0
	Semi-manufactured	1.4	0.0	2.0
	Finished products	0.9	0.0	0.0
Metals	Raw	0.3	0.0	0.0
	Unwrought	2.1	1.8	0.2
	Wrought	0.0	0.0	0.0
	Finished	0.2	0.0	0.0
Energy	Raw	0.0	0.0	1.4
	Semi-manufactured	0.3	0.9	0.0
	Finished	1.0	0.0	2.2
Hides and skins	Raw materials	0.0	0.0	0.0
	Leather	1.0	1.0	8.5
	Articles	7.6	0.0	7.6
Paper & paper board	Semi manufactured	0,0	0.0	0.0
	Finished products	0.0	0.0	0.0
Iron and Steel	Raw	0.0	0.0	0.0
	Semi-manufactured	5.0	0.2	0.0
	Finished	0.7	0.0	0.0
Textiles	Raw materials	2.3	0.0	0.0
	Slightly processed	5.6	3.4	0.0
	Yarns	9.1	9.2	0.0
	Fabrics	12.3	17.2	0.0
	Made-up articles	13.7	22.3	0.0

Source:UNCTAD (1993): Market opportunities (Trade Measures, Implications of Regional Integration Arrangement) Report of the Secretariat TD/B/WG.4/7. September 23.

Mobility barriers to dynamic sectors

Mobility from raw materials to processed goods constitutes only one among many possible dimensions of mobility of capital across sectors. Moreover, mobility from raw materials to processed goods *per se* would not be the basic goal of the capitalist, who in the ultimate analysis organise production. Mobility of capital, as capitalists are driven by the profit motive, is more likely to be determined by relative profitability of sectors. Incidentally, there is no guarantee that production of processed goods would always ensure higher returns compared to that of raw materials. Take for instance, a range of processed goods which are derived from the same raw material base. All of them need not be facing favourable demand conditions. Some of them might even face very adverse demand conditions as well as lower rates of profit. In short, the specificities of demand (e.g. income elasticity of demand) faced by the processed goods might even be worse than that faced by the raw materials.

Therefore, it would not be advisable to confine our analysis to mobility across processing chains. It is in this context that we propose to examine more specifically mobility from sectors facing stagnating or declining demand conditions to dynamic demand conditions. The latter dimension of mobility, we hope, would more closely represent mobility from sectors with lower to higher rates of return and accumulation.

Table 6.3.2, which combines data on trade barriers and the pattern of changes in world demand, would help us address the question posed above. However, before interpreting the figures, it would be useful to add two important caveats. Ideally, the analysis should be undertaken at a more disaggregate level, for the pattern of demand as well as the level of trade barriers differ from one tariff line to another. For instance, tariff lines facing dynamic as well as declining demand conditions would be clubbed together in many aggregate categories. Another important limitation crops up from the distortive effect of trade barriers. Note that our endeavour is to prove that sectors, which are characterised by higher levels of trade barriers, also face dynamic demand conditions. Unfortunately, high trade barriers themselves would tend to dampen world trade in such product lines.

To begin with, it is clear that sectors facing very low tariff and non-tariff barriers, such as Oil seeds and nuts, Agricultural raw materials, Ores and metals, Non-ferrous metals and Fuels face rather unfavourable demand conditions. All the above sectors have registered significant decline in their share in world trade between 1976 and 1986. Therefore, in such sectors, which tend to decline in relative importance, the

underdeveloped countries appear to be free and most welcome to enter and specialise. But as data on India's exports show, she has been successfully trying to move out of the historically given pattern of specialisation. Note that the share of the cited sectors, except in the case of fuels, have declined in India's exports.

Table 6.3.2: Mobility barriers to dynamic sectors

(per cent)

SITC	Product Coverage	Trade Barriers		World Demand (Share in world exports)		India's Specialisation (Share in India's global exports)	
		Tariff	NTB Coverage (1989)	1976	1986	1976-77	1986-87
0+1+22+4	All food items	6.0	30.0	12.97	10.92	29.78	24.37
0	Food and live animals	6.1	32.5	10.68	8.95	25.36	22.35
22	Oil seeds/ nuts	0.4	3.4	0.66	0.44	1.39	0.26
4	Animal/Veg. Oils	5.0	4.0	0.59	0.44	1.02	0.26
2 (less 22+27+28)	Agri. Raw- materials	0.5	7.0	4.12	3.25	3.71	3.51
27+28+67+68	Ores and Metals	1.0	15.9	9.06	7.07	18.25	6.43
67	Iron and Steel	3.1	50.8	4.48	3.42	7.76	0.45
68	Non-ferrous metals	1.1	6.6	2.21	1.90	3.85	0.20
3	Fuels	0.7	10.2	19.46	11.28	0.64	3.36
5	Chemicals	3.7	12.3	6.45	8.24	2.28	3.53
6 to 8 less 67+68	Manuf. other than chemicals	7.7	28.4	46.34	56.37	45.12	58.51
61	Leather	3.1	13.4	0.35	0.42	5.15	5.89
65	Textile Yarn & Fabrics	8.2	64.6	3.26	3.10	14.20	11.32
84	Clothing	17.2	77.1	1.90	2.76	6.50	11.31
85	Footwear	11.7	19.6	0.57	0.72	0.59	0.65
0 to 9 less 3	All Items excluding fuels	-	26.1	80.54	88.72	99.36	96.64
0 to 9	All Items	3.0	21.1	100.00	100.00	100.00	100.00

Source: For trade barriers, Tables 6.3 2 and 6.2.7. For data on trade Appendix Tables A.5.4 to A.5.6

Notably, exactly the opposite is the story of Manufactures other than chemicals which accounted for around 60 per cent of world exports in 1986. As products facing dynamic demand conditions they have also encountered higher than average tariffs and NTB coverage. Clothing and Footwear also exhibit more or less the same pattern as the general category Manufactures less chemicals. It is contextual here to note that the above sectors have registered significant increase in their share in India's global exports. Thus, in sectors endowed with dynamic demand conditions, the underdeveloped countries face more barriers and hence, are not that welcome to enter and specialise.

However, we hasten to add that the situation may not be the same for all product lines with favourable demand conditions. As mentioned earlier, there could be many dynamic areas, where developed countries do not need any protection from the exports of the underdeveloped countries. For, there are other entry barriers like capital requirements, technology, intellectual property rights, etc. A break-up of Manufactures less chemicals would have helped us identify some such areas. For instance, data on barriers and world trade pertaining to different sub-divisions of SITC-7 would have been more instructive. Chemicals, for which we have information, probably is a good example for such sectors, where low level of trade barriers and dynamic demand conditions coexist. Incidentally, the chemical industry is also known for the non-commercial policy barriers to entry. The recent controversy on the possible adverse effects of the intellectual property rights system of the WTO on Indian pharmaceutical industry is pertinent to be cited here (Patel 1992, Sen 1992, Dhar and Rao 1992).

Finally, it should be reported that some sectors and sub-divisions like All food items, Food and live animals, Animal, Vegetable oils, Iron and steel and Textile yarn and fabrics do not conform to the expected pattern. In such areas, underdeveloped countries are subjected to high tariff or NTBs despite the fact that they face unfavourable demand conditions.[14] One possible reason for the observed behaviour could be the dampening effect of barriers on trade. In other words, but for the barriers, the trade would have grown faster than the rate at which it had actually grown. This, however, does not explain why producers in developed countries continue to operate in such areas facing declining demand conditions where we expect very low rates of return to persist. The answer probably lies in the high dose of subsidies in such sectors which effectively means transfer of income from other sectors of the economy to such declining areas.[15] The private rate of return in such sectors would be maintained at reasonably higher levels through such transfer of income from the rest of the economy.

The fact that high level of barriers and declining demand conditions coexist in some areas does not disprove our general observation that the underdeveloped countries encounter more barriers in areas where they face dynamic demand conditions. The above cases may be considered as exceptions to the general rule. In Table 6.3.3 we have more evidence at the disaggregate level to validate our argument.

The data presented in Table 6.3.3 are based on the results of the UNCTAD trade policy simulation model. The Table presents the top 50 4-digit CCCN (Customs Cooperation Council Nomenclature) items (out of a total of 1,100 such items) where developing countries would benefit from MFN (non-preferential)

liberalisation of tariff and non-tariff distortions in the EEC. Intuitively, the projected gains from liberalisation can be taken as a rough measure of restrictiveness of trade barriers. Thus viewed, the listed items are the most affected/protected areas in the EEC. Now, if we establish that the highly protected items listed have also registered relatively high growth rates in world trade, it would prove beyond doubt that trade barriers bunch together against sectors facing dynamic demand conditions. But, obviously, it is a difficult task to undertake. For, as the potential trade gains show, the restrictions have actually had a significant dampening effect on the relevant trade flows. However, surprising though it may sound, available evidence suggests that the highly restricted items had registered relatively higher growth than the world trade in general.

Column 7 in Table 6.3.3 gives SITC 3-digit groups to which the listed CCCN items belong. Changes in the relative share of SITC groups in world exports presented in columns 8 and 9 are assumed to broadly reflect the same for the corresponding CCCN items. However, it requires to be cautioned that SITC 3-digit groups are broader categories than the CCCN items.

As is clear from the Table, SITC groups representing 30 out of 50 CCCN items listed had improved their share in world exports between 1976 and 1986. Thus, majority of the highly restricted items appear to have grown faster than the world exports in general. Naturally, but for the restrictions, growth in such items would have been much faster. Further, as the projected rate of increase show, many more items among those which witnessed a decline in their share in world trade would have improved their position had they not been affected by the barriers. Therefore, it would not be wrong to conclude that trade barriers in the EEC bunch together against areas of high actual or potential growth in world demand.

Now let us see whether the above proposition hold good for the mobility areas in India's exports to the EEC, which as we argued in the previous Chapter play a crucial role in India's endeavour to be structurally mobile. To recapitulate, we included in mobility areas those dynamic product groups in India's exports which also face favourable external demand conditions. The mobility areas thus identified were, Shell fish, fresh frozen (SITC 036), Spices (075), Leather manufactures (612) Textile Yarn (651), Nitrogen function compounds (514), Synthetic dye natural indigo, lakes (531), Aircraft and associated equipment (792), Travel goods, hand bags (831), Women's outerwear nonknit (843), Under garments nonknit (844), outerwear knit nonelastic (845), Undergarments Knitted (846), Headgear, non textile clothing (848), Footwear (851) and Gold, Silverware, Jewellery (897).

6.3.3: Products showing Greatest Potential for Liberalisation in Favour of Developing Countries (MFN Liberalisation of Tariffs and NTBs - The EEC Case)

Sl. No.	CCN	Abbreviated Description	Projected increase		Share in projected increase	SITC	Share in World Exports	
			$ '000	Per cent			1976	1986
1	0201	Meat and edible offal	141254	28.1	1.56	011	0.89	0.84
2	1602	Meat Offal prepd/psvd.	93617	39.8	1.03	014	0.17	0.12
3	0303	Crustaceans, molluscs	35700	13.2	0.39	036	0.25	0.35
4	1604	Fish, prepared/psvd.	67714	31.0	0.75	037	0.15	0.19
5	1006	Rice	43512	39.0	0.48	042	0.23	0.14
6	2002	Vegetable, prepared	28521	28.3	0.31	056	0.22	0.15
7	0801	Dates, Bananas, Coconuts, etc.	66533	7.6	0.73	057	0.66	0.74
8	2007	Fruit juices	131083	40.4	1.44	058	0.22	0.27
9	2006	Fruit otherwise prepd/psvd.	69053	38.8	0.76	058	0.22	0.27
10	1703	Molasses	111279	69.3	1.23	061	1.02	0.53
11	1701	Sugar cane + beet solid	312302	68.3	3.44	061	1.02	0.53
12	2102	Coffee/tea extracts, other preps.	51639	44.6	0.57	071	1.00	0.87
13	0901	Coffee and Substitutes	187306	6.2	2.06	071	1.00	0.87
14	2302	Bran/cereal and veg substitutes	74399	40.9	0.82	081	0.64	0.60
15	2304	Oil cake, oil-extracted residues	840947	40.9	9.26	081	0.64	0.60
16	5305	Sheep/lambs wool, animal hair	29327	41.9	0.32	268	0.35	0.22
17	2710	Petroleum/shale oils not crude	457919	6.2	5.04	334	3.90	2.84
18	2711	Petroleum gases	36763	2.0	0.40	341	0.73	1.27
19	1507	Veg. Oils, fixed	416316	46.3	4.58	424	0.20	0.12
20	3907	Artificial resin, plastic article	30532	23.3	0.34	585	0.04	0.05
21	5505	Cotton Yarn (not retail)	102955	52.0	1.13	651	0.94	0.85
22	5509	Fabrics of Cotton, other woven	213741	42.0	2.35	652	0.49	0.44
23	5607	Fabrics, woven of man-made fabric	64109	41.0	0.71	653	0.62	0.63
24	6202	Linen (bed/toilet/table) curtains	74040	42.3	0.82	658	0.21	0.22
25	5801	Carpets, carpeting, rugs	159127	43.2	1.75	659	0.28	0.26
26	7302	Ferro-alloys	125823	53.4	1.39	671	0.31	0.22
27	7308	Iron/Steel Coils	26418	53.9	0.29	672	0.43	0.44
28	7313	Iron/Steel Sheets/Plates	34847	54.6	0.38	674	1.32	1.08
29	7338	Domestic builders sanitary ware	28553	42.9	0.31	697	0.20	0.19
30	8515	Radio/TV/Comm. Equipment	101256	15.2	1.11	761	0.41	0.35
31	9211	Gramophone, Sound recorders	43741	47.5	0.48	763	0.25	0.75
32	8702	Motor Vehicles (cars, buses)	41415	9.9	0.46	781	3.58	5.75
33	9401	Chairs, seats, etc.	113509	103.2	1.25	821	0.51	0.72
34	9403	Furniture, other and parts	184393	104.5	2.03	821	0.51	0.72
35	4202	Travel goods (suitcases, bags)	34008	12.5	0.37	831	0.13	0.17
36	6101	Male outer garments	678874	75.6	7.47	842	0.37	0.47
37	6102	Female and infant outer garments	427366	75.0	15.72	843	0.42	0.75
38	6104	Female and infant under garments	48460	129.7	0.53	844	0.15	0.18
39	6103	Male under garments	434642	95.6	4.79	844	0.15	0.18
40	6005	Outer garments (knit, non-elastic)	717481	89.8	7.90	845	0.48	0.69
41	6004	Under garments (knit, non-elastic)	412838	94.1	4.55	846	0.19	0.28
42	6109	Corsets, belts, brassiers etc.	81860	123.2	0.90	846	0.19	0.28
43	6002	Gloves, mittens (non-elastic)	45908	90.2	0.51	847	0.10	0.12
44	6003	Stockings, socks (knit, non-elastic)	70301	93.7	0.77	847	0.10	0.12
45	4203	Apparel/accessories of leather	63964	17.5	0.70	848	0.19	0.27
46	6402	Foot wear, outers of leather	264987	66.8	2.92	851	0.57	0.72
47	6401	Foot wear, outs of rubber/plastic	38130	74.7	0.42	851	0.57	0.72
48	6405	Footwear, parts (uppers/insoles/ heels)	40921	56.4	0.45	851	0.57	0.72
49	9706	Sports appliances, accessories	26162	62.2	0.29	894	0.41	0.51
50	9703	Toys, other and working models	156810	67.1	1.73	894	0.41	0.51
		Total	9082352	32.6	100.00		28.60	30.87

Source: Computations based on UNCTAD (1988:55) Protectionism and Structural Adjustment, TD/B/196/Add.1, Thirty-Second Session, Official Records, Annexes, New York: United Nations.

