Chapter-I

INTRODUCTION AND RESEARCH DESIGN
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1.1 Context

Export sector has been described as a propulsive sector. It widens the market provides economies of scale and sets in the pace of multiplier - acceleration process in the economy. Economic development of a country is largely determined by the growth of its export sector. “One of the main assets a country has that will sustain its own economics development is its ability to produce goods for export”. (William Diebold Jr., 1959) The correlation between the growth of exports and the rate of economic growth has been jointed out by several experts and international agencies. Margaret G. de Vries (1967) maintains that several studies by United Nations, the ECAFE, the World Bank and others have shown noteworthy, Correlation ship between the growth of exports of a country and its overall rate of growth. Countries with the greatest expansion of exports have also experienced the most rapid rate of overall growth; the examples of Mexico, Peru, Japan, Venezuela, Israel, the Philippines and Thailand among others are often cited.

The expansionary effect of export sector has been aptly described by Arthur Levis (1963). When he says “All sectors of the economy do not grow at the same time some sectors develop and work as propulsive sectors viz., Agriculture (A), Manufacturing (M), Catering to the home market and the export sector (X) producing for external
market. Growth of these sectors is an interdependent complex. In this interrelated function the growth of the exports sector is crucial. Growth acceleration is caused through expansionary effect of export sector. If M expands the demand for products of A will increase. If the increased output of M substitutes for imports the foreign exchange thus released may pay for the increased imports of A. if not and if A is stagnant while M is expanding either A’s prices will rise or imports will rise creating a balance of payments deficit and either of these will check the expansion of M. the expanding demand on the other Land could be met by expansion of X which would provide foreign exchange to pay for imports. So an expansion of M must be accompanied by an expansion of either A or X or by import substitution if it is to continue. Similarly an expansion of A must be accompanied by an expansion of either M or X or by import substitution. It is only X (export sector) which can expand continuously by itself without being checked by a failure of either A or M to expand for the demand generated by an expansion of exports can be met by import for which the exports provide foreign exchange. This, says Lewis... is one reason why expansion usually starts with exports and not with production for home markets whether of manufactures or of food.

Export sector and its expansionary impact has been a historical fact and economic truth. The expansionary effect of export sector has been felt in almost all the advanced countries in their stages of economic development. “Whether one thinks of Britain at the outset of industrial revolution or of the US in the nineteenth country or of
Japan in the twentieth, the expansion of exports gave a conspicuous momentum to the economy and helped it on its way to industrialization” (Cairn Cross, 1962).

1.2 Export Trade as “Engine of Growth” – Nurksian Analysis

Ragnar Nurkse has supported the view that trade worked as engine of economic growth for the nineteenth century Europe. But he has maintained that exports based growth of the economies would be painfully slow for the under developed countries in the present condition of the world trade. Nurkse has enlisted the following factors preventing the growth of demand for the products of under developed countries and thereby their rate of growth;

❖ A shift in the composition of industrial output (in the advanced countries) from industries with a high raw material content of the finished output to those with low content.
❖ Low income elasticities of consumer demand for many of agricultural commodities once a high standard of living has been reached.
❖ Growing technological advances leading to economies in the industrial use of primary raw materials.
❖ Displacement of natural raw materials by synthetic and other man made substitutes made from a few basic elements mostly of local origin.

These factors according to Nurkse put a constraint on the external demand for the producers of underdeveloped countries. H. Myint (1965) on the other hand has argued that underdeveloped countries produce only a part of the world’s total exports of primary
products. Hence it is not safe to regard them as identical with primary
exports. Nurkse's reference to the agricultural production in the
European countries affecting exports demand pertains only to the
temperate zone products. Such protection does not affect the tropical
underdeveloped countries.

1.3 Exports and the Trade Policy in India

India's foreign trade policy regime is characterized by the
following three periods viz.,

1. Export pessimism period (The period coinciding the First Two Five
   Year Plans)
2. The era of export promotion and import restriction and
3. The period coinciding with the open economy system (from 1991
   onwards)

Export pessimism was the result of the belief by the policy
makers that exports of primary products or of traditional goods based
on primary products faced poor demand prospects in the world
market.

The next phase (from third plan to eighth plan) is characterized
by import restrictions and adoption of a number of measures for
export promotion.

