8.1 INTRODUCTION

Information concerning the pattern of international competitiveness and its tendency to change overtime is highly desirable input to decision making. Enhancing competitiveness may be termed as one of the major objectives of trade strategy. Competitiveness of exports may depend on whether the composition of exports, as suggested by trade theories, is determined by comparative advantage or not. The comparative (cost) advantage has two useful applications - (i) it serves as one of the fundamental concepts in descriptive (or positive) theories by providing a basic explanation of the international pattern of specialization in production and trade (ii) it plays an important role in prescriptive (or normative) economics by providing guidelines for government policies on resource allocation and trade. In the positive role, trade theories are able to tell us why, after all the composition of exports differ from one country to another. The pattern of trade between different countries is determined by the pattern of comparative advantage among them.

The strategy of industrialisation that takes comparative advantage into consideration provides a suitable basis for an international division of labour between countries of different levels of economic development. An international division of labour on this basis is considered to be desirable objective in the long run interest of harmonious development of the international trade and the world economy. The neglect of comparative advantage very often leads to diseconomies of scale and inefficiency in production. Thus, comparative advantage consideration should be
brought to bear upon the choice that has to be made regarding the kind of specialisation in exports.

However much of the research in this area has focused on trade in industrial goods and a number of studies have worked out the comparative advantage in manufacturing. In the case of agriculture, though the thrust has been shifting to agricultural exports since recently and a number of studies on performance, problems and prospects of agricultural exports are there, the study of comparative advantage in agricultural exports has received little attention. The analysis of comparative advantage in exports of agricultural products has received scant attention on the ground that agricultural products are intensive in the use of natural resources and thus the pattern of trade in such products depends to a considerable extent on the not easily quantifiable resource endowment of the country. The neglect, however, has also been partly to the fact that most of the studies on comparative advantage were done for developed economies (mainly USA and Japan) which were at that stage of development where primary exports weightage was quite low. As comparative advantage for developing economies seems to lie in agricultural products and labour intensive manufactures primary exports weightage seems to be quite high for low income predominantly agricultural economies of South Asia which necessitates the analysis of comparative advantage in agricultural exports of South Asia.

8.2 HYPOTHESIS

South Asian economies, at present, confront a difficult situation in their international competitive position. The staggering trade deficits of the past several years and the borrowing needed to finance them obviously can not be sustained for
long. Inspite of the efforts to diversify exports (along regional and commodity dimensions) and the introduction of numerous export promotion measures since late 1970s, the exports of South Asian countries failed to register growth rates either comparable to those of other developing nations or commensurate with the amount of effort and initiative taken by these countries. Export promotion as one of their strategies did not help them in adjusting to the crisis through increased export earnings. We hardly need to reiterate that their market share in world exports declined. They were outstripped by other developing countries who emerged more successful in gaining export market shares, in addition to what they already possessed.

The analysis of export performance of South Asian Countries as compared to NIC-4 and ASEAN-4 (Chapter II) reveals that though most of the countries in South Asia shifted to relative export orientation policies since 1970s and have initiated structural economic reforms since mid of 1980's, lack of international competitiveness still seems to be the root cause of poor performance of exports in these economies. Thus, the process of trade liberalization which has been gradual, slow and detrimental to growth due to lack of competitiveness may be made easier, quicker and more successful by adopting trade policies which are aimed at improving the underlying competitiveness of exports of South Asian countries. What is needed to make the position less costly is the development of a national competitiveness policy and the major objective of this trade strategy may be termed as enhancing competitiveness of exports.
The question arises, "What are the major corrections through which South Asian countries could improve their competitiveness of exports"? In other words, we have to look at the determinants of competitiveness. An attempt is made to answer this question in Chapter III.

The analysis of Chapter III reveals that competitiveness is a dynamic phenomenon. Though it depends on initial conditions, factors and resource endowment, size, location, social mores and international environment, it is to be evolved as an integral component of the development process. The reasons may be:

First, competitiveness of exports may depend on whether the composition of exports, as suggested by trade theories, is determined by comparative advantage or not. Second, comparative advantage itself is a dynamic phenomenon as there might be shifts in the comparative advantage with the process of economic growth.