From Table 6.3.2, it is clear that majority of the mobility areas (SITCs, 036, 075, 651, 831, 843, 844, 845, 846, 848, 851 and 897) belong to sectors or their subdivisions facing higher than average tariff or NTB coverage. Further, as Table 6.3.3 shows nine out of fifteen mobility areas (SITCs 036, 651, 831, 843, 844, 845, 846, 848, 851) belong to the most restricted groups in the EEC with high potential for gains from liberalisation. Interestingly, the nine groups which appear in the list of restricted items in the EEC accounted for about 41 per cent of the total projected gains from liberalisation (Column 6, Tab. 6.3.3). It would be useful here to note the overwhelming importance of clothing (SITC 84) in the list of most restricted items in the EEC. Clothing alone accounted for around 44 per cent of the projected trade gains. It is needless to say that clothing is one of the most dynamic areas in India's bilateral as well as global exports. Incidentally, female and infant outer garments (SITC 843) is the topmost group in the list of restricted items in terms of projected gains from liberalisation. It alone accounted for around 16 per cent of the total trade gains projected. What a coincidence! SITC 843 is also the most important dynamic product group in India's exports to the EEC. In 1986-87, it accounted for nearly 11 per cent of India's exports to the EEC. Further, between 1976-77 and 1986-87, it gained more than 5 percentage points in its share in India's bilateral exports.

Mobility areas identified in India's global exports were Shell fish, fresh, frozen (SITC 036), Fruits, nuts, fresh, dried (057), Spices (075), Tobacco manufactured (122), Stone, sand and gravel (273), Leather manufactures (612), Medical pharm products (541), Perfumery, cosmetics, etc. (553), Other machinery for special industries (728), Metal working machine tools (736), Office and data processing equipments and parts thereof (759). Travel goods (831), Women's outerwear nonknit (843), Under garments nonknit (844), outerwear knit nonelastic (845), Undergarments Knitted (846), Headgear, non textile clothing (848), Works of art, etc. (896), and Gold, Silverware, Jewellery (897).

Here again, in terms of aggregate data presented in Table 6.3.2, more than half of the mobility areas belong to sectors or their subdivisions (for e.g. SITCs 0, 1, 83 and 84) which face higher than average tariffs or NTB coverage. Further, significantly large number of the mobility areas appear in the list of highly restricted products in the EEC, Japan, and USA.[16] Mobility areas like 036, 057, 612, 831, 843, 844, 845, 846 and 848 deserve special mention for they appear in all the three lists of most restricted items with very high potential for gains from liberalisation. Thus, what we clearly see is an intersection between the set of mobility areas in India's exports and the set of most restricted items in developed countries.

Section IV
Structural rigidity and unequal exchange

Our endeavour in the previous Section has been to substantiate empirically the proposition that trade policy regimes of developed countries constrain the process of structural mobility of underdeveloped countries. In this Section, we put forward empirical evidence in support of the proposition that restrictions on structural mobility (structural rigidity) can cause unequal exchange.

The empirical exercise undertaken here, it needs to be underlined, is only a follow up of the theoretical arguments presented in Chapter 3. To recapitulate, it has been argued that restrictions on structural mobility (structural rigidity) would lead to unequal exchange unfavourable to the countries, whose structural mobility is constrained. Unequal exchange, as defined in the present study, is the outcome of the process by which the structure of production gets adjusted to the changes in the structure of demand. Sustained changes in the structure of demand would require sympathetic changes in the distribution and accumulation of capital across sectors. Sectors to which the structure of demand is favourably shifting is likely to receive prices higher than the respective prices of production and rates of profit higher than the average rate of profit. The opposite will be true of sectors facing unfavourable shifts in the structure of demand. We characterise areas being phased out of circulation to be disadvantageous, not so much because of the nature of demand, but for the reason that such areas are likely to be over-crowded by producers (capital) who find it difficult to move out.

The operation of the law of value and the process by which the production sphere is reoriented to the shifts in social needs has certain distinct features at the international level. At the national level the burden of unequal exchange falls directly on those who are caught up in areas facing unfavourable demand conditions. But the burden of international unequal exchange is often shifted, due to the intervention of the state, from capitals operating in the export sector to the rest of the economy, by offering direct or indirect subsidies, exemptions from labour welfare legislations, tax concessions as also by resorting to frequent devaluation of the currency. It is for these reasons that we expected unequal exchange to get reflected in lower wages and lower prices of non-tradables in underdeveloped countries.

Admittedly, both unequal exchange and structural rigidity are complex theoretical categories to be represented by simple statistical indicators. However, there is no way out but to use indicators that most

closely approximate the theoretical categories. Ideally, we should have taken deviations of market prices from the respective prices of production to study the pattern of unequal exchange. But, it is nearly impossible to generate a data set to represent the prices of production. However, since we expect unequal exchange to get reflected in lower wages, explicit and implicit subsidies to the exporters, and lower prices of non-tradables, they may be made use of as indirect indicators of unequal exchange.

In Chapter 3, we have referred to some such pieces of evidence of unequal exchange drawn from the Indian context, viz., huge subsidies given to exporters (Nayyar 1987), poor working conditions, lower wages, and persistence of lower forms of capitalist production in export industries (Kannan 1983, Isaac 1984, Isaac et.al 1992:49, Tiwari 1987, Krishnaswami 1989, Cawthorne 1993), real depreciation of the currency and switching of prices in favour of tradables to promote exports, etc. That many important export industries of underdeveloped countries are characterised by very low wages and inhuman working conditions is further substantiated by the recent complaints to the effect made by the industrial nations in ILO, WTO and other international organisations. Another important piece of evidence is the deterioration of the factoral terms of trade of underdeveloped countries (Sarkar and Singer 1991).

Why is it that the export industries in underdeveloped countries, which caters to the world's rich, require to be subsidised and tend to offer wages below their own national standards, not to speak of the level of wages in developed countries? There are at least two sets of factors which question the conventional practice of blaming primary commodities for such symptoms of unequal exchange. First, over the last few decades, developing countries have successfully diversified their exports and started exporting manufactures in a big way. Second, even the manufactured exports from underdeveloped countries are observed to suffer from most of the symptoms of unequal exchange including deterioration in the factoral terms of trade (Sarkar and Singer 1991). Is it then because of the lack of technological sophistication of exports from developing countries? The technology based argument also does not provide a satisfactory answer to the question posed. Technological sophistication of the product *per se* is no guarantee for favourable demand conditions or remunerative prices. There are as many or more instances of manufactured products as primary commodities which tend to get phased out of international circulation. Similarly, there are many instances of technologically sophisticated products proving to be non-starters in the international market. Conversely, there are also products using comparatively simple technologies but experiencing favourable demand conditions and fetching attractive prices for their producers. This could very well be due to intensive advertising and other sales promotion strategies or more subtle factors like

cultural hegemony which generate a fascination for western life styles and the products originating from such sources.

Our endeavour here, however, is not to undermine the importance of policy initiatives in underdeveloped counties to move on to manufactures and technologically superior products. In fact, as we shall try to explain in the concluding Chapter, such policy initiatives could very well form a part of a larger strategy for overcoming the problem of unequal exchange. Rather, our attempt has been to underline the importance of a more general explanation to the phenomenon of unequal exchange. It is in this context that we tried to develop an argument based on the prices of production framework, which accords due emphasis to both changes in the structure of demand and mobility of capital. Products characterised by unfavourable shifts in the structure of demand as well as crowding of capital would tend to suffer from unequal exchange. Similarly, products facing favourable shifts in demand and excess demand conditions, which arise more often than not due to entry barriers of various type (including trade barriers), would tend to benefit from the process of unequal exchange. The entry barriers and the consequent distortion of the conditions of 'perfect competition', it needs to be reiterated, are not inconsistent with the prices of production framework (Clifton 1977, Shaikh 1978, Weeks 1981, Semmler 1982).

In what follows, we shall try to provide more empirical evidence in support of the theoretically postulated relationship between structural rigidity and unequal exchange. Following Sau (1993), we use the difference between market exchange rate and purchasing power parity (PPP) exchange rate of national currencies as an indicator of unequal exchange.[17] It may be noted that the definition of unequal exchange in Sau (1993) differs significantly from what we have attempted in the present study. The justification for using the above indicator is that we expect the unequal exchange to get reflected in lower prices of non-tradables and relatively lower wage rates in underdeveloped countries. This is so for the simple reason that the burden of international unequal exchange in the export sector would invariably be transferred to the workers and the sectors producing non-tradables. Such transfer is possible, as non-tradable goods and services are not sold and bought in the international market. Incidentally, international difference in the prices of non-tradable goods and services is one of the most important reasons for the widely observed systematic difference between market exchange rate and purchasing power parity rates of individual countries.[18]

The above indicator is known to suffer from some other important limitations as well which should not be overlooked. We shall return to the above limitations later in the Chapter and explain why the results of the present exercise need to be interpreted with caution.

The United Nations International Comparison Programme (ICP) periodically estimates PPP exchange rates. Using the ICP data the World Bank (eg. 1994) publishes estimates of GNP per capita for selected countries both in terms of market exchange rate (**e**) and PPP exchange rate (**e***). We have used the World Bank data to derive the ratio between market exchange rate and PPP exchange rate of different national currencies (**e*/e**). The following index may be used as an indirect indicator of the degree of unequal exchange (UE):

$$UE = 1 - e^*/e$$

Coming to structural mobility, we view the same as the process by which countries adapt their pattern of specialisation to the changes in the structure of world demand. Thus viewed, the proportion of sunset areas (i.e., products facing declining world demand) in a country's exports would have served as an ideal indicator of structural rigidity. However, considering data problems, we desisted the temptation to construct the above index.[19] Instead, we used the familiar export concentration/ diversification index for capturing structural rigidity.[20] Concentration indices are directly available from UNCTAD (1993a: 241-244) publications.

Admittedly, the concentration index is not the first-best proxy for structural mobility/rigidity. However, it would serve as a rough indicator of structural rigidity: A country with a highly concentrated export structure is likely to be less adaptive than a country with a diversified export basket. This, however, is not to rule out exceptions. For instance, a country may have a highly concentrated export structure, but her export concentration may be in areas facing dynamic world demand conditions! Our results, therefore, should be interpreted with caution.

Data on export concentration (structural rigidity) and the degree of unequal exchange for an illustrative sample of countries are presented in Table 6.4.1. A more detailed data set is available in the appendix (Table A.6.3). As column 3 of the Table shows, for most underdeveloped countries the PPP exchange rate is lower than the market exchange rate, whereas the opposite is true of the developed nations. The same pattern may be seen reflected in the behaviour of the index of unequal exchange. The positive values of

the index pertaining to the underdeveloped countries show that they suffer from unfavourable unequal exchange. The developed nations on the other hand, as is clear from the negative values of the indicator, tend to benefit from the process of unequal exchange. In other words, unequal exchange between nations is favourable to the developed countries.

Further, Table 6.4.1 clearly brings out the positive association between structural rigidity and unequal exchange. While countries characterised by rigid export structure suffer from unequal exchange, those with diversified export specialisation tend to gain from the same process of unequal exchange. This relationship between structural rigidity (constrained mobility) and unequal exchange may be postulated as follows; the higher the degree of structural rigidity of a country, the higher the degree unequal exchange

Table 6.4.1: Structural rigidity and unequal exchange - 1992

Sl. No.	Country	Structural Rigidity (SR)	Ratio of PPP Exch. Rate to Mkt. Rate (e*/e)	Degree of Unequal Exchange (1-e*/e) UE
1	Sierra Leone	0.954	0.208	0.792
2	Chad	0.951	0.31	0.69
3	Uganda	0.948	0.159	0.841
4	Ethiopia	0.934	0.324	0.676
5	Malawi	0.926	0.288	0.712
6	Bangladesh	0.899	0.179	0.821
7	Nepal	0.871	0.155	0.845
8	Tanzania	0.832	0.175	0.825
9	India	0.62	0.256	0.744
10	Switzerland	0.521	1.633	-0.633
11	Japan	0.438	1.398	-0.398
12	Sweden	0.395	1.534	-0.534
13	Belgium	0.381	1.15	-0.15
14	Germany	0.265	1.117	-0.117
15	France	0.256	1.159	-0.159

Note: The data set for the larger sample of 89 countries is presented in the Appendix Table. A.6.3.