The New Economic Policy of Liberalization in 1991 has changed
the scenario substantially. The new Export-Import Policy 1992 gave
the Exim Policy for the first time validity for a period of five years and
coincided with the eighth plan. Later the New Export Policy for 1997-
2002 has further helped in promoting the Indian exports.
1.4 Product – Country Matrices – A New Approach for Export Promotion

A new approach for promotion of exports proposed by the Ministry of Commerce in 1996 under Mr. Chidambaram’s stewardship is the product country matrices which is based on the assessment that 15 destinations account for $20 billion of India’s total exports of $26.2 billion. Similarly 15 products account for $17 billion of total products. The first conclusion arrived at by the ministry through the matrices approach is that India should focus on markets with per capita income of over $20,000. The second conclusion is that India’s share in the World market should be increased where it already has a presence. The assumption is that if you can sell one product in a market it is fair conclusion that other products can also be sold in the same market. Similarly if you can sell one product in a market it should be possible to sell the same product in neighboring market.

The product country matrices is helpful in identifying emerging markets as well as product groups where the country can seek to make special efforts. It is in this area that the development of the matrices can possibly be most useful as exporters should be able to focus both on prospective markets and potential products by examining these charts.

The ten emerging markets identified are Australia, Brazil, Indonesia, Iran, Israel, South Korea, Malaysia, Nigeria, South Africa and Spain. Ten most prospective products are fruits and vegetables, processed fruits and juices, processed minerals, sports goods,
cosmetics and toiletries woolen yarn fabrics and made ups, silk readymade garments, wool readymade garments, electronic goods and computer software.

1.5 Export Potentials of Products

A more detailed look at the matrices shows, where the new products have the greatest potential. For instance 46 percent of silk readymade garments are being sold in United States, which is also the largest market for woolen garments. On the other hand Russia is the biggest destination for cosmetics and toiletries, while the UAE imports the largest amount of fruits and vegetables from here. The UK and US are emerging as a destination for sports goods but Australia and Germany also show considerable potential. Similarly one of the new markets Australia seems to have a stable potential market for cotton yarn, fabrics and made ups as well as cotton readymade garments. Nigeria is also becoming a big importer of drugs and pharmaceuticals, while meat and meat product appear a prospective area in Malaysia. A detailed analysis of the matrices can thus prove a fruitful study for exporters to enable them to plan their market strategies (Susma Ramachandrttam, 1996).

1.6 Significance of Agricultural Exports – Indian Perspective

Despite the rapid growth of industrial sector India’s depend once on agriculture is significant. India being a low income agricultural economy has its comparative advantage in agricultural products and labour intensive manufactures. Agricultural exports should make a
higher contribution to the total exports than the present level of 17 percent. The reasons supporting this premise are:

1. The domestic resources cost of each rupee of foreign exchange earned is lower in agriculture than in manufacture.

2. 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 manufactures.

3. Agricultural commodity exports require the least amount of cash assistance. Net foreign exchange earnings is positive in most of the agricultural commodity exports.

4. 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.

5. India enjoys a fairly large potential for agricultural horticultural and marine products due to large geographical area with varied climate, temperature, and variety of soils accompanied by the largest coastlines in the world.

1.7 Agriculture and Agricultural Exports in India

Agriculture has been the major driving force of Indian economy. It provided approximately one-third of the Gross Domestic Product (GDP) and employed roughly two thirds of the population. The share of agriculture in the GDP has however declined in comparison to the growth of industrial and services sectors. However agriculture still provides the bulk of wage good required by the non-agricultural sector as well as numerous raw materials for industry. Moreover the direct
share of agricultural and allied sectors in total exports is around 185 percent when the indirect share of agricultural products in total exports such as cotton textiles, and jute goods is taken into account the percentage is much higher.

**Share of Agricultural Exports in Total Exports from India**

India's exports of agricultural commodities do not constitute a substantial part of the country's total exports. They have stagnated at a lower level varying between 10.22 percent of the total exports and a maximum of 20.33 percent during the two decades from 1990-91 to 2009-10. During the post-reform period of nineties the share of agricultural exports in total exports varied between a minimum of 15.91 percent in 1999-2000 to a maximum of 20.33 percent in 1996-97. The share of agricultural exports in total exports during the first decade of the new millennium has been more discouraging. Agricultural exports during this period varied from a low of 10.22 percent in 2008-09 to a high of 14.23 percent of total exports in 2000-01. Thus there is a decline in the growth of exports of agricultural commodities during the first decade of the new millennium in relation to total exports of the country.