The sources of comparative advantage lay in factor endowments. Changes in factor endowments over a period of time (due to change in technology, scale economies etc.) will lead to change in comparative advantage. Thus, a priori one would expect underdeveloped economies having scarcity of capital and skill to possess a traditional production structure and thus specialize in production and export of raw materials and agricultural products. As economies move from lower to higher levels of development, they accumulate more capital, develop skills and generate better technology and thus move up the ladder of comparative advantage from specialization in primary products to products which are capital, skill, technology and knowledge intensive.
In accordance with the principle of comparative advantage, Japan since 1950s, NIC-4 since 1960s and ASEAN-4 in 1970s expanded their exports and employment by specializing in highly productive agriculture in the initial stages of development, then in labour intensive products and then moved into capital intensive and skill intensive exports in later stages at development. Thus, we see that countries whose trade strategy supported pattern of trade that not only conformed to comparative advantage as it existed initially but also changed the strategy in accordance with shifts in the comparative advantage overtime improved their competitiveness in the world markets. NIC-4 (except Hongkong) having realized that an expanding industrial sector cannot be fuelled for long by resource transfers from a static agricultural sector and the economic potential of agriculture must be mobilized before it can be used, improved their competitiveness by increasing their share of primary exports in the initial stages of development. The success of ASEAN-4 in the 1970s in international trade and growth was also based on the same policy. By expanding agricultural exports ASEAN-4 countries realised greater foreign exchange earnings and improved the linkages between agriculture and other sectors.

The mobilization of agriculture for general development and trade would depend, as per the experience of successful Asian countries, on Macro economic and trade policies which are fairly conducive to expansion of agricultural exports. Export growth has been particularly rapid in cases where more or less equal incentives have been provided to exports of different sectors and individual export products. Macro economic and trade policies in Korea, Taiwan and ASEAN-4 were fairly conducive to expansion of agricultural exports.
It may, however, not be implied that only protection will lead to better performance of exports by the agricultural sector of the economy. Unless a sector (industry or agriculture) receiving protection in pushed rapidly to become internally competitive by not only producing more but of quality too, it may not contribute significantly to improvement in competitiveness. The effects of primary exports on industrial development depend to a considerable extent on output relationships. In other words Agriculture could be exploited for general development and trade only if it first produced a surplus which was there for exploitation.

Comparative analysis of growth of agricultural production by countries reveals that agricultural exports were growing fastest in the countries with the highest rates of growth in agricultural production.

Production increase will prove to be effective i.e. cost disadvantage will be reduced only if backed by adequate infrastructure. Infrastructure in the form of ports, railways and roads often represents important inputs for primary exports and their availability may contribute to the development of industrial activities.

The Government is expected to develop the infrastructure by providing various types of economic services for promoting overall developmental climate in the country.

Comparative study of NIC-4, ASEAN-4 and South Asian countries (Chapter VI) reveals that the share of economic services in total expenditure of Central Government (consolidated accounts) works out much higher for NIC-4, ASEAN-4 and China as compared to South Asian countries.
Thus it was hypothesized in Chapter III that countries whose trade strategy supported composition of trade that not only confirmed to the comparative advantage as it existed initially but also changed the strategy in accordance with shifts in comparative advantage (overtime) with major emphasis not only on subsidies but on production and infrastructure improved their competitiveness in world trade.

In the light of the above hypothesis we may state that the first requisite for enhancing competitiveness of exports is a trade strategy which supports a composition of trade that conforms to comparative advantage (static as well as dynamic). In other words, the first requisite for evolving competitiveness of exports is to identify the export sector and commodities which will give comparative edge in terms of resource endowment and capabilities of the country concerned. Having identified the sector and commodities which could easily be developed for trade and thus for which export effort would be worth undertaking the second requisite is the formulation of a trade strategy which is conducive to expansion of exports in the identified sector.