Source: Structural rigidity (Concentration indices) are from UNCTAD, Handbook of Trade and Development Statistics (1993a:241- 248). Ratios of PPP exchange rates to market rates have been computed from World Bank, World Development Report 1994:162-164 and 222-234.

to which it is subjected to. The relationship postulated above may be further verified by estimating OLS regression of the following type.

$$UE = a + b\,SR + e$$

where UE represents the degree of unequal exchange while SR stands for the structural rigidity.

The relationship can be examined using either time-series data pertaining to a given nation or cross-Section data for a sample of nations. But, we have estimated the equation using cross-Section data for the year 1992 for two alternative samples of countries. The first sample comprises of 89 countries, i.e., all the countries for which data on export concentration and PPP exchange rate are available from the respective sources. The second sample excludes oil producers and South Africa. The excluded countries are characterised by relatively high export concentration. But in the case of these countries, export concentration need not signify structural rigidity, for they are known to specialise in commodities like oil and gold! Therefore, the second sample is expected to improve the association between the degree of unequal exchange and the structural rigidity in terms of magnitude.

Table 6.4.2: Empirical Validation of Unequal Exchange

Independent Variables	Sample I	Sample II
Constant	-0.629 (6.36)*	-0.653 (6.39)*
Structural Rigidity (SR)	1.497 (11.23)*	1.535 (10.93)*
N	89	79
R-bar^2	0.587	0.603
SEE	0.249	0.254
F-Stat	126.00	119.38

Note: * refers to significance at 5 per cent level.
Sample II is net of Oil Producers and South Africa.

Estimation results presented in Table 6.4.2 are self-explanatory. Both the samples clearly bring out the positive relationship between the degree of unequal exchange and the structural rigidity. Further, the degree of association is seen to improve when we remove the exceptional group of countries from the sample I. It is also true in the case of the explanatory power of the structural rigidity variable in the unequal exchange equation (see the improved value of R-bar^2 in Table 6.4.2). Given the large sample of countries, the relatively high value of R-bar^2 itself lends empirical support to the proposition that structural rigidity, ie., restrictions on structural mobility, leads to unequal exchange. It does not, however, imply that structural rigidity is the only factor governing unequal exchange.

Notwithstanding the fairly clear relationship emerging, we wish to reiterate the limitations of the above exercise and caution against ambitious interpretations. Undervaluation of currencies is too complex a problem to be satisfactorily unravelled by monocausal explanations. The direction of causation assumed in the above exercise is fairly clear. We expect the countries specialising in sun-set areas to suffer from unequal exchange: with the export industries of such countries receiving prices lower than the prices of production and rates of profit lower than the general rate. As a result, the state would be forced to intervene and shift the burden of unequal exchange to the rest of the economy, by resorting to various measures including devaluation of the currency, to avoid exit of capital from export industries as also to check the consequent marginalisation of the country in the international division of labour. Incidentally, all these measures adopted for shifting the burden, especially subsidies, tax concessions, etc., which also signify unequal exchange, need not always get reflected in the difference between market and purchasing power parity exchange rates.

Another limitation of the indicator used originates from the factors other than trade which influence determination of exchange rates. For instance, as Sau (1993) argues, if the role of foreign exchange as an asset is brought in, it would demand a major change in the present (Casselian) approach to purchasing power parity rates. According to him, "should assets be included along with currently produced goods and services, it is likely that the extended **e*** for a developing economy would be higher than its Casselian value".

Another problem is related to the use of exchange rate as a policy tool. Relative autonomy that the states enjoy with respect to determination of exchange rates, and the fact that the specific ways in which states respond to the pressures of international market, would differ between countries, cannot be overlooked.

To illustrate the point further, a country, in spite of its specialisation in sun-rise areas and the attendant advantages that it enjoys on the trade front, may opt for undervaluation of the currency to boost its international competitiveness. Similarly, there could be instances of countries specialising in sun-set areas and suffering consequent disadvantages on the trade front, but stubbornly resisting the pressures to devalue the national currency.

The above limitations demand a cautious approach while interpreting the results. More importantly, they underline the need for a careful consideration of country specific factors, before applying the general conclusions to individual countries. The limitations of the indicator used, however, do not rule out the significance of the observed relationship between structural rigidity and undervaluation of exchange rates. It would be difficult to explain the systematic pattern that emerges from the experience of 89 odd countries and the regression analysis simply in terms voluntary policy choices. The inability to be structurally mobile and the consequent disadvantages on the trade front continues to be one of the important reasons why countries of the third world maintain undervalued exchange rates. In fact, even the problems originating from the use of foreign exchange as an asset are not totally unrelated to the dynamics and problems on the trade account. While recognising country specific factors and relative autonomy of exchange rate policy regimes, it is important that we do not overlook the limits imposed by the international division of labour. If not, we would also be falling pray to the conventional social science and historiographical practice which suffer from 'centrality of state'. A more realistic position in the context of our theoretical framework would be to take the policies and options of the nation\state actors as conditioned to a large extent by the reality of the capitalist world system.

Finally, the question as whether undervalued exchange rate, lower wages, poor working conditions, etc., would not under certain conditions help such countries to promote exports and accelerate overall GDP growth emerges. Such strategies to sell more at lower prices should be seen in the context of other objectives and the success of the country in achieving such goals. One such objective could be to convert the short-run disadvantage to long-run gain: the country can use the enhanced foreign exchange earnings to redefine its role in the international division of labour (move into new and dynamic areas) and escape conditions that lead to unequal exchange. As we have tried to make clear in Chapter 3, the situation of unequal exchange is not at all irreversible. Unequal exchange, as we define it, is the product of disadvantageous specialisation. Individual nations can successfully plan policies to redefine their role in the international division of labour, move on to dynamic areas, and thus escape from the problem of

unequal exchange. In doing so they can also make use of the advantage of lower wages, lower prices of non-tradables and undervalued exchange rates. In fact, underdeveloped countries do make such efforts. Our endeavour in the present study has been to focus on factors (especially trade barriers) which constrain such efforts of underdeveloped countries to be structurally mobile.

Even though undervaluation of exchange rate, persistence of poor working conditions, lower wages, survival of lower forms of capitalist production in export industries, etc., may prove to be advantageous under certain conditions, they are not ideal objectives that the underdeveloped countries generally seek or should be striving to achieve. In our analytical framework what they generally signify is unfavourable specialisation and unequal exchange. As long as such countries fail to move out of the over-crowded product lines which are being phased out of circulation, the 'strategy' of competitive devaluation, lower wages, etc., would benefit only the buyers. This, unfortunately, appears have been the case of most underdeveloped countries included in our sample of countries.

Conclusions

For the EEC, one of the most important and fast growing component of the global market, India is one among the least preferred sources of imports. India, like other GSP beneficiaries, is discriminated against all but purely MFN sources. The claim that the GSP beneficiaries are preferred to the purely MFN suppliers is also contentious. As shown in Section II, NTBs in developed countries including the EEC, affect the developing countries more than the trade among developed countries. Admittedly, the trade weighted applied tariff on developing countries' exports to developed nations, including the EEC, is lower than the average MFN rate. But this conclusion need not be true in the case of all developing countries, particularly, in the case of countries like India which appear to specialise more in high tariff areas. A firm conclusion, however, presupposes country-specific estimates of average tariffs payable, which we have not been able to undertake for India.

The low level of average MFN tariff rate in developed countries, in any case, should not make one complacent to the question of tariff protection. The height of tariffs as well as the incidence of NTBs vary considerably across tariff lines. Significantly enough, majority of tariff lines with high tariff and high NTB

incidence are of special interest to developing countries. In other words, high tariffs and NTBs tend to persist more in areas of interest to developing nations where they enjoy proven comparative advantage.

The observation that India is one among the least preferred sources of imports of the EEC means that she is one among the least preferred sources in the world market as well. We argue so not only because of the overwhelming and growing importance of the EEC in the network of world trade but also for the similarities between trade policy regimes of developed countries. Added to this is the similarities in the structure of trade barriers in developed countries which tend to discriminate against products of interest to developing countries.

It is true that there are large number of product lines in which India and other GSP beneficiaries enjoy free or equal access in the EEC market. It would mean that India is free to take part in the division of labour. However, it needs to be reiterated that the freedom of specialisation (i.e., freedom of choice of the area of involvement) is constrained. India is generally free to specialise in raw materials and products facing declining/stagnating demand conditions, which tend to decline in relative importance in the international division of labour. As she moves from raw materials to processed goods, and from products facing declining to dynamic demand conditions, trade barriers tend to escalate. Underdeveloped countries in general face more discrimination in those areas of their specialisation where they face dynamic external demand conditions. In short, the pattern of trade barriers in developed countries is such that it tends to restrict structural mobility of underdeveloped nations.

Our empirical estimates in Section IV bring out a strong positive association between structural rigidity and the degree of unequal exchange. The limitations of the empirical exercise, it needs to be underlined, calls for a cautious interpretation of the results. The limitations of the empirical enquiry, however, does not preclude us from making the following observations. Trade policy regimes of developed nations offer systematic resistance to the process of structural mobility of underdeveloped countries, and also thereby renders the sphere of global division of labour and trade a realm of unequal exchange.

Notes

1. The practice of designing tariff classifications so detailed as to discriminate against specific supplying countries is widely known. One widely cited illustrative case is the German effort to allow special treatment for Switzerland without violating MFN obligations to countries exporting cattle from lower altitudes. The product specification was, " Large dapple mountain cattle or brown cattle reared at a spot at least 300 metres above sea level and having at least one month's grazing each year at a spot at least 800 metres above sea level" (Pomfret 1988:18)

2. This theoretical possibility is not far removed from reality. For, many individual GSP rates (in different GSP schemes) are higher than the average MFN tariff rates charged by the respective GSP donors (Weston 1981). For instance, many articles of apparel, manufactured tobacco, honey, etc. encounter very high GSP rates in the EEC. Naturally, countries specialising more in such areas would end up paying higher duty per unit of their exports to the EEC as compared to the overall average MFN duty of the EEC.

3. The EEC's MFN rate, however, should be interpreted more cautiously. For individual member countries, the MFN rate would not reflect the degree of protection to domestic producers vis-a-vis all foreigners, because they are not applicable to fellow Community members.

4. For classifying imports form GSP beneficiaries into imports eligible and not eligible for GSP benefits, we have used the proportion given in the Trade Policy Review of the EEC undertaken by the GATT Secretariat (GATT 1993:35).

5. The EEA (European Economic Area) Agreement between the EEC and the EFTA would further improve the free trade relations between the two regional arrangements. The EEA agreement aims to create a "homogenous European Economic Area" embracing the following elements: (i) the free movement of goods, persons, services and capital; (ii) the establishment of a system of competition rules that prevents market distortions; (iii) closer cooperation in areas such as research and development, the environment and social policy.(GATT 1993:29-39).

6. Association agreements have been signed in Dec. 1991 between the EEC on the one hand and the Czech Republic, Slovakia, Hungary and Poland on the other hand (The Europe Agreements). The agreements aim at providing for the progressive establishment of free trade area between the parties. Similar agreements have been negotiated with Bulgaria and Rumania (GATT 1993:40-43).

7. One can list any number of products covered by the Community's GSP scheme wherein MFN sources offer no competition. For instance, in the case of Frog legs, fresh, chilled or frozen (CCCN Tariff line 0204.9200 CI) the share of GSP beneficiaries in the EEC market is 99 per cent. In order to give a more important example, in the case of blouses and shirt blouses for women, girls and infants of silk (CCCN 6102.7600) the developing countries which enjoyed GSP concessions supplied nearly 95 per cent of the EEC market in 1985 (GATT 1989).

8. In the case of European Union, a priori limitations apply to most of the products included in the scheme. "Under the EEC Scheme, in 1992, 179 items including agricultural and MFA textiles have been affected by the fixed duty free amounts (FDFA) or other tariff quotas and the MFN rates reestablished vis-a-vis the beneficiaries affected up to the end of the year" (Devenport 1994:16).

9. For revealed comparative advantage indices, see Tables 5.1.9 and 5.1.10 in Chapter 5.

10. NTBs are amenable to tariffication. Such an exercise may be feasible in individual cases, not for a study of their distribution which needs to take into account non-tariff measures on all trade flows.

11. For instance, we have left out trade flows where India do not figure among the first five suppliers. Many such trade flows left out, regardless of India's market share in the specific item, might be of significant weightage in India's aggregate exports to the EEC.

12. It is widely noted that ad-valorem tariffs increase or escalate with the level of fabrication. According to Yeats (1979:95-100) even the effective rates tend to escalate as one moves from raw materials to processed products.

13. Yeats (1979:87) gives an instructive numerical illustration to show how even seemingly low nominal tariffs extends very high effective protection to the processing chain and thereby hamper the development of processing industries in the underdeveloped countries. "Consider for example a tariff of only 5 per cent on the importation of cocoa paste or butter. If value-added for these products is 5 per cent, the process is protected by an effective rate of 100 per cent. This means that producers in the developing country can spend less than half the amount on labour and capital as producers in the developed country if they are to be competitive"

14. The observation need not be true of all product lines belonging to the cited areas. Many 3-digit groups under the above heads are known to have faced dynamic world demand conditions and improved their share in global trade. Shell fish, fresh, frozen (SITC 036) and Fruits, nuts, fresh, dried (057), which appear among mobility areas in India's exports are good examples.

15. For instance, the EEC has a massive subsidisation programme to support domestic production and export competition of its agricultural sector (Pearce 1981). According to the GATT (1993:129) secretariat's review of the Community's trade policy, "Average net percentage PSEs (Producer Subsidy Equivalents) for the sector as a whole of close to 50 per cent in 1990 and 1991 indicate that about one half of EC's farm revenue results from policy intervention, either through border restrictions or by financial assistance". Beef and veal, milk, poultry, pig meat, oil seeds, sugar, coarse grains, wheat, etc., are important ones among highly subsidised sectors in the EEC (GATT 1993:130)

16. UNCTAD (1988:55-59) gives simulation results of MFN trade liberalisation for Japan and USA as well. More details, especially on methodology and data base, on the UNCTAD trade policy simulation model are available from Laird and Yeats (1986).