The data relating to the share of agricultural exports in total exports also indicate a trend of fluctuation from year to year and a trend of downward movement during the two decades from 1990-91 to 2009-10.
Table-1.1

Share of Agricultural Exports in India’s Total Exports

<table>
<thead>
<tr>
<th>Year</th>
<th>Percentage of Share of Agricultural Exports in Total Exports (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1990-91</td>
<td>18.49</td>
</tr>
<tr>
<td>1991-92</td>
<td>17.80</td>
</tr>
<tr>
<td>1992-93</td>
<td>16.84</td>
</tr>
<tr>
<td>1993-94</td>
<td>18.05</td>
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<tr>
<td>1994-95</td>
<td>15.99</td>
</tr>
<tr>
<td>1995-96</td>
<td>19.18</td>
</tr>
<tr>
<td>1996-97</td>
<td>20.33</td>
</tr>
<tr>
<td>1997-98</td>
<td>19.09</td>
</tr>
<tr>
<td>1998-99</td>
<td>18.25</td>
</tr>
<tr>
<td>1999-2000</td>
<td>15.91</td>
</tr>
<tr>
<td>2000-01</td>
<td>14.23</td>
</tr>
<tr>
<td>2001-02</td>
<td>14.22</td>
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<tr>
<td>2002-03</td>
<td>13.58</td>
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<tr>
<td>2003-04</td>
<td>12.70</td>
</tr>
<tr>
<td>2004-05</td>
<td>11.08</td>
</tr>
<tr>
<td>2005-06</td>
<td>10.78</td>
</tr>
<tr>
<td>2006-07</td>
<td>10.92</td>
</tr>
<tr>
<td>2007-08</td>
<td>12.05</td>
</tr>
<tr>
<td>2008-09</td>
<td>10.22</td>
</tr>
<tr>
<td>2009-10</td>
<td>10.59</td>
</tr>
</tbody>
</table>

**Coefficient Variation (CV)**

<table>
<thead>
<tr>
<th>Period</th>
<th>CV</th>
</tr>
</thead>
<tbody>
<tr>
<td>1990-1991 to 1999-2000</td>
<td>47.00</td>
</tr>
<tr>
<td>2000-2001 to 2009-2010</td>
<td>43.99</td>
</tr>
</tbody>
</table>

**Compound Annual Growth Rate (CAGR)**

<table>
<thead>
<tr>
<th>Period</th>
<th>CAGR</th>
</tr>
</thead>
<tbody>
<tr>
<td>2000-2001 to 2009-2010</td>
<td>15.32</td>
</tr>
</tbody>
</table>

Source: Director General of Commercial Intelligence and Statistics, Ministry of Commerce, Kolkata
1.8 Need for the Research Study and the Statement of the Problem

Exports from India in general and agricultural exports in particular are constrained by two major factors viz., slow growth rates accounting for a lower percentage of gross domestic product and limited range of commodity and market composition. The later resulting in fluctuations in export earnings severe competition from developed as well as developing countries for major agricultural exports is another hurdle which Indian exports face in exports markets. Moreover agricultural exports particularly food item and agricultural raw materials have to face low income elasticities of demand in export markets in advanced markets. From supply side our exports of agricultural products have low elasticities resulting in failure to meet demand in the expanding market for food grains, vegetables, fruits etc in some of the afferent markets like the Gulf countries and the Asian neighbors. Marketing inadequacies like proper quality maintenance, timely delivery, inadequate market intelligence, credit and financial facilities to buyers too have been affecting the growth of agricultural exports. Hence the various factors relating to supply and demand elasticities, market related aspects need to be properly analyzed in the light of sluggish growth of exports of agricultural commodities. Therefore the researcher felt the need for analyzing the various aspects of agricultural exports from India. Hence the research problem is stated as “Agricultural Exports of India - An Economic Analysis”.
1.9 **Objectives of the Research Study**

The research study is conducted with the following objectives.

1. To study the export growth relationship both theoretical and historical.
2. To analyze the export growth trends in India relating to agricultural commodities during the post reform period.
3. To examine the commodity and market diversification of agricultural exports from India.
4. To identify and assess the problem areas affecting structural dimensions of agricultural exports of India.
5. To appraise the export policies of the Government in promoting agricultural exports.

1.10 **Hypothesis**

The following hypotheses have been framed for verification.

1. There is a trend of fluctuation in the exports of agricultural commodities during the Post Reform period from India.
2. There is no commodity and market diversification in exports of agricultural commodities from India during the last two decades.

1.11 **Methodology and Database**

The research study is a macro analysis of Indian exports of agricultural commodities over the past few decades. The study is based purely on secondary data obtained from different official sources viz. The annual time series data are used for the entire period from 1991 to 2012. The objective is to compare export performance under WTO regime with Post-WTO period. Sub-periods are also made
for short-term comparison. Wherever it is necessary, longer period

time series data are used. Data are obtained from World Trade
Organisation, Reserve Bank of India, Ministry of Agriculture GOI and
Tea Board of India, Directorate of Commercial Intelligence and
Statistics, Agricultural and Processed Food Products Export
Development Authority (APEDA) Publications, etc.