8.3 THE BASIC THRUST OF THE STUDY

The basic thrust of the present study is that the comparative advantage for developing South Asian economies characterized by abundance of labour, scarcity of capital and heavy dependence on natural endowments would seem to lie in agricultural products and labour intensive manufacturers. Thus growth model based on primary and agricultural products seems to have considerable advantages in maximising agriculture's contribution to overall development. Further, South Asian economies are basically agricultural in nature. Despite the rapid growth of industrial production,
their dependence on agriculture is staggering. At present, about 50% of national income of Sri Lanka, 40% of India and 25% of Pakistan is derived from agricultural sector. There are several reasons why agricultural exports should contribute a similar proportion to total exports.

(a) Domestic Resource Cost of each rupee of foreign exchange earned is lower in agriculture than in industry.

(b) Factor incomes generated at home per rupee of output exported, directly and through backward linkages is higher for agriculture compared with manufacturing and mining.

(c) Basically, agricultural commodity exports require the least amount of cash assistance. Foreign exchange earning is net in most of the agricultural commodity exports.

(d) World demand for some of the higher value agricultural products such as dairy items, fruits and vegetables and marine products has been increasing since last few years.

(e) Since recently the thrust has been shifting to agricultural exports and changing international environment is also favourable to this.

(f) South Asian countries enjoy enormous opportunities in the developing region especially in Asia and Africa because of similarity in socio-economic conditions, initial stages of their economic development and the geographical proximity to the region.

(g) South Asian countries enjoy a fairly large potential for agricultural, horticultural and marine products. Despite these advantages, the share of these countries in global imports of agricultural products pales into insignificance (less than 1% of world agricultural exports). To look into the explanation for this paradoxical situation an analysis of comparative advantage of exports in agricultural products of South Asia has been attempted in this study.

The fundamental premise upon which this study is based is that comparative advantage considerations should be brought to bear upon the choice that has to be made regarding the kind of specialization in exports of developing economies of South Asia. Thus the objectives of the study has been:
(1) To prove empirically that

(i) The comparative advantage for South Asian countries lies in exports of agricultural products and labour intensive products.

(ii) The sectoral composition of South Asian countries trade however has not been based on comparative advantage considerations, and

(iii) To stress the need (on the basis of empirical approximation of (i) and (ii) to increase share of agricultural exports in the export basket of South Asian countries to enhance competitiveness of their exports.

(2) Analysis present position and problems of agricultural exports.

(3) Identify agricultural commodities (at the 3 digit SITC level) which will give South Asian Economies a comparative edge in terms of their resource endowment and capabilities and thus for which export effort would be worth undertaking.

(4) Offer Suggestions as to how agriculture can be exploited in a better way for trade in these economies. i.e. suggest a suitable strategy of agricultural exports.

The analysis proceeds in three stages: Chapters I, II and III provide the theoretical background. Chapter IV and V are empirical in content and deal with the empirical verification of pattern of trade of South Asian countries. Chapter VI attempts an empirical analysis of agricultural exports at micro level by taking a case study of India. It analysis the performance of agricultural exports in India. Identifies the agricultural commodities (at three digit SITC level) having comparative advantage in India, analysis their export performance in comparison to their revealed comparative advantage and attempts to suggest a suitable strategy for increasing the share of agricultural exports (specially in the identified commodity groups) in the export basket of India to help enhance competitiveness of exports in India.

8.4 FINDINGS OF THE STUDY: CHAPTER I TO VII

Introduction serving as Chapter I outlines the approach for analytical purposes, reviews the literature and specifies the objective, scope and methodology of the study.
The analysis of export performance of South Asian countries (Chapter II) revealed that the root cause of poor performance of exports in South Asian countries has been lack of international competitiveness. Thus enhancing competitiveness may be termed as one of the major objectives of trade strategy for South Asia.