17. The purchasing power parity (PPP) is defined as the number of units of a country's currency required to buy the same amount of goods and services in the domestic market as one dollar would buy in the United States. Market rate, on the other hand, is the value of U.S dollar in terms of the national currency that prevails in the world market.

18. It may be cautioned that deviations between market exchange rates and the PPP exchange rates cannot be attributed exclusively to the differences in the prices of non-tradable goods and services (Rogoff 1995, Sau 1993).

19. It may be noted that for constructing such an index one need to undertake a disaggregate level (at least at the 3-digit level) analysis of the export structure of the sample of countries. Such an exercise is not feasible for our study, for our exercise requires a fairly large sample of countries.

20. The proxy for structural rigidity (concentration index) is computed using the following method.

$$SR = \left(\sum_{I=1}^{n} |hij - hi|\right)/2$$

Where hij is the share of each 3-digit commodity 'I' in total exports of country 'j', while 'hi' is the share of commodity 'I' in world exports. The index of structural rigidity (export concentration) ranges between zero and 1, with the latter indicating the most extreme concentration/structural rigidity.

Chapter 7
SUMMARY AND CONCLUSIONS

The process of globalisation of economic activities has now reached such a state that it in many ways justifies the claim that "the global village" has at last emerged. True, the world economy of our times resembles that of a village, at least with respect to the high degree of division of labour among its constituents. The intensity of the division of labour is such that individual countries, regions and even sectors, have become highly dependent on the rest of the world system. The consequent interdependence of national economies gives some legitimacy to the euphoria of the global village, but it should not make us overlook the fact that high degree of social division of labour can co-exist with stringent restrictions on the freedom of choice of the area of specialisation of individual participants. Therefore, two questions remain crucial in the context of the ongoing process of globalisation. How free are the participants of the international division of labour, especially the underdeveloped countries, to choose and change their pattern of specialisation? What are the implications of the restrictions, if any, on their freedom to choose and change the pattern of specialisation? The present study has made an attempt to seek answers to the above questions. In what follows, we bring together our theoretical arguments and empirical findings as the conclusion of the study.

The freedom of the choice of the area of specialisation, especially the freedom to change the pattern of specialisation, assumes great import when considered against the dynamic nature of the global division of labour. The world economy is characterised by frequent shifts in the structure of demand and trade. It is also not unusual to see many areas/lines of specialisation getting phased out of the international circulation. Therefore, it becomes imperative on the part of individual countries to be mobile structurally, ie., to adapt their pattern of specialisation to the changes in the structure of world demand. In this context an intriguing question emerges as to whether or not the trade policy regimes of developed countries constrain structural mobility of underdeveloped countries? This question is examined by *a priori* formulation and empirical verification, of the hypothesis that among different plausible lines of specialisation of underdeveloped countries, they face more trade restrictions in areas that are characterised by dynamic world demand conditions, that is to say, in their mobility areas.

The review of the literature (chapter 2) reveals that the mainstream theories of trade and protection are generally indifferent to the question of structural mobility. They define the gains from trade as well as the

cost of protection independently of the pattern of trade. The literature on commercial policy hardly recognises the possibility that the structure of trade barriers, that the exports of an underdeveloped country encounters, can constrain its efforts to be structurally mobile. The only exception, perhaps, is the group of studies on the effective rate of protection, which, however, takes care of only one among the many dimensions of mobility, viz., mobility across processing chains.

The inability of the mainstream approaches, leaving technology gap theories aside, to take into account the structure of trade barriers and the dimensions of structural mobility, can be traced to the underlying theory of international trade and prices. The existing theories of trade and protection do not take into account international mobility of capital. More importantly, they use neo-classical market structure models which approach competition essentially as an intra-industry phenomenon. What is being ignored in the process is inter-sectoral mobility of capital and labour across countries, which happens to be one of the crucial aspects of competition we highlight in the present study.

The assumption of 'international immobility' of capital and the consequent reluctance to extend the classical labour theory of value to the international context are of crucial importance. For, the 'immobility of capital' rules out formation of 'prices of production' or 'natural prices' at the international level which would have facilitated an objective evaluation of international prices. Thus, within the framework of existing theories, there is no objective basis to examine whether a line of specialisation or a pattern of specialisation is advantageous or not? The theory, therefore, can neither discriminate among the different areas of specialisation, nor be sensitive to the question of mobility across such lines of specialisation. Instead, the conventional theories have been pre-occupied with the task of proving the superiority of free trade over autarky.

We argue that the superiority of free trade in its trivial sense of it being preferable to autarky, is obvious in today's world of growing interdependence of countries and hence, not the right question to be posed. What is needed is a comparison of different lines of specialisation within the division of labour. In other words, the theory should be able to facilitate an objective/social evaluation of international prices so that it would be able to discriminate among different lines of specialisation and hence, would also be able to be sensitive to the question of mobility. This would be possible only if we drop the assumption of immobility of capital, and recognise the process of internationalisation of capital and production that the world has witnessed over the past several decades.

We take the position (Chapter 3) that the integration of the world economy since the days of the classical political economy, and the consequent strengthening of the different dimensions of mobility of capital, that activate the tendency for the rates of profit to equalise, provide the justification for the extension of the classical labour theory of value to the international context. Also, we suggest that the alternative approach to the study of protection has to be based on an extension of the Marxian prices of production framework to the international context. The alternative framework recognises structural mobility as an inevitable attribute of international competition and competitiveness of countries.

The logic of the alternative theoretical framework runs as follows. The shifts in the structure of world demand would require sympathetic restructuring at the level of production. Re-orientation of production presupposes reallocation of capital - capital being the prime-mover of the elements of production - among competing lines of production. Clearly, such reallocation of the productive forces would not be possible in a system, which unfailingly ensures equal rate of return on capital in all the sectors. The mismatch between structures of production and demand would lead to, what we call, structural unequal exchange. Sectors with buoyant demand conditions would tend to receive market prices higher than the respective prices of production, and *vice versa*. More importantly, sectors adversely affected by the changes in the structure of demand are likely to suffer from the problem of lower than the general rate of profit.

The structural unequal exchange and the inter-sectoral differences in rates of profit would disappear as soon as the structure of production is reoriented to suit the newly established pattern of demand. Inter-sectoral differences in rates of profit, wages, etc., would facilitate the needed reallocation of the elements of production. However, sooner or later another cycle of dislocation and adjustment would begin. The course of capitalist development cannot be separated from the above process of recurring dislocation and adjustment.

The process of structural unequal exchange - the process by which the society reorients its production to the changes in the pattern of its needs - is more direct and apparent at the national level. The fact that the world economy is structured into nation-states, makes the process more complex and less visible at the international context. In the national division of labour, the burden of structural unequal exchange falls directly on those, who are caught up in the areas facing unfavourable demand conditions. The burden of international unequal exchange is often shifted, due to the intervention of the state, from the capitals operating in the export sector to the rest of the economy, especially to the sectors producing non-tradeables

and workers. Thus, the unequal exchange would tend to get reflected in lower and declining prices of non-tradable and lower wages in the underdeveloped country, whose structural mobility is restricted. The strategy of shifting the burden from tradables to non-tradables, however, does not save the country from the process of structural unequal exchange. The country would continue to suffer from unfavourable unequal exchange as long as it is bogged down by unfavourable specialisation.

The alternative approach clearly suggests that the effects of individual trade barriers cannot be studied in isolation. It is important to see how individual trade barriers, and for that matter the structure of trade barriers that the country encounters, affect her efforts to be structurally mobile. Trade policy measures, which restrict structural mobility of countries, can cause unequal exchange of values among nations.

The proposition that trade policy measures of developed countries offer systematic resistance to the structural mobility of their underdeveloped counterparts finds empirical support in the concrete context of India's exports to the EEC (Chapters 4-6). The analysis of the two-way trade between India and the EEC, in terms of trade intensity indices, suggests that there is ample scope for improvement in the mutual orientation of their trade (Chapter 4). As of now, the bilateral partners are miserably under-represented in each others' market. However, the gap in bilateral trade orientation is found to be more acute with respect to India's exports to the Community (Community imports from India). Thus, India's exports to the Community (Community imports from India) represent the weakest link in India-EEC trade relations.

Logically, factors which influence trade in general, i.e. regardless of directions, cannot be employed to explain the dynamics of the orientation of the same in particular directions. Therefore, we put forth two plausible explanations, viz. (1) the import policy bias of the Community and (2) the incompatibility between the structures of the EEC demand and India's exports, to explain the poor orientation of India's exports to the EEC and the consequent inadequate orientation of the Community imports from India. The analyses of India's efforts to be structurally mobile and the EEC's trade policy regime eminently support the proposed explanations.

The interface between changes in the composition of external demand and changes in the structure of exports is an important determinant of export performance. This is apparent from the analysis of the determinants of India's exports. The regression estimates have shown that there is a positive relationship between the level of external demand and India's exports, but there is a strong negative relationship

between changes in the composition of external demand and India's exports. The inference is then drawn to the effect that the structural change in external demand has not been very conducive for India's exports. Apparently, India has not been able to adapt her pattern of specialisation to the changes in the structure of external demand.

Thus, the weakness of the mainstream theoretical approach, which ignores inter-sectoral mobility of participants from the purview of competition and competitiveness, gets exposed at the empirical level as well. This, however, is not to underrate the significance of other factors that influence competitiveness. For instance, empirical findings lend support to the view that India's exports are responsive to the price advantages rendered through real depreciation of the currency. But, competitiveness is not just the ability to produce and sell cheap in given areas of specialisation; it also encompasses the capability to adapt the areas of specialisation to the dynamic changes in demand.

Thus viewed, an important question comes up. Has India been able to adapt her specialisation to the changes in external demand? Or has it been the case that India tended to specialise more and more in areas that face stagnant or declining external demand conditions? In terms of broad aggregates, Indian exports present a very promising picture of structural transformation from non-manufactures to manufactures in general and from traditional manufactures to non-traditional manufactures in particular (Chapter 5). The desegregated level analysis, however, brings out an unwelcome crowding together of exports into a narrow range of products, comprising mainly of Clothing, Textiles, Pearls, Precious and semi-precious stones, Floor coverings, and Leather manufactures. The concentration indices computed for India's global as well as bilateral exports give evidence of export concentration. Clearly, India has been specialising increasingly in a narrow range of products, notwithstanding its diversified industrial base.

The observed dependence of India's exports on a narrow range of products is a matter of grave concern. For, it has made India's exports highly prone to protectionist policies. We argue so because dynamic product groups around which India's exports tend to cluster together happen to be high import penetration areas in developed markets, including the EEC. It needs to be noted, however, that the areas of export concentration in India's export basket are not the ones where she lacks 'comparative advantage'. The analysis in terms of revealed comparative advantage (RCA indices) shows that the patterns of changes in the commodity composition of exports have broadly followed the signals of 'comparative advantage'.

Nevertheless, the structural backwardness of India's exports gets reflected in the comparison of structural change in India's exports with the same in world exports/EEC imports. India's export basket is dominated by sunset areas, i.e., areas which tend to get marginalised in the net-work of world trade. For instance, the declining groups (sunset groups) accounted for 51 per cent in India's exports to the EEC in 1986-87 as against 33 per cent in the EEC imports. Similarly, declining groups accounted for 52 per cent in India's global exports in 1986-87 as against 37 per cent in world trade. Further, fast growing areas of world trade/EEC imports are very poorly represented in India's export basket. While 'the most dynamic groups' claimed 24 per cent of the EEC imports, their share in India's exports to the Community was only 2 per cent. Likewise, 'the most dynamic groups' accounted for only 12 per cent in India's global exports in 1986-87 as against 34 per cent in world trade.

Notwithstanding the continued dominance of sunset areas, and the adverse specialisation that it implies, some measure of structural dynamism is still left in India's export basket. This is evident from the decline- though inadequate when compared to the pace with which the structure of world/EEC demand has been changing- in the proportion of areas facing declining demand conditions. However, the mobility areas in India's exports, ie., product lines responsible for the observed structural dynamism, are characterised by high import penetration in developed markets and hence, are also vulnerable to protectionist policies.

In regard to the protectionist policies (trade barriers) of the developed countries, especially the EEC, two important characteristics are worth emphasising (Chapter 6). First, India and other GSP beneficiaries are among the least preferred sources of imports of the EEC. As far as tariffs are concerned, India, like other GSP beneficiaries, is discriminated against all but the 'purely MFN sources'. Incidentally, the 'purely MFN sources' contributes only around 20 per cent of the EEC imports. Admittedly, the trade weighted applied tariff on developing countries' exports to the developed nations, including the EEC, is lower than the average MFN rate. But this concession is not of much use in the case of a developing country like India, which specialises more in high tariff areas like Textiles, Clothing and Footwear. Coming to the NTBs, there is clear evidence to prove the discriminatory bias against underdeveloped countries. The NTB incidence on imports from underdeveloped countries *vis-a-vis* those from their developed country competitors is significantly higher.

Second, the pattern of trade barriers in developed countries, including the EEC, is such that it offers systematic resistance to the structural mobility of underdeveloped countries. India is generally free to

specialise in raw materials and in products facing declining/stagnating demand conditions. As she moves from raw materials to processed goods, and from products facing declining to dynamic demand conditions, trade barriers, both tariff and non-tariff measures, tend to escalate. Underdeveloped countries in general face more discrimination in those areas of their specialisation where they face dynamic external demand conditions.

What are the consequences of the protectionist policies of the developed countries that constrain the structural mobility of the underdeveloped countries? The theoretically postulated relationship between structural rigidity and unequal exchange, we believe can stand on its own. The empirical verification of the above relationship between unequal exchange (using the difference between market exchange rate and purchasing power parity exchange rate as an indirect indicator) and structural rigidity (measured by the export concentration indices) brings out a strong positive association between structural rigidity and the degree of unequal exchange. However, the limitations of the empirical exercise, especially of the unequal exchange indicator, must be kept in mind while interpreting the results. It requires detailed examination of country specific factors before applying the generally observed relationships to individual countries.