Time series data have been obtained about the volume and
value of agricultural exports both in rupees and in dollar terms.

1.12 Data Analysis

Simple statistical tools like percentages, averages, Co-efficient of
Variation and Charts have been used for the analysis of the data.

1.13 Limitations

The study is conducted with the following limitations.

1. The study is confined to the analysis of exports of only agricultural
commodities from India.

2. The study is restricted to cover the Post Reform era period only for
the analysis of agricultural exports from India.

3. The study is conducted for an analysis of exports of the selected
agricultural commodities only.

1.14 Review of Literature

The present study is designed to examine the discussions of
exports of agricultural commodities from India. A comprehensive
review of relevant literature in the area of research is essential as it
places the research study in its proper perspective by indicating the
amount of work already done in the related area of the study. It
provides background information to aid the researcher in designing and analyzing the research work. A large number of studies have examined the various dimensions of agricultural exports in India and in different regions. There have been a good number of published works in the form of research papers, reference books, reports, etc in the area of export trade. An attempt is made in this chapter to give a brief account of literature related to the topic of the present research work.

Sachdev (1993), in his paper "International Competitiveness and Agricultural Export of India" affirmatively stated that India being a low income, predominantly agriculture economy its comparative advantage would seem to be in agricultural products and labour intensive manufactures. An increase in the share of agricultural exports in the export basket of India may lead to better performance of her exports. The author has emphasized the theoretical fact that India's comparative advantage as per the factor endowment theory of comparative advantage lies in the exports of agriculture and labour intensive products. The author has expressed that the performance of India's agricultural exports has however been quite poor viz., (a) in comparison with other countries (b) in industrial exports and (c) in world agricultural products. The share of agricultural exports in India's total exports showed a decline from 40% 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 1960s to 0.8 percent by the end of 1980s. The author
perceives that this paradoxical situation lies in the slow growth of agricultural production due to yields wastages and inefficiency in resource use. He affirms that the basic push to agricultural exports in India along with policy initiative has to come through (a) yield improvement, (b) reduction in wastes and (c) efficiency in resource management, land and capital. He stresses that this supply management has to be supplanted by conscious export promotion efforts.

Thomas and Waheeda Sheikh (2000), in their article “Growth and Composition of Indian Agricultural Exports During Reform Era” have observed that emerging world demand for Indian agricultural commodities offers great opportunity. Indian agricultural exports have increased manifold. However the authors have referred to the fact that contribution of agricultural exports in the total exports of the country has declined. The author has made a comprehensive analysis of the composition and structural analysis of the agricultural exports from India and they have examined the changing dynamics of the contribution of individual group of commodities in the basket of agricultural exports. The author’s study has revealed that the growth of percentage share of each of the commodity groups indicates improvement for all except tea and coffee which has negative growth.

Nageshwar et al. (2009), in their study “Direction of Trade in Indian Agricultural Commodity Exports” have highlighted the changes in the agriculture and agricultural exports of India. The authors have referred to the fact that India is amongst top ten producers in the
world of rice, buffalo milk, wheat, cow milk, fresh vegetable, sugarcane, potatoes, groundnut, pepper and buffalo meat. The authors have rightly mentioned the impact of the technological developments, macro-economic reforms and Uruguay Round Agreement on the changes in the agricultural export trade. They have concluded that the progress of agriculture has made a lot of change in the net trading position of India.

Burange and Sheetal J. Chaddha (2008), in their article “India’s Revealed Comparative Advantage in Merchandise Trade” have evaluated the structure of comparative advantage in India and the change in the scene over 10 year period from 1996 to 2005. The authors have observed that India enjoys a comparative advantage in the exports of goods for which standard technology is required for the production is shifting to developing economies like India as shown by absence of Revealed Comparative Advantage of India in imports of these goods.

Sinoj et al. (2008), in their paper “Comparative Advantage of India in Agricultural Exports – vis-à-vis Asia – A Post Reform Analysis” have examined the comparative advantage of India in agricultural exports vis-à-vis Asia in the post reform era. They have studied ten major agricultural commodities group from 1991 to 2004. They have concluded that India has been able to maintain comparative advantage in commodities like cashew and oil meals. The authors have found that tea, coffee, spices, marine products have been negatively affected.
Singh et al. (2003), in their study “Prospects of Agricultural Exports of India – A Composite Index Approach” have analyzed the export value and export quantum from 1980 to 2001. Their study has revealed that coffee green coffee extract, groundnuts, shelled milled paddy