Chapter III is theoretical in nature and deals with the model of export determinant. It is divided into three parts: (a) Determinants of competitiveness (b) Sources of comparative advantage i.e. theories of comparative advantage and empirical models review and (c) theoretical validity of the H.O. model of trade.

Looking into the determinants of competitiveness i.e. the major corrections through which competitiveness could be improved it is hypothesized in Chapter III that countries whose trade strategy supported composition of trade that not only confirmed to comparative advantage as it existed initially but also changed this composition in accordance with shifts in comparative advantage (overtime) with major emphasis not only on subsidies but on productivity and infrastructure.

The competitiveness of exports as per the first part of the hypothesis is to be evolved with development process by changing the composition of trade in accordance with changing or dynamic advantage. For this we have to provide an understanding of the historical forces which gives rise to current pattern of comparative advantage and provide an insight into likely direction of change in the future i.e., we have to look into the sources of comparative advantage. Thus before proceeding to the empirical analysis of comparative advantage in exports of South Asian countries, a review of theories of comparative advantage and empirical models review has been attempted in chapter III only to determine the model of export determinant.
A review of the theories of comparative advantage and the empirical models review (Chapter III) reveals that the H.O. Model has conventionally been used to explain the pattern of international trade. According to this theory (assuming the technology to be the same across countries), comparative advantage is the result of the resource endowment structure of different economies. A series of interesting hypothesis and modifications of the simple H.O. theorem examining the importance of various alternate determinants of pattern of trade have been developed over the last forty years. A detailed review of these modifications reveal the following: First, sources of comparative advantage lay in differences in factor endowment. The weight carried by different factors may, however, vary from country to country and from sector to sector. Differences in natural endowment (land, labour and natural resources) have been taken to be as sources of comparative advantage in case of raw-materials and agricultural products. Capital (physical and human), technology, scale economies, research and development have similarly been given high weight in manufactured products. Second, in a world of rapidly changing technology one needs to focus on the dynamics of comparative advantage as compared to the static one. Third, the role of scale economies in determining pattern of trade would depend on the nature of trade (inter-industry or intra-industry) which in turn is dependent upon country similarities. "Countries with similar factor endowment will engage in intra-industry trade, while countries with different endowment will engage in H.O. trade (Krugman, 1990). As there as substantial differences in the endowment pattern of developing economies of South Asia, a strong H.O. component should be present among the determinants of the commodity composition of trade in these economies.
The comparative advantage of trade in agricultural products of South Asian countries, thus, is examined (in static as well as in dynamic sense by practical application of the commodity version of H.O. model.

The familiar neo-classical version of factor proportions explained the pattern of trade for the economy as a whole i.e. considered all the sectors - agriculture, industry etc. The later theories, except a few (Leamer, Linder) considered sources of comparative advantage in manufacturing sector only. The reason may be that most of the studies were for developed economies (mainly USA) who were at that stage of development where primary exports weightage becomes quite low. South Asian economies being underdeveloped economies characterized by abundance of labour, scarcity of capital, technology etc. our analysis will consider not only the manufacturing sector but all the sectors in these economies to judge whether their pattern of trade has been as per the resource endowment structure as reflected in the comparative cost advantages.

An attempt is made in Chapter IV and V to verify empirically whether the pattern of trade of South Asian economies conforms to the structure of comparative advantages as reflected in their resource endowment structure (in static as well as in dynamic sense). Chapter IV attempts to examine the proposition that the comparative advantage for South Asian countries lies in the exports of agricultural products and labour intensive manufacturers. The proposition is examined, as per the theoretical analysis of Chapter III, by the empirical verification of H.O. model of trade. Having established that the comparative advantage for South Asian countries lies in exports of agricultural products and labour intensive manufactures, we analyse, in
Chapter V, the composition of exports of these countries vis-a-vis comparative advantage to see whether the composition of exports of these countries has been as per comparative advantage or not.