It is important here that we mention some of the important limitations of the study. The present study was narrowly focussed on the question of trade barriers in industrial countries that restrict structural mobility of countries in the international division of labour. The scope of the study was too narrowly defined to be able to address the larger question of development or underdevelopment of nations. A country's involvement in the international division of labour, and the nature of gains and losses it entails, cannot be taken as the sole determinants of its development dynamics. The development experience of erstwhile Soviet Union and other socialist countries would amply prove the above point. Their experience, notwithstanding the crisis encountered by most of them later, proved the plausibility of an alternative course of development, which is known to have been less dependent on international trade. There are many forces and factors, not necessarily related to trade, including those beyond the realm of pure economics, that need to be considered while attempting a general explanation of underdevelopment. In fact, even the unfavourable specialisation that leads to unequal exchange cannot be explained independently of the larger phenomenon of underdevelopment. Therefore, the insights that the present study provide for unravelling the larger question of underdevelopment, admittedly is rather limited. Our idea has not been to provide a competing explanation of underdevelopment. On the contrary, our attempt has just been to

highlight the role of trade in general and trade barriers in particular, in reproducing and perpetuating the conditions of underdevelopment.

The same limitation of the study, it may be noted, has a bearing on the policy insights that it provides. The policy makers would require a more general framework and understanding of factors that block development of the country to be able to arrive at a comprehensive strategy of development. This, however, is not to suggest that the study does not have any policy implications. Our conclusions, that the ability to adapt the pattern of specialisation to the changes in the structure of external demand is an unavoidable aspect of successful international competition and that trade barriers in developed countries offer systematic resistance to such efforts of underdeveloped countries to be structurally mobile, certainly merit the attention of policy makers. However, even though the study successfully highlight the importance of the ability of countries to periodically redefine their role in the international division of labour according to the changes in the structure of demand, it does not throw much light on the factors that determine a country's ability to be structurally mobile.

As we have explained in the introductory Chapter, a variety of factors can be seen to influence an underdeveloped country's ability to be structurally mobile. Among them, our focus has been almost exclusively on trade barriers in developed countries. The trade barriers in developed countries are not evenly distributed across tariff lines. On the contrary, the distribution of trade barriers in developed countries is seen to have a pattern which is undeniably hostile to the efforts of underdeveloped countries to be structurally mobile in the international division of labour. We decided to focus on trade barriers for the simple reason that it has been a relatively neglected aspect of the problem. This, however, was not meant to underrate the significance of other factors that determine the role of partner countries in the international division of labour. Admittedly, policy makers cannot afford to focus exclusively on trade barriers as we did in the present study.

Even though we have not been able to focus on factors other than trade barriers, certain insights that the study provide, especially those emanating from the theoretical Chapters, are important from the point of view of policy. The mobility of countries from areas being phased out of circulation to products facing dynamic demand conditions constitutes only one among the important dimensions of mobility of participants in the international division of labour.

The importance of other dimensions of mobility of participants, viz., from raw materials to processed products, from low skill/ low technology areas to high technology/ skill intensive products, etc., can hardly be exaggerated. In fact, the ability to adapt the pattern of specialisation to the changes in the structure of demand would also depend on the latter two dimensions of mobility. Viewed in the above sense, structural mobility would generally require policy measures designed to promote mobility from raw materials to value added products, as well as to technology intensive or skill intensive areas of specialisation. From the point of view of achieving structural mobility, it may be also important that the country try to get into sectors characterised by large internal and external economies.

Admittedly, many of the mobility areas identified in India's exports in the present study are 'labour intensive, low technology, low skill' products, which do not satisfy the conditions set by strategic trade theories or the evolutionary approach for favourable interventionist policies. But, this only shows the weakness of India's specialisation in the global division of labour. Majority of industries belonging to fast growing areas of world trade could be classified as skill or technology intensive areas with large internal and or external economies. It is unfortunate that India, given the present pattern of specialisation, does not enjoy a significant presence in such areas. In fact, the analytical framework used in the present study, would favour efforts of the country to move on to such areas of international specialisation.

In conclusion, we make the following generalisations. There is no guarantee whatsoever that all lines of specialisation in the international division of labour would be equally rewarding. The lines of specialisation, which tend to get phased out of the international circulation, are likely to suffer from unfavourable unequal exchange. Naturally, countries which specialise more in such areas are also likely to suffer in the process. The structural unequal exchange is the normal outcome of the process by which the production sphere gets adjusted to the changes in the structure of social demand. Therefore, structural mobility is an indispensable attribute of the international competitiveness of countries. However, in their efforts to be structurally mobile, the underdeveloped countries encounter many hurdles operating both within and outside their economies. Among the external hurdles the major ones are the tariff and non-tariff barriers that their exports encounter in developed markets. We conclude that the trade policy regimes of developed nations offer systematic resistance to the process of structural mobility of underdeveloped countries, and also thereby render the sphere of global division of labour and trade a realm of unequal exchange.

STATISTICAL APPENDIX

Table A.5.1: India's Exports to the EEC : Important Product Groups among Non-Manufactures

Sl. No.	Group Code	Product Description	Share in India's Exports to EEC		Share in EEC imports		Revealed Comparative Advantage Index	
			1978-79	1986-87	1978	1986	1978-79	1986-87
1	011	Meat fresh, chilled, frozen	0.49	0.06	1.56	1.25	0.31	0.05
2	036	Shell fish fresh, frozen	0.78	2.35	0.11	0.22	6.86	10.74
3	042	Rice	0.17	0.52	0.12	0.09	1.36	6.03
4	054	Veg. etc. fresh, simply prsvd	0.28	0.09	0.75	0.77	0.37	0.11
5	056	Vegetables etc. prepd	0.20	0.25	0.27	0.22	0.73	1.13
6	057	Fruits, nuts, fresh dried	0.98	2.89	1.12	0.96	0.87	3.02
7	061	Sugar and Honey	0.79	0.00	0.34	0.27	2.29	0.00
8	071	Coffee and Substitutes	1.30	1.92	1.09	0.98	1.20	1.95
9	074	Tea dnd mate	7.27	5.18	0.11	0.08	63.62	68.05
10	075	Spices	0.62	1.02	0.05	0.05	13.75	20.33
11	081	Feeding Stuff for animals	4.94	0.56	1.01	0.91	4.87	0.62
12	121	Tobacco Unmanufactured, refuse	3.84	1.64	0.41	0.28	9.34	5.90
13	263	Cotton	0.07	0.68	0.30	0.19	0.24	3.53
14	273	Stone, sand and gravel	0.21	0.81	0.12	0.11	1.77	7.56
15	278	Other Crude minerals	0.22	0.22	0.31	0.25	0.72	0.89
16	281	Iron Ore, concentrates	0.09	0.77	0.49	0.38	0.19	2.04
17	291	Crude animal materials nes...	0.49	0.31	0.15	0.12	3.19	2.50
18	292	Crude Veg. materials nes...	2.22	1.80	0.48	0.50	4.59	3.58
19	424	Fixed Veg. oil non soft	0.24	0.45	0.22	0.13	1.09	3.33
20	681	Silver, platinum, etc.	4.66	0.00	0.26	0.23	17.90	0.00

Notes : Important product groups are defined as those which had a share in Indian exports to the EEC of at least 0.2 per cent in either 1978-79 or 1986-87. Revealed Comparative advantage indices (RCA) are calculated using the formula RCA = $(X^i a/X^i t)/(M^e a/M^e t)$ where subscript `a' refers to any specific commodity, subscript `t' refers to all traded commodities and subscripts `i' and `e' stand for India and the EEC. X and M represent exports and imports respectively.

Sources : Data on India's exports are from Statistics of the Foreign Trade of India. Vol.I, Exports and Re-Exports, DGCI&S, Calcutta, various issues. EEC import data are from UN Yearbook of International Trade Statistics, Vol.II, relevant issues.

Table A.5.2: India's Exports to the EEC : Important Product Groups among Traditional Manufactures

Sl. No.	Group Code	Product Description	Share in India's Exports to EEC		Share in EEC Imports		Revealed Comparative Advantage Index	
			1978-79	1986-87	1978	1986	1978-79	1986-87
1	611	Leather	10.01	8.27	0.30	0.33	33.448	24.779
2	612	Leather etc. manufactures	0.56	3.07	0.06	0.08	10.098	37.389
3	651	Textile yarn	0.87	2.61	1.02	1.06	0.849	2.471
4	652	Cotton fabrics, woven	5.10	3.96	0.58	0.51	8.814	7.787
5	653	Fabrics, woven man-made fabrics	0.66	0.27	0.62	0.58	1.058	0.469
6	654	Oth.woven textile fabric	1.28	2.25	0.24	0.22	5.281	10.315
7	658	Textile articles nes	2.52	1.40	0.24	0.24	10.599	5.849
8	659	Floor coverings, etc.	4.44	5.79	0.49	0.34	9.088	16.784

Notes and Sources : Same as in Table A.5.1

Table A.5.3: Indian Exports to the EEC : Important Product Groups among Non-Traditional Manufactures

Sl. No.	Group Code	Product Description	Share in India's Exports to EEC		Share in EEC Imports		Revealed Comparative Advantage Index	
			1978-79	1986-87	1978	1986	1978-79	1986-87
1	514	Nitrogen fnctn compounds	0.04	0.47	0.37	0.55	0.116	0.840
2	523	Other inorg. chemicals etc.	0.11	0.21	0.26	0.28	0.412	0.772
3	531	Synthetic dye, natural indigo,lakes	0.28	1.12	0.18	0.21	1.522	5.456
4	541	Medical, Pharm products	1.41	1.02	0.80	1.03	1.764	0.988
5	551	Essential oils, perfumes, etc.	0.08	0.24	0.11	0.12	0.699	2.119
6	667	Pearls, prec-semi-p stones	19.22	13.23	1.95	0.92	9.866	14.381
7	695	Tools	0.92	0.76	0.36	0.37	2.536	2.022
8	697	Base metal household equp.	0.46	0.17	0.24	0.21	1.887	0.813
9	699	Base metal mfrs nes...	0.34	0.48	0.63	0.68	0.543	0.712
10	713	Intrnl Combas pstn engin.	0.69	0.45	0.74	0.87	0.929	0.516
11	736	Metalworking mach. tools	0.20	0.20	0.46	0.56	0.434	0.361
12	784	Motor Veh. parts, access. nes...	0.14	0.20	1.98	2.25	0.071	0.088
13	785	Cycles, etc. motorized or not	0.19	0.23	0.27	0.21	0.704	1.098
14	792	Air craft and equipment, parts	0.00	0.20	1.04	1.16	0.000	0.171
15	793	Ships and boats, etc.	0.35	0.00	0.88	0.27	0.397	0.000
16	831	Travel goods, handbags,	0.48	1.35	0.16	0.18	3.000	7.489
17	842	Mens Outerwear not knit	0.83	0.84	0.60	0.63	1.392	1.316
18	843	Womens Outwerwear not knit	4.48	10.15	0.71	0.82	6.277	12.339
19	844	Under garments not knit	4.92	5.17	0.19	0.18	25.401	27.977
20	845	Outerwear knit non elastic	0.12	1.22	0.65	0.82	0.191	1.498
21	846	Under garments knitted	0.38	1.21	0.31	0.36	1.198	3.386
22	847	Textile clothing access nes..	0.64	0.36	0.14	0.16	4.698	2.295
23	848	Headgear, nontxtl clothing	0.69	2.27	0.32	0.31	2.170	7.419
24	851	Footwear	0.47	1.45	0.71	0.83	0.668	1.741
25	894	Toys, sporting goods, etc.	0.65	0.39	0.48	0.50	1.366	0.783
26	896	Works of art, etc.	2.42	2.16	0.19	0.22	12.540	9.699
27	897	Gold, silver ware, Jewellery	0.17	0.51	0.15	0.20	1.102	2.513

Notes and Sources : Same as in Table A.5.1

Table A.5.4: India's Global Exports : Important Items among Non-Manufactures

Sl. No.	Group Code	Product Description	Share in India's Exports		Share in World Exports		Revealed Comparative Advantage Index	
			1976-77	1986-87	1976	1986	1976-77	1986-87
1	011	Meat fresh, chilled, frozen	0.41	0.60	0.89	0.84	0.459	0.716
2	034	Fish, fresh, chilled, frozen	0.09	0.25	0.27	0.40	0.344	0.637
3	036	Shell fish fresh, frozen	3.34	3.94	0.25	0.35	13.588	11.208
4	041	Wheat etc. unmilled	0.01	0.29	1.01	0.59	0.007	0.489
5	042	Rice	0.12	1.59	0.23	0.14	0.519	11.556
6	054	Veg etc. fresh, smply prsvd	0.60	0.64	0.48	0.44	1.256	1.439
7	057	Frshits, nuts, fresh, dried	2.29	3.07	0.66	0.74	3.488	4.151
8	058	Fruit preserved, prepared	0.18	0.34	0.22	0.27	0.808	1.264
9	061	Sugar and honey	2.93	0.01	1.02	0.53	2.869	0.025
10	071	Coffee and substitutes	2.46	2.39	1.00	0.87	2.456	2.757
11	074	Tea and Mate	5.72	4.65	0.11	0.08	51.461	59.879
12	075	Spices	1.46	2.21	0.07	0.07	22.106	30.331
13	081	Feeding Stuff for animals	5.23	1.82	0.64	0.60	8.198	3.039
14	121	Tobacco unmnfetrd, refuse	1.89	1.17	0.29	0.21	6.496	5.658
15	122	Tobacco manufactured	0.11	0.32	0.19	0.26	0.571	1.215
16	222	Seeds for soft fixed oil	1.31	0.20	0.61	0.42	2.159	0.469
17	247	Other wood rough, Squared	0.33	0.00	0.38	0.24	0.878	0.009
18	263	Cotton	0.76	1.68	0.48	0.22	1.573	7.833
19	273	Stone, sand, gravel	0.17	0.58	0.07	0.08	2.563	7.084
20	278	Other crude minerals	0.65	0.28	0.28	0.21	2.315	1.301
21	281	Iron Ore, concentrates	4.65	4.40	0.56	0.37	8.253	11.834
22	287	Base metal ores, conc. nes.	0.97	0.51	0.82	0.48	1.177	1.069
23	291	Crude animal mtrials, nes.	0.46	0.33	0.08	0.08	5.609	4.077
24	292	Crude Veg. Mtrials nes	1.68	1.41	0.29	0.36	5.693	3.917
25	322	Coal, lignite and peat	0.27	0.05	0.68	0.62	0.389	0.074
26	334	Petroleum products, refin	0.36	3.31	3.90	2.84	0.093	1.166
27	424	Fixed Veg. oil nonsoft	0.94	0.23	0.20	0.12	4.644	1.928
28	681	Siver. Platinum, etc.	3.33	0.02	0.20	0.18	17.029	0.111
29	684	Aluminium	0.48	0.12	0.58	0.80	0.825	0.154

Notes: Important product groups are defined as those which had a share in India's global exports EEC of at least 0.2 per cent in either 1976-77 or 1986-87. Revealed Comparative advantage (RCA) = $(X^i a/X^i t)/(M^w a/M^w t)$ where subscript `a' refers to any specific commodity, subscript `t' refers to all traded commodities and subscripts `i' and `w' stand for India and world respectively.

Sources : Data on India's exports are from Monthly Statistics of the Foreign Trade of India. Vol.I, Exports and Re-Exports, (MSFTI), DGCI&S, Calcutta, various issues. Data on world exports from UN Yearbook of International Trade Statistics, Vol.II, various issues.

Table A.5.5: India's Global Exports : Important Product Groups among Traditional Manufactures

Sl. No.	Group Code	Product Description	Share in India's Exports		Share in World Exports		Revealed Comparative Advantage Index	
			1976-77	1986-87	1976	1986	1976-77	1986-87
1	611	Leather	4.81	3.76	0.23	0.27	20.605	13.304
2	612	Leather etc. manufactures	0.18	2.13	0.05	0.08	3.879	28.158
3	651	Textile yarn	1.08	1.12	0.94	0.84	1.142	1.337
4	652	Cotton fabrics, woven	5.41	3.55	0.49	0.44	10.999	7.997
5	653	Fabrics, woven man-made fabrics	0.57	0.24	0.62	0.63	0.923	0.386
6	654	Oth.woven textile fabric	2.64	1.61	0.20	0.21	13.059	7.525
7	658	Textile articles nes	2.48	1.83	0.21	0.22	11.798	8.465
8	659	Floor coverings, etc.	1.70	2.86	0.28	0.26	6.025	11.066

Notes and Sources : Same as in Table A.5.4

Table A.5.6: India's Global Exports : Important Product Groups among Non-Traditional Manufactures

Sl. No.	Group Code	Product Description	Share in India's Exports		Share in World Exports		Revealed Comparative Advantage Index	
			1976-77	1986-87	1976	1986	1976-77	1986-87
1	523	Other inorg chemicals etc.	0.21	0.22	0.24	0.26	0.892	0.834
2	531	Synth dye, nat indigo, lakes	0.47	0.31	0.25	0.21	1.838	1.468
3	533	Pigments, panits, etc.	0.17	0.29	0.24	0.33	0.718	0.885
4	541	Medical Pharm products	0.47	1.30	0.80	1.08	0.589	1.199
5	551	Essential oils, perfumes, etc.	0.08	0.21	0.10	0.11	0.779	1.811
6	553	Perfumery, Cosmetics, etc.	0.19	0.39	0.13	0.23	1.449	1.691
7	591	Pesticides, disinfectants	0.03	0.22	0.20	0.28	0.157	0.803
8	625	Rbber tyres, tubes, etc.	0.39	0.48	0.45	0.48	0.869	0.998
9	661	Lime, cement, bldg prods	0.79	0.03	0.22	0.21	3.612	0.144
10	663	Mineral manufacturers nes.	0.23	0.17	0.20	0.25	1.141	0.662
11	667	Pearls, prec-semi-p stones	5.60	16.07	0.84	0.83	6.698	19.466
12	671	Pig iron etc.	1.70	0.01	0.31	0.22	5.521	0.023
13	672	Iron, Steel primary forms	0.79	0.00	0.43	0.44	1.845	0.003
14	673	Iron, Steel shapes, etc.	2.87	0.01	0.90	0.65	3.173	0.016
15	676	Rails and rly track mtrls	0.76	0.01	0.06	0.03	11.999	0.206
16	678	Iron, Steel tubes, pipes etc.	1.51	0.14	1.02	0.69	1.471	0.201
17	679	Iron, Steel castings unwork	0.05	0.20	0.10	0.05	0.474	4.259
18	691	Structures and parts nes.	0.46	0.15	0.47	0.34	0.977	0.426
19	693	Wire products non-electric	0.23	0.07	0.14	0.11	1.597	0.576
20	694	Stl, Copper nails, nuts, etc.	0.37	0.09	0.19	0.18	1.970	0.502
21	695	Tools	0.59	0.38	0.34	0.36	1.724	1.059
22	697	Base metal household equips.	0.35	0.17	0.20	0.19	1.758	0.874
23	699	Base metal mfrs nes.	0.48	0.39	0.59	0.69	0.819	0.573
24	713	Intrnl combs pstn engins	0.63	0.43	0.95	1.08	0.663	0.392
25	724	Textile, leather machinery	0.33	0.46	0.70	0.63	0.475	0.728
26	727	Food machry non-domestic	0.10	0.46	0.71	0.14	0.145	3.235
27	728	Oth machy for spel industries	0.14	0.35	0.43	1.08	0.326	0.325
28	736	Metalworking mach.tools	0.31	0.53	0.64	0.73	0.486	0.730
29	759	Office, data mach pts, acces	0.01	0.36	0.44	1.33	0.025	0.269
30	772	Switchgear etc. parts nes	0.20	0.17	0.64	0.97	0.310	0.175
31	773	Electr distributing equip.	0.43	0.28	0.30	0.35	1.454	0.796
32	775	Household equip. nes	0.24	0.06	0.51	0.61	0.473	0.099
33	778	Electrical machinery etc.	0.36	0.54	0.81	1.06	0.452	0.507
34	783	Road Motor Vehicles nes.	0.27	0.09	0.19	0.15	1.439	0.630
35	784	Motor Veh. prts, access nes	0.56	0.54	2.03	2.70	0.274	0.202
36	785	Cycles, etc. motorized or not	0.51	0.47	0.29	0.26	1.763	1.829
37	791	Railway Vehicles	0.22	0.14	0.19	0.14	1.131	1.024
38	831	Travel goods, hand bags.	0.13	0.57	0.13	0.17	0.938	3.385
39	842	Mens outerwear not knit	2.18	0.45	0.37	0.47	5.861	0.957
40	843	Womens outerwear not knit.	1.30	6.03	0.42	0.75	3.108	8.075
41	844	Under garments not knit	1.71	2.28	0.15	0.18	11.696	12.763
42	845	Outer wear knit, non-elastic	0.50	1.10	0.48	0.69	1.034	1.596
43	846	Under garments knitted	0.28	0.55	0.19	0.28	1.449	1.972
44	847	Textile clothing acces nes.	0.44	0.30	0.10	0.12	4.257	2.294
45	848	Heargear, non-textile clothing	0.09	0.59	0.19	0.27	0.475	2.157
46	851	Footwear	0.59	0.65	0.57	0.72	1.035	0.905
47	893	Articles of plastic nes	0.23	0.07	0.39	0.61	0.574	0.119
48	894	Toys, sporting goods etc.	0.26	0.21	0.41	0.51	0.621	0.407
49	896	Works of art etc.	1.07	1.51	0.14	0.23	7.525	6.465
50	897	Gold, Silver ware, Jewellery	0.23	0.64	0.20	0.42	1.129	1.508

Notes and Sources: Same as in Table A.5.4.

Appendix A.5.7: Structure of India's Exports, 1987-88 to 1990-91

Code	Product description	Share in Exports to EEC (12)			Share in Global Exports	
		1987-88	1988-89	1990-91	1987-88	1990-91
HS 01	Live animals	0.0057	0.0062	0.0010	0.0063	0.0013
HS 02	Meat & edible meat	0.0138	0.0047	0.0015	0.5694	0.4312
HS 03	Fish & crustaceans	2.0762	2.5073	2.9458	3.3535	2.9327
HS 04	Dairy products	0.0060	0.0042	0.0013	0.0262	0.0139
HS 05	Products of animal origin	0.2133	0.2411	0.1862	0.2791	0.2270
HS 06	Live trees, cut flowers	0.0118	0.0349	0.0541	0.0112	0.0243
HS 07	Edible vegetables	0.1553	0.1102	0.1095	0.4788	0.4601
HS 08	Edible fruits & nuts	2.3965	2.3267	1.2924	2.5180	1.6847
HS 09	Tea, Coffee, etc.	5.0206	4.6449	2.8445	7.4198	4.6236
HS 10	Cereals	0.5209	0.6102	0.5482	2.4126	1.5290
HS 11	Malt, starches, etc.	0.0016	0.0013	0.0021	0.0201	0.0032
HS 12	Oil seeds etc.	0.5339	0.4850	0.5491	0.6443	0.8728
HS 13	Lacs, gums etc.	1.2117	1.0247	0.4479	0.9358	0.4246
HS 14	Vegetable plaiting materials	0.0589	0.0635	0.0251	0.1333	0.1042
HS 15	Animal/veg. fats	0.1105	0.0892	0.3828	0.1355	0.2704
HS 16	Meat/fish preparations	0.0040	0.0114	0.0030	0.0044	0.0033
HS 17	Sugar, confectionary	0.1900	0.0898	0.1829	0.0800	0.1195
HS 18	Cocoa	0.0119	0.0147	0.0023	0.0060	0.0095
HS 19	Preparations of cereals	0.1277	0.1151	0.0841	0.0999	0.0676
HS 20	Preparations of vegetables, fruits, nuts	0.0969	0.0952	0.0788	0.1190	0.0917
HS 21	Miscellaneous edible preparations	0.1057	0.0432	0.0461	0.1413	0.1418
HS 22	Beverages,spirits,vineger	0.0019	0.0043	0.0135	0.0109	0.1003
HS 23	Waste food industries	0.0915	0.1954	1.5064	1.3793	1.8813
HS 24	Tobacco	0.7831	0.6682	0.7523	0.8654	0.8128
HS 25	Salt, sulphur, etc.	1.2820	1.3000	1.0029	1.0239	1.0146
HS 26	Slag, ores and ash	0.4971	0.8203	0.7065	3.8790	3.6042
HS 27	Mineral fuels, etc.	0.0005	0.0004	0.0012	4.2102	2.9254
HS 28	Inorganic chemicals	0.2346	0.2883	0.3897	0.2418	0.9479
HS 29	Organic chemicals	0.9031	1.2518	1.6097	0.7769	1.3973
HS 30	Pharma products	1.5139	1.8207	2.3016	1.4545	2.3687
HS 31	Fertilizers	0.0018	0.0004	0.0003	0.0142	0.0007
HS 32	Dyeing,tanning, matter	1.4396	1.3042	1.2335	1.2368	1.3079
HS 33	Essential oils	0.2588	0.2620	0.2127	0.5747	0.8652
HS 34	Soaps, etc.	0.0021	0.0162	0.0327	0.0525	0.4936
HS 35	Albuminoidal substances	0.0199	0.0093	0.0065	0.0093	0.0084
HS 36	Explosives,matches	0.0004	0.0011	0.0001	0.0148	0.0137
HS 37	Photographic goods	0.0786	0.0660	0.0484	0.1249	0.0571
HS 38	Misc. chemical products	0.2660	0.4358	0.6558	0.2033	0.4045
HS 39	Plastics	0.2566	0.3841	0.3234	0.2357	0.4402
HS 40	Rubber and articles	0.1452	0.1406	0.1497	0.5475	0.7670
HS 41	Raw hides and skins	8.2130	6.4524	5.4994	3.8028	2.5053
HS 42	Articles of leather	4.7406	4.9911	7.4901	1.7761	2.8858
HS 43	Furskins & artificial fur	0.0017	0.0011	0.0000	0.0016	0.0017
HS 44	Wood & articles thereof	0.1138	0.0851	0.0412	0.1143	0.0792
HS 45	Cork & articles thereof	0.0014	0.0001	0.0000	0.0014	0.0009
HS 46	Manufacturers of plaiting material	0.0021	0.0011	0.0005	0.0013	0.0004
HS 47	Pulp of wood or other materials	0.0000	0.0000	0.0007	0.0001	0.0003
HS 48	Paper & paper board	0.0140	0.0167	0.0090	0.0444	0.0767
HS 49	Printed books	0.0869	0.0810	0.0539	0.1635	0.1083
HS 50	Silk	1.5736	1.8300	1.1721	0.8231	0.6411
HS 51	Wool	0.0168	0.0631	0.0414	0.0809	0.0394