The analysis of Chapter IV takes in account both the static and dynamic nature of comparative advantage. The static nature of export compatibility is analysed by an application of the commodity version proposition of the Heckscher-Ohlin (H.O.) theory. The dynamic comparative advantage is observed by testing empirically the factor proportions model over different points of time in an economy that is observing the model as a static one at different dynamic points. As the concept of comparative advantage involves intercountry comparisons, we attempt a comparison between South Asian countries, and some of the successful developing Asian countries, NIC-4 and ASEAN-4.

The Methodology adopted is as follows:

According to H-O model, comparative advantage (assuming the technology to be same across countries) is the result of resource endowment structure of different economies. Empirical application of the HO model requires a three way relationship between factor abundance, factor intensity and trade composition of the country concerned. The method adopted in the present study is based on the studies by Hirsch (1974) and Leamer (1984).

Comparative advantage according to Hirsch (1974) is the outcome of interaction between two factors, namely, factor endowment, which is a country characteristic, and factor intensity which is an industry or product characteristic. Comparative advantage is empirically taken to be high when the values of the factor
intensity and the factor endowment go together. Comparative advantage is taken to be low in other cases.

We first estimate factor endowment of South Asian countries and also establish factor intensity for three sectors namely, agricultural, labour intensive manufacturers and capital intensive manufacturers. The interaction between these two factors i.e. factor endowment and factor intensity enables us to determine comparative advantage for South Asian countries in static sense. The dynamic comparative advantage is examined by considering the period between 1970 and 1985 and estimating the relative changes in factor endowment of South Asian countries as compared to NIC-4 and ASEAN-4.

A rigorous analysis of the patterns of comparative advantage however requires cost comparisons across countries. But the data required for such an analysis are rarely available. The export performance index which reflects all types of costs and non-price factors and is based on the empirical data pertaining to trade flows has often been used as an indicator of comparative advantage. Since this is revealed by the observed pattern of trade flows, it is called revealed comparative advantage (RCA). We work out the RCA index for South Asian countries, NIC-4 and ASEAN-4 to examine the performance of agricultural exports of South Asian countries and to identify agricultural products having comparative advantage in India.

As per the empirical approximations of Chapter IV the South Asian countries are found to be relatively abundant in land and unskilled labour and thus the comparative advantage for South Asian countries as per the factor endowment proposition of comparative advantage (in static as well as in dynamic sense) lies in
agricultural and allied products and labour intensive manufactures.

The analysis of Chapter V reveals inconsistency between composition of trade and comparative advantage. The comparative advantage for South Asian Countries, as per neo-classical doctrine, lies in agricultural products and labour intensive products. The composition of exports of these countries (specially India Pakistan and Bangladesh), however depict high percentage of capital intensive exports. Though as regards labour intensive exports there was some awareness on the part of these countries and the share of labour intensive exports showed little upward trend from beginning of 1980s, the share of agricultural exports showed decline not only in 1970s but even in 1980s.

In an attempt to analyse the above inconsistency between composition of exports and revealed comparative advantage in South Asian countries, empirical analysis of agricultural exports is attempted in Chapter VI at micro level by taking a case study of India.

Chapter VI is divided into three parts. The importance of agricultural export strategy for India is attempted in part I. The analysis of performance and problems of agricultural exports in India is attempted in Part II and Part III suggests a suitable strategy of agricultural exports in India. The strategy of agricultural exports in India [in the light of the hypothesis of Chapter III] is further subdivided into two parts.

(a) The comparative advantage consideration should be brought to bear upon the choice that has to be made regarding the kind of specialization in exports. The export planning and policies therefore, require as a first step, identification of export sector and the commodities which would give us a comparative edge in terms of our resource endowments and capabilities. Thus identification of agricultural products having comparative advantage in India is attempted in part a.
(b) Having identified the agricultural products having comparative advantage in India we proceed with the second requisite of enhancing competitiveness of exports as per hypothesis of Chapter III i.e. how to create export surpluses in the agricultural sector in part b. In other words the suggestions for better performance of agricultural exports in India is attempted in part b.