Code	Product description	Share in Exports to EEC (12)			Share in Global Exports	
		1987-88	1988-89	1990-91	1987-88	1990-91
HS 52	Cotton	10.5055	5.1755	7.3574	7.0190	7.3222
HS 53	Other vegetable fibres	1.2471	1.1035	0.6271	1.1202	0.6339
HS 54	Man-made filaments	0.8686	0.8739	1.3721	0.5974	0.9268
HS 55	Man-made fibres	0.1493	0.4637	0.8297	0.1520	0.4329
HS 56	Wadding, felt, non-woven	0.0123	0.0113	0.0275	0.0274	0.0325
HS 57	Carpets, floor coverings	5.6594	5.9424	4.6312	3.1403	2.5038
HS 58	Speical woven Fabrics	0.0508	0.0568	0.1092	0.0829	0.1137
HS 59	Coated Textile Fabrics	0.0053	0.0057	0.0258	0.0706	0.0986
HS 60	Knitted Fabrics	0.0345	0.0100	0.0324	0.0596	0.4011
HS 61	Knitted garments	5.6403	4.4090	5.5996	3.0348	3.2463
HS 62	Garments not knitted	14.0661	12.0791	14.2208	8.6228	9.1365
HS 63	Other made up textile articles	1.7223	1.9720	2.4801	1.6567	1.9084
HS 64	Footwears	4.4628	3.7475	5.0726	2.8650	2.8373
HS 65	Headgear	0.0029	0.0015	0.0112	0.0015	0.0104
HS 66	Umbrellas	0.0008	0.0006	0.0011	0.0012	0.0011
HS 67	Prepared feathers	0.0090	0.0162	0.0158	0.0079	0.0158
HS 68	Stone-cement	0.0895	0.1622	0.1676	0.1588	0.2548
HS 69	Ceramic products	0.0182	0.0166	0.0242	0.0371	0.0677
HS 70	Glass & Glassware	0.1472	0.0986	0.1103	0.1125	0.1110
HS 71	Pearls, precious, semi-precious stones	12.7230	19.3438	14.2062	16.7624	16.2075
HS 72	Iron & steel	0.3629	1.4565	0.7030	0.4774	1.1244
HS 73	Articles of iron & steel	0.2847	0.3507	0.5191	0.8719	1.5365
HS 74	Copper & articles	0.3769	0.6896	0.2421	0.1953	0.1788
HS 75	Nickel & articles	0.0008	0.0003	0.0065	0.0039	0.0048
HS 76	Aluminium & articles	0.0619	0.2377	0.1082	0.2102	0.5447
HS 78	Lead & articles	0.0084	0.0020	0.0125	0.0039	0.0059
HS 79	Zinc & articles	0.0026	0.0080	0.0036	0.0036	0.0027
HS 80	Tin & articles	0.0020	0.0011	0.0005	0.0130	0.0148
HS 81	Other base metals	0.0028	0.1399	0.0039	0.0058	0.0026
HS 82	Tools & parts of base metal	0.6528	0.7571	0.7807	0.4332	0.4872
HS 83	Misc.articles of basemetal	0.4164	0.4360	0.3211	0.1898	0.1804
HS 84	Nuclear, reactors, boilers etc.	1.0246	1.1372	1.2090	3.0098	3.5589
HS 85	Electrical machinery,parts	0.4788	0.5370	0.5315	1.6944	1.6724
HS 86	Railway locomotives,parts	0.0057	0.0051	0.0739	0.1481	0.2422
HS 87	Road vehicles,parts	0.6522	0.8365	0.9035	1.4218	1.7445
HS 88	Aircrafts, and parts	0.0890	0.1100	0.0535	0.0436	0.0319
HS 89	Ships, boats, floating structure	0.0000	0.0000	0.0022	0.0079	0.1993
HS 90	Optical, measuring, medical instruments	0.1536	0.1647	0.1760	0.5758	0.4118
HS 91	Clocks and watches	0.0005	0.0009	0.0090	0.0063	0.0137
HS 92	Musical instruments	0.0197	0.0225	0.0239	0.0440	0.0387
HS 93	Arms and ammunition	0.0029	0.0030	0.0021	0.0021	0.0015
HS 94	Furniture, etc.	0.0093	0.0133	0.0088	0.0244	0.0300
HS 95	Toys, games, etc.	0.3300	0.2712	0.2693	0.1895	0.1881
HS 96	Misc. manufacturers	0.0806	0.0858	0.1011	0.0888	0.1330
HS 97	Works of art	0.0134	0.0089	0.0070	0.0072	0.0040
HS 98	Project goods	0.0010	0.0204	0.0026	0.0111	0.2127
HS 99	Miscellaneous goods	2.1375	2.2000	1.9598	1.7276	1.3859
Total		100.0000	100.0000	100.0000	100.0000	100.0000

Note: India's exports to the EEC cover all the twelve members.

Source: For India's global exports, MSFTI, Vol.I, Exports and Re-exports, DGCIS, Calcutta, Various Issues. For India's exports to the EEC, SFTI, Vol.I, Exports and Re-exports, DGCIS, Calcutta, Various Issues.

Table A.6.1 : The EEC Tariff Protection by Sector, 1988

(Per cent)

Tariff Study Category		Average Tariffs		Tariff range
		Simple	Weighted	
01.00	**Raw hides and skins, leather and furskins**	**3.1**	**2.5**	0-10.0
01.01	Raw hides and furskins	0.0	0.0	0
01.02	Semi-manufactured products	3.7	2.2	0-7.0
01.03	Manufactured articles	6.9	7.1	3.8-10.0
02.00	**Rubber**	**3.1**	**4.0**	0-10.0
02.01	Raw Rubber	0.2	0.0	0-3.8
02.02	Semi-manufactured products	3.6	4.2	0-6.2
02.03	Manufactured articles	4.5	5.6	0-10.0
03.00	**Wood and cork**	**4.4**	**2.0**	0-10.0
04.00	**Pulp, paper and paper-board**	**7.4**	**2.7**	0-12.5
05.00	**Textiles and clothing**	**10.1**	**7.6**	0-17.0
05.01	Textile fibre and waste	3.0	0.6	0-10.0
05.02	Yarns	7.0	8.2	2.9-9.5
05.03	Fabrics and similar products	10.9	10.8	3-17.0
05.04	Made-up articles and related products	9.6	8.7	3.2-14.0
05.05	Clothing and clothing accessories	13.0	13.2	0-14.0
06.00	**Mineral proudcts and fertilizers**	**5.2**	**4.6**	0-13.5
07.00	**Precious stones and precious metals**	**2.6**	**0.6**	0-8.5
08.00	**Ores and metals**	**5.1**	**2.6**	0-17.0
08.01	Ores and metal waste	0.0	0.0	0
08.02	Iron and steel	5.4	5.5	0-10.0
08.02.01	Unworked	3.5	2.9	0-6.0
08.02.02	Ferro-alloys	4.9	6.8	0-8.0
08.02.03	Semi-manufactured products	5.6	5.5	0-10.0
08.03	Non-ferrous metals	5.2	1.4	0-10.0
08.03.01	Unwrought metals	1.2	0.3	0-6.0
08.03.02	Metal products	5.2	5.3	0-10.0
08.04	Metal manufactures	5.4	6.0	0-17.0
09.00	**Coal and natural gas (excludes 09.03)**	**2.2**	**4.0**	0-16.0
10.00	**Chemicals**	**7.3**	**6.7**	0-17.6
10.01	Chemical elements and compounds	7.3	5.3	0-17.6
10.02	Dyeing, tanning and colouring materials	7.1	7.6	0-10.0
10.03	Medical and pharmaceutical products	6.0	5.3	0-13.6
10.04	Plastics	9.3	9.9	0-16.0
10.05	Essential oils, perfume materials, soaps	5.6	5.3	0-11.0
10.06	Other chemicals	6.1	6.5	4.6-12.0
11.00	**Non-electric machinery**	**4.1**	**4.4**	**0-12.0***
11.01	Power-generating machinery	4.5	2.6	0-10.0*
11.02	Agricultural machinery	3.6	3.5	3.5-4.1
11.03	Office machines	4.6	4.7	0-12.0*
11.04	Metal working machinery	4.3	4.6	2.2-5.3
11.05	Textiles and leather machinery	4.2	4.3	3.2-5.8

	Tariff Study Category	Average Tariffs		Tariff range
		Simple	Weighted	
11.06	Construction, mining & handling equipment	4.1	5.2	0-6.5
11.07	Other machine tools	3.8	3.4	2.9-5.8
11.08	Pumps	3.3	4.2	0-5.3*
11.09	Heating and cooling equipment	3.7	4.3	0-5.6*
11.10	Pulp and paper machinery	3.9	3.8	3.8-4.1
11.11	Bookbinding and printing machinery	3.4	3.2	2.2-4.5
11.12	Other machines	4.0	4.1	0-6.2*
11.13	Parts and accessories	4.7	5.8	0-9.0*
12.00	**Electrical machines and apparatus**	**5.8**	**8.3**	0-15.0*
12.01	Electrical machinery for industry	4.3	5.4	0-8.5*
12.02	Telecommunications apparatus	7.2	8.8	0-14.0*
12.03	Tools and other electrical apparatus	4.4	4.9	0-6.0*
12.04	Electrical equipment and parts	7.2	10.6	0-15.0*
13.00	**Transport equipment**	**7.0**	**7.3**	0-22.0
13.01	Motor vehicles	9.5	9.4	4.4-22.0
13.02	Aircraft	3.7	0.5	0-15.0
13.03	Ships and boats	1.8	0.5	0-4.9
13.04	Other transport equipment	5.3	10.0	3.8-17.0
14.00	**Professional, Scientific and controlling instruments; photographic apparatus, clocks and watches**	**5.4**	**6.5**	0-11.0*
15.00	**Footwear and travel goods**	**10.4**	**11.1**	4.6-20.0
15.01	Footwear	11.7	13.5	4.6-20.0
15.02	Travel goods, handbags, etc.	7.0	6.1	5.1-12.0
16.00	**Photographic and cinematographic supplies**	**6.0**	**6.4**	0-7.6
17.00	**Furniture**	**5.4**	**5.5**	0-7.0
18.00	**Musical instruments, sound recording or reproduction apparatus**	**5.7**	**7.3**	0-14.0
18.01	Sound recorders and sound recordings	5.9	7.5	0-14.0
18.02	Musical instruments	5.5	5.8	4.9-7.5
19.00	**Toys**	**6.7**	**6.8**	0-10.5
20.00	**Works of art and collectors' pieces**	**0.0**	**0.0**	0
21.00	**Firearms, ammunition, tanks and other armoured fighting vehicles**	**5.0**	**5.7**	0-6.7
22.00	**Office and stationery supplies**	**5.7**	**6.0**	3.8-7.2
23.00	**Manufactured articles n.e.s.**	**6.4**	**6.4**	0-11.0
24.00	**Foodstuffs**	**14.5**	**9.8**	0-30.0
24.01	Fruit and edile nuts, fresh or dried	10.0	7.6	0-20.0
24.02	Fruit, prepared or preserved (except dried)	22.8	19.0	0-30.0
24.03	Vegetables, fresh or dried	10.5	6.2	0-20.0
24.04	Vegetables, prepared or preserved	17.6	18.7	0-24.0
24.05	Coffee, tea and mate	11.8	5.2	0-18.0
24.05.01	Coffee	13.7	7.0	5-18.0
24.05.02	Tea and mate	2.0	1.4	0-5.0
24.05.03	Coffee and tea extracts	17.1	15.6	12-18.0

Tariff Study Category		Average Tariffs		Tariff range
		Simple	Weighted	
24.06	Spices	8.5	9.1	0-25.0
24.07	Cocoa and cocoa preparations	12.2	6.5	3-16.0
27.00	**Oilseeds, fats and oils and their products**	**6.9**	**0.3**	0-18.0
27.01	Vegetable oils and seeds, oilcake	6.5	0.2	0-15.0
27.01.01	Oilseeds and oleaginous fruit	0.2	0.0	0-7.0
27.01.02	Vegetable oils	10.4	9.8	0-15.0
27.01.03	Oilcake and other residues	0.0	0.0	0
27.02	Other fats, oils, waxes and products	7.8	1.3	0-18.0
28.00	**Cut flowers, plants, vegetable materials**	**8.4**	**4.4**	0-24.0
29.00	**Beverages and spirits**	**21.5**	**14.3**	0-24.0
31.00	**Fish, shellfish and products**	**12.2**	**10.3**	0-30.0
31.01	Fish	12.3	10.1	0-30.0
31.01.01	Fish, fresh, chilled or frozen	11.1	8.7	0-22.0
31.01.02	Fish, salted, in brine, or dried	13.3	12.9	8-16.0
31.01.03	Fish, prepared or preserved	20.1	11.6	5.5-30.0
31.02	Crustaceans	11.8	10.7	0-26.0
32.00	**Tobacco**	**26.4**	**9.4**	26-117.0
32.01	Unmanufactured tobacco	12.9	8.5	
32.02	Manufactured tobacco	66.6	30.9	26-117.0
97.00	**Petroleum**	**3.1**	**0.5**	0-7.0
99.00	**All industrial products (excl. Petroleum)**	**6.4**	**5.6**	
99.01	Raw materials and petroleum	1.1	1.2	
99.02	Semi-manufactured manufactures	7.1	5.1	
99.03	Finished manufactures (excl. Petroleum)	6.5	6.5	

Note: Weighted average tariffs were calculated using as weights the 1988 imports (under ad valorem tariffs) from m.f.n. treated countries. Tariff ranges refer to the range of conventional tariffs.
"*" zero rates for certain products destined for use in civil aircrafts.

Source: GATT (1993) Trade policy Review, European Communities, Vol.I, Report of the Secretariat, Table A IV 1, p. 256-258.