The analysis of Chapter VI revealed the following:

First: Agricultural sector has been providing substantial support to export development right since 1950s. The relative decline in its support as compared to manufacturing sector during 1970s and 1980s added to India’s balance of payments deficits. At present, India confronts a difficult situation in its international competitive position. The staggering trade deficits of the past several years and the borrowing needed to finance them obviously can not be sustained for long. The long term solution for India, thus, is to strengthen its export base in order to gain increased export earnings. The feasibility of continuing to rely on manufacturing export led growth as a major development dynamic is to be reassessed at this critical juncture of India’s economic development. The export potential of the agricultural sector needs to be rediscovered to augment exports in India. The relative decline of agricultural support as compared to manufacturing sector during the 1970s and 1980s can be revived in nineties as (a) India still has comparative advantage in exports of agricultural products (b) the domestic resource cost of each rupee of foreign exchange earned is lower in agriculture than in manufacture (91 paise and 96 paise respectively), (c) factor incomes generated at home per rupee of output exported (directly and through backward linkages) amount to 71 paise for agriculture compared with 59 paise for manufacture. (d) basically, agricultural commodity exports require the least amount of cash assistance. Net foreign exchange earnings is positive in most
of the agricultural commodity exports. (e) world demand for some of the higher value agricultural products such as dairy items, fruits and vegetables and marine products has been increasing for the last few years (f) India enjoys a fairly large potential for agricultural, horticultural and marine products due to large geographical area with varied climates, temperatures and variety of soils accompanied by the largest coast lines in the world.

**Second**: The performance of India’s agricultural exports, despite the above advantages, however, has been quite poor from beginning of 1970s till the beginning of 1990s. The performance of agricultural exports in India, evaluated in relation to their comparative advantage, sectoral output and manufactured exports in India, world agricultural exports and India’s potential of horticultural and marine products shows:

(a) Inconsistency between the composition of exports and RCA ranking in the Indian case (Table 5.2 and 5.3).

(b) The continuous decline in the share of India’s agricultural exports (i) in World agricultural exports (ii) in total exports of India (iii) in manufactured exports of India (Table 6.1 and 6.2).

The share of agricultural exports in India’s total exports showed a decline from 40 percent in mid 1960s to 17 percent by the beginning of 1990s. Similarly the share of India’s agricultural exports in world agricultural exports declined from 1.5 percent in mid 1960s to 0.8 percent by end of 1980s.

**Third**: Macro economic policies on the one hand and lack of export surpluses on the other hand seem to be the two basic reasons for poor performance of agricultural
exports in India. The analysis of trade policy reforms in India (Chapter VII)\(^1\) reveals that though the implicit bias against agriculture has been removed and a climate for increasing agricultural exports has been created by reduction in tariff and non-tariff protection for industrial sector and eliminating the over valued exchange rate through a substantial depreciation. However, the real effect of these policy initiatives on agricultural exports and their contribution to general trade and development in the economy would depend on how far these policy initiatives are successful in not only creating a climate for increasing agricultural exports but also on whether the increase in agricultural exports are based on comparative advantage considerations and supply management in agricultural sector (specially for the identified commodities).

The analysis of India's agricultural exports from 1990-91 to 1992-93 does not reveal any revival in relative decline of agricultural support as compared to manufacturing sector till 1992-93. The share of agricultural and allied products in

\(^1\) Till the completion of the collection, processing and analysis of data for the present study i.e. beginning of 1990s, trade in agriculture was excluded from trade policy regime of South Asian countries. The reason may be that the concomitant desire for economic independence with the inception of national planning, led to a development strategy of rapid industrialization in these economies and insufficient attention was paid to agricultural development as a means to promote overall economic growth. Following from this, it was implicitly assumed that instead of exporting agricultural products the country would export value added goods and manufactured goods. Thus, the purpose of the present study, as mentioned earlier, was to prove that South Asian countries have comparative advantage in agricultural products and thus an increase in the share of agricultural exports in export basket of these economies would lead to better competitiveness of their exports. Further, in order to suggest how agriculture could be exploited for general development and trade, an attempt was made in Chapter VI to suggest a suitable strategy of agricultural exports for these economies. However, it is heartening to note that keeping with our own results, there has been a move, though belatedly, towards giving positive thrust to agricultural exports in the Indian context. This move has been facilitated by the changing international trading order under Uruguay round which brought in agriculture for the first time in GATT negotiations. Thus, though the main analysis, as per hypothesis (Chapter III) and scope (Chapter I) of the study, has been limited to the end of 1980's, Chapter VII attempts to analyse the implications of trade policy reforms (1991, 1992) on India's agricultural exports.
total exports of India showed a decline from 18.5 percent in 1990-91 to 17.9 percent in 1991-92 and further to 16.5 percent in 1992-93. Similarly, the share of agricultural exports in manufactured exports of India showed a decline from 26.6 percent in 1990-91 to 25.17 percent in 1991-92 and to 23.16 percent in 1992-93. Further, the share of India’s agricultural exports in world agricultural exports showed decline from 0.95 percent in 1990 to 0.85 percent in 1991 and 0.83 percent in 1992.

8.5 CONCLUSION AND SUGGESTIONS

Agricultural commodities, having comparative advantage in India, have been losing their share in the world market. India’s once dominant position in tea has been challenged by Sri Lankan and African producers. The share of India’s tea exports in total world exports of tea has declined from 35 percent in mid 1960s to 25 percent in mid 1980s, 22 percent in 1990 and only to 10 percent by 1992. The proportion of India’s exports of spices in total world exports of spices has declined from 25 percent in mid 1960s to 14 percent in mid 1980s, 8 percent in 1990 and only to 7.6 percent in 1992. The proportion of India’s exports of fruits and nuts varied between 2 and 3 percent till 1981 and since 1982 it started declining. In 1988 the share of India’s exports of fruits and nuts was 1.5 percent of world exports. There was a further decline in this share to 1.22 percent in 1992. Similarly the share of vegetable exports showed a decline from more than 1 percent in 1970 to 0.5 percent in 1980s and only to 0.3 percent in 1992. The share of rice exports which showed an upward trend in 1980s declined from the beginning of 1990. The share of India’s rice export in world exports of rice decline from 6.5 percent in 1990 to 3.4 percent in 1992. However, the share of India’s exports of oilseeds which were nil till the beginning of 1980 and
in which India does not have comparative advantage have gone up and their share doubled between 1990 and 1992.

The falling share of agricultural raw materials (i.e. 081, 121, 263, 264, 291 and 292) may be attributed to increase in domestic demands for raw materials due to increase in value added product exports and possibly slow growth prospects in world markets. The prospects of high growth in exports of tropical beverages (i.e. 071 and 074) may be limited due to slow growth prospects in world markets and of food exports such as cereals, live stock products and sugar, due to subsidized exports of developed countries. [This does not imply that India should not maintain its share of these traditional exports.] The fall in share of horticultural exports of India in total world exports, however, is inspite of the fact that - (1) India enjoys a fairly large potential for horticultural and marine products due to large geographical area with varied climates, temperature and variety of soils accompanied by the largest coast lines in the world, (2) world demand for some of the higher value agricultural products such as meat, dairy items, marine products, fruits and vegetables and other processed and semiprocessed products is increasing in western world leading to renewed preference for natural and fresh foods. The potential that exists for India to increase her share in the world markets of horticultural products may be indicated by the fact that India’s share in production for fruits and vegetables as a group is around 11 percent of the world total yet her share of world exports of this group is less than 1 percent. India is the third largest producer of fruits after Brazil and USA. However, USA and Brazil are the main exporters of fruits in the world market whereas India’s position is marginal.
The declining share of India's exports of agricultural commodities (having comparative advantage) in world market may indicate that these commodities received less attention in realising their export potential. The export promotion policies, especially subsidies have been directed towards sectors which did not possess comparative advantage. On the other hand, price benefits (due to Govt.'s support measures) and improved technology for the import substituting crops resulted in not only increased yields in these crops as compared to the export crops but also led to some shift of area from the export crops to the import substituting ones. Thus, we may state that apart from maximising the exports of traditional commodities and maintaining their share in world exports, importance of promoting non-traditional exports with high growth prospects in world markets and high production potential at home such as horticulture, appiculture, fisheries and sericulture can hardly be overemphasized. The exports of non-traditional commodities like fruits, vegetables, flowers and honey require greater attention in realising the country's potential of agricultural exports.

The effects of primary exports on industrial development depend to a considerable extent on output relationships. The main source of output growth in developing countries was the rise in domestic output. This implies that a significant increase in agricultural production (specially of the products having comparative advantage) is the foremost prerequisite in exploiting India's agricultural export potential. The basic push has to come through (a) yield improvement (b) reduction in waste (c) efficiency in resource management.
India's production potential in tea, spices and specially fruits and vegetables is enormous and it will be quite easy to generate a sizable export surplus.

India's potential for increasing output in the horticultural sector through yield improvement is significant as the untapped yield potential is quite high in the country. A large number of horticultural crops suffer from low yields as compared to world average. If this is corrected per hectare yields would increase to take care not only of the increase in domestic consumption but at the same time export surpluses will be generated. (Please see Table 6.8 page 170). As per the extensive experimental work done by Pusa Institute for Agricultural Research, a 100 to 200 percent increase in yields for vegetables appears conceivable.

According to a Report of the working group on Agro-Food Processing Industry (VIII\textsuperscript{th} Five Year Plan), nearly 20 to 25 percent of fruits and vegetables (excluding substantial losses in handling & transport) perish each year in India. Thus if 30 percent more is added to the yield improvement (which may be realised by eliminating the present wastes by proper planning at the production and post harvest phases and organisation of trade on a systematic basis) the increase in production may come out to be still higher.

A major cause of low productivity in agriculture is the inefficiency in the use of resources - land and capital. Improvements in capacity utilization and efficient project implementation in all areas, especially in irrigation, power, transport and food processing units are essential for achieving increases in productivity of capital in the agricultural sector.

Efficiency in the use of land has been low due to the fact that more than half
of the estimated land area of 328.8 million hectares remains untilized in India. It is necessary to adopt commercial approach for the wasteland development programme to make best possible use of wasteland resources.

Utilization of wastelands for horticulture along with afforestation seems to be efficient use of land resources as (a) The wasteland which is unsuitable for field crops can profitably be utilized for horticultural crops, (b) horticulture pursuits are labour intensive, provide high income per unit of land and help in maintaining ecological balance, (c) Horticulture, in addition to supplementing the national foodgrid by providing nutritive food in the form of fresh and processed fruits and vegetables, can be an important source of foreign exchange earnings. Certain species of fruit trees, vegetables and medicinal plants, which can be grown on wastelands are an important source of agricultural exports. Thus afforestation supplemented with horticulture, floriculture, appiculture and food processing in urban areas can assure substantial amount of agricultural exports and afforestation supplemented with other related vocations such as bee keeping, livestock raising, charcoal making, carpentary, paper and pulp production can assure year round employment in rural areas. Efforts need to be made first, to carry out micro level surveys for systematic identification of the extent, location and nature of wastelands suitable for plantation work and second, define specific development projects (for horticulture, floriculture and appiculture etc.) that necessarily will entail site specific work. A processing plant with a marketing system should be designed along with this development plant to link it with a strong marketing system.
It is hoped that the present study would enable a focused thrust on enhancing the competitiveness of agricultural exports by adopting a suitable strategy of agricultural exports based on comparative advantage with major stress on improvement in productivity of agriculture, duly supported by efficiency in resource management, reduction in wastes and viable infrastructure in the agricultural sector.