Table A.6.2 : TARIFF AND NON-TARIFF MEASURES IN THE EEC APPLICABLE TO PRODUCTS OF INTEREST TO DEVELOPING COUNTRIES

Sl. No.	CCCN Tariff Line	Product Description	Post MTN Rates (%)	GSP Rate (%)	Imports from LDCs in '000 US $ (LDC share %)	India's rank	No. Of NTBs reported
1	0204.9200	Whale and Seal meat, Frog legs, Fresh, chilled or frozen	10.0	D.R.	13775 (99))	3	1
2	0303.1100	Lobsters, dead not whole, frozen	16.0	4.0	340 (53))	3	5
3	0303.4900	Other shrimps and prawns, nes.	18.0	4.5	165011 (95))	3	6
4	0303.7100	Squid, Loligo, species, frozen	6.0	4.0	32554 (48))	4	3
5	0303.9100	Squid, Loligo, not frozen	6.0	4.0	221 (47)	4	3
6	0705.3000	Lentils, Shelled for sowing	2.0	2.0	381 (58)	5	1
7	0801.7700	Cashew nuts	Free	Free	33404 (99)	1	2
8	0811.9700	Fruit nes provisionally preserved in brine	11.0	D.R.	2456 (45)	4	3
9	0812.8000	Dried fruits nes	6.0	D.R.	1224 (45)	1	2
10	1006.1900	Paddy rice long grain	12.0 (L)	12.0 (L)	1709 (30)	4	3
11	1006.2700	Husked rice, long grain	12.0 (L)	12.0 (L)	77130 (47)	4	3
12	1006.4300	Semi-milled rice, long grain	16.0 (L)	16.0 (L)	26 (67)	3	4
13	1006.4700	Milled rice, long grain	16.0 (L)	16.0 (L)	14534 (75)	5	4
14	1102.1800	Groats and meal of rice	23.0 (L)	23.0 (L)	50 (96)	2	4
15	1102.4900	Pearled grain or other cereals nes	23.0 (L)	23.0 (L)	26 (93)	1	4
16	1102.5900	Grains not otherwise worked than kibbled	23.0 (L)	23.0 (L)	2 (50)	2	4
17	1102.7600	Flaked rice	23.0 (L)	23.0 (L)	73 (97)	1	3
18	1308.1100	Opium	Free	Free	4535 (73)	1	2
19	1303.1800	Saps of medicinal Vegetables	2.5	Free	3699 (50)	5	2
20	1303.1900	Saps of non-medicinal Vegetables	Free	Free	12048 (60)	5	2
21	1303.5900	Mucilages, Thickeners from vegetables	Free	Free	22226 (77)	1	2
22	1507.1500	Castor oil for Aminoun becanoic acid	Free	Free	52739 (100)	1	5
23	1507.1700	Castor oil for non-industrial purposes	8.0	6.0	14510 (95)	2	6
24	1507.9000	Other oils, than palm oil	15.0	13.0	10458 (71)	2	6
25	1902.1000	Infant food preparations	11.0 (L)	Free	2016 (44)	1	1
26	1902.6900	Infant food preparations	11.0 (L)	Free	2912 (98)	5	1
27	2001.1000	Mango Chutney	Free	Free	1015 (100)	1	2
28	2005.9000	Fruit puree and paste	14.0	D.R.	106 (45)	3	5
29	2006.9700	Mixtures of fruit without spirit	23.0	9.0	39 (67)	3	6
30	2102.3000	Extracts, Essences or concentrates of tea or mate	12.0	Free	1528 (73)	2	3
31	2107.0300	Cereals other than maize or rice in grain	13.0 (L)	2.0 (L)	37 (32)	3	3
32	2916.4100	Acyclic Carboxylic acids	6.9	Free	1673 (20)	4	2
33	3301.5000	Resinoids	4.1	Free	1970 (41)	3	2
34	4102.0500	East India kip. Veg. tanned	Free	Free	46641 (100)	1	2
35	4102.9900	Other bovine cattle leather, nes	7.0	D.R.	212401 (63)	1	2
36	4104.1000	Goat and kid skin leather Vegetable tanned (Indian goat)	Free	Free	3194 (100)	1	1
37	4104.9100	Goat and kid skin leather (Other than Indian goat)	2.9	2.9	52552 (85)	4	1
38	4104.9900	Indian goat or kid leather Otherwise prepared	3.8	D.R.	63616 (82)	1	1
39	4202.9000	Travel goods	5.1	D.R.	265242 (55)	5	3
40	5509.6000	Cotton fabrics nes. Of width minimum 85cm.	10.0	Free (Q)	630441 (58)	4	MFA
41	5801.0100	Carpets of wool containing more than 10 % of weight of silk	8.9	Free (Q)	3650 (94)	1	MFA
42	5801.1000	Carpets of wool containing maximum 10% by weight of silk	9.6	Free (Q)	277069 (65)	1	MFA
43	5801.3000	Carpets, carpeting and rugs of silk	8.9	Free (Q)	26943 (87)	2	MFA
44	5801.8000	Carpets, carpeting and rugs of other textile materials	6.9	Free (Q)	4821 (96)	1	MFA
45	5802.6000	Carpets, other than of coir or tufted, knotted	8.9	Free (Q)	29419 (43)	1	MFA
46	5809.2100	Handmade lace	13.0	Free (Q)	1369 (99)	2	MFA

Sl. No.	CCCN Tariff Line	Product Description	Post MTN Rates (%)	GSP Rate (%)	Imports from LDC's in '000 US $ (LDC share %)	India's rank	No. Of NTBs reported
47	6005.2100	Blouses for women, girls or silk or noil	14.0	Free (Q)	339 (81)	2	MFA
48	6005.2400	Blouses for women, girls of regenerated textile fabrics	14.0	Free (Q)	325 (87)	1	MFA
49	6005.2500	Blouses for women, girls of cotton	14.0	Free (Q)	33290 (86)	5	MFA
50	6005.5400	Skirts including divided skirts of cotton	14.0	Free (Q)	2761 (47)	5	MFA
51	6005.9200	Other outer garments of other textile materials	14.0	Free (Q)	69384 (65)	4	MFA
52	6101.9600	Other outer garments for men, boys of cotton	14.0	Free (Q)	18494 (64)	5	MFA
53	6102.1800	Swim wear for women, girls and infants	14.0	Free (Q)	381 (66)	3	MFA
54	6102.3300	Jackets and blazers for women, girls of cotton	14.0	Free (Q)	38158 (74)	3	MFA
55	6102.4400	Suits and coordinate suits for women, girls of cotton	14.0	Free (Q)	59175 (86)	3	MFA
56	6102.4700	Dresses for women, girls of silk noil	14.0	Free (Q)	5449 (72)	2	MFA
57	6102.5300	Dresses for women, girls for regenerated textile fabrics	14.0	Free (Q)	6762 (84)	1	MFA
58	6102.5400	Dresses for women, girls of cotton	14.0	Free (Q)	55258 (78)	1	MFA
59	6102.7600	Blouses for women, girls of silk or noil	14.0	Free (Q)	30066 (93)	3	MFA
60	6102.9200	Outer garments for women, girls of cotton	14.0	Free (Q)	105716 (80)	2	MFA
61	6102.9400	Outer garments for women, girls of other textile materials	14.0	Free (Q)	4802 (50)	3	MFA
62	6103.8500	Other under garments nes for men and boys of cotton	13.0	Free (Q)	7321 (70)	2	MFA
63	6104.9800	Other under garments for women, girls of other textile materials	13.0	Free (Q)	1566 (80)	5	MFA
64	6105.9100	Handkerchiefs of silk noil	10.0	Free (Q)	402 (73)	2	MFA
65	6106.6000	Shawls, scarves, mufflers and the like of cotton	8.0	Free (Q)	4023 (80)	1	MFA
66	6202.1100	Bed linen of cotton	13.0	Free (Q)	84184 (57)	5	MFA
67	6202.4100	Table linen of cotton	13.0	Free (Q)	3921 (43)	5	MFA
68	6202.7100	Toilet or kitchen linen of cotton	13.0	Free (Q)	13108 (44)	5	MFA
69	6202.8100	Curtains and other furnishing articles of cotton	13.0	Free (Q)	8685 (45)	2	MFA
70	6202.8900	Curtains and furnishing articles of other textile materials	13.0	Free (Q)	6242 (38)	2	MFA
71	6203.1300	Sacks of jute weighing less than 310 G/M2	8.9	Free	22040 (100)	3	3
72	6203.1500	Sacks of jute weighing not more than 500 G/M2	8.7	Free	13497 (100)	3	3
73	6203.1700	Sacks of jute weighing not less than 500 G/M2	7.7	Free	7467 (100)	4	4
74	6405.1000	Assemblies of Uppers affixed to inner soles	5.8	Free	14194 (81)	4	1
75	6405.9000	Other parts of Footwear	4.6	Free	96815 (56)	1	1
76	7315.6600	Pieces shaped for forging of alloy steel	3.8	Free (Q)	1262 (37)	1	2

Notes : The Symbol 'L' attached to a rate means that a levy or a variable levy can be applied under certain conditions. The letter 'Q' indicates that a quantitative limitation is attached to the preferential rate. D.R stands for differential rates. MFA indicates that the product is subject to MFA (Multi-Fibre Agreement) regulations. Import data is for the year 1985.

Source : GATT (1989), Tariff Treatment and Non-Tariff Measures Applicable to Products of Interest to Developing Country Markets, Vol. I, EEC, Geneva.

Table A.6.3 :Structural Rigidity and Unequal Exchange - 1992

Sl. No.	Countries	Structural Rigidity (SR) (index of export concentration)	Ratio of PPP exchange rate to market rate (e*/e)	Degree of Unequal Exchange (UE) (1-e*/e)
1	Ethiopia	0.9340	0.3235	0.6765
2	Tanzania	0.8320	0.1746	0.8254
3	Sierra Leone	0.9540	0.2078	0.7922
4	Nepal	0.8710	0.1545	0.8455
5	Uganda	0.9480	0.1589	0.8411
6	Malawi	0.9260	0.2877	0.7123
7	Bangladesh	0.8990	0.1789	0.8211
8	Chad	0.9510	0.3099	0.6901
9	Guinea-Bissau	0.9410	0.3188	0.6812
10	Madagascar	0.8110	0.3194	0.6806
11	Rwanda	0.9600	0.3247	0.6753
12	Niger	0.9150	0.3784	0.6216
13	Burkina Faso	0.9410	0.4110	0.5890
14	India	0.6200	0.2562	0.7438
15	Kenya	0.8060	0.2279	0.7721
16	Mali	0.9180	0.6200	0.3800
17	Nigeria	0.9150	0.2222	0.7778
18	Nicaragua	0.8610	0.1574	0.8426
19	Togo	0.8890	0.3545	0.6455
20	Benin	0.8590	0.2733	0.7267
21	Central African Republic	0.9310	0.3942	0.6058
22	Pakistan	0.8430	0.1972	0.8028
23	Ghana	0.9070	0.2381	0.7619
24	Mauritiana	0.9500	0.3841	0.6159
25	Sri Lanka	0.7970	0.1922	0.8078
26	Zimbabwe	0.7820	0.2893	0.7107
27	Honduras	0.8530	0.3005	0.6995
28	Egypt	0.7000	0.1744	0.8256
29	Indonesia	0.6530	0.2256	0.7744
30	Cote d' Ivoira	0.8560	0.4085	0.5915
31	Bolivia	0.8750	0.2996	0.7004
32	Philippines	0.6480	0.3105	0.6895
33	Senegal	0.8570	0.4457	0.5543
34	Cameroon	0.7770	0.3565	0.6435
35	Paupua New Guinea	0.9010	0.4703	0.5297
36	Peru	0.8050	0.3084	0.6916
37	Guatimala	0.7290	0.2908	0.7092
38	Congo	0.8860	0.4204	0.5796
39	Morocco	0.7560	0.3150	0.6850
40	Dominican Republic	0.8710	0.3125	0.6875
41	Ecuador	0.8480	0.2443	0.7557
42	Jordan	0.7980	0.2654	0.7346
43	El Salvador	0.7440	0.5247	0.4753
44	Colombia	0.6650	0.2309	0.7691
45	Jamaica	0.8560	0.3554	0.6446
46	Paraguay	0.9110	0.3932	0.6068

Sl. No.	Countries	Structural Rigidity (SR) (index of export concentration)	Ratio of PPP exchange rate to market rate (e*/e)	Degree of Unequal Exchange (UE) (1-e*/e)
47	Tunisia	0.6680	0.3353	0.6647
48	Algeria	0.8830	0.3206	0.6794
49	Thailand	0.5690	0.3124	0.6876
50	Costa Ricca	0.7240	0.3532	0.6468
51	Turkey	0.6700	0.3830	0.6170
52	Iran	0.9000	0.4167	0.5833
53	Panama	0.8080	0.4449	0.5551
54	Chilie	0.7900	0.3375	0.6625
55	Mauritious	0.8440	0.2371	0.7630
56	Brazil	0.5230	0.5276	0.4724
57	Malaysia	0.5690	0.3466	0.6534
58	Venezuela	0.7980	0.3311	0.6689
59	Uruguay	0.7400	0.4483	0.5517
60	Mexico	0.5000	0.4633	0.5367
61	Trinidad Tobago	0.8040	0.4685	0.5315
62	Argentina	0.6520	0.9951	0.0049
63	Oman	0.8270	0.6729	0.3271
64	Korea Republic	0.5000	0.7587	0.2413
65	Greece	0.6330	0.9101	0.0899
66	Portugal	0.5290	0.7362	0.2638
67	Saudi Arabia	0.8540	0.6723	0.3277
68	Ireland	0.5530	1.0116	-0.0116
69	New Zealand	0.6730	0.8542	0.1458
70	Israel	0.5610	0.9055	0.0945
71	Spain	0.3530	1.0607	-0.0607
72	Hong Kong	0.6340	0.7661	0.2339
73	Singapore	0.4860	0.9408	0.0592
74	Australia	0.6510	0.9948	0.0052
75	United Kingdom	0.2380	1.0634	-0.0634
76	Italy	0.3450	1.1540	-0.1540
77	Netherlands	0.3500	1.1663	-0.1663
78	Canada	0.4030	1.0502	-0.0502
79	Belgium	0.3810	1.1498	-0.1498
80	Finland	0.5210	1.3757	-0.3757
81	France	0.2560	1.1594	-0.1594
82	Austria	0.3950	1.2196	-0.2196
83	Germany	0.2650	1.1174	-0.1174
84	United States	0.2960	1.0052	-0.0052
85	Norway	0.6320	1.4313	-0.4313
86	Denmark	0.4500	1.3941	-0.3941
87	Sweden	0.3950	1.5338	-0.5338
88	Japan	0.4380	1.3983	-0.3983
89	Switzerland	0.5210	1.6326	-0.6326

Source : Structural rigidity (Concentration indices) are from UNCTAD, Handbook of Trade and Development Statistics (1993:241-48). Ratios of PPP exchange rates to market rates have been computed from World Bank, World Development Report 1994:162-164 and 222-234.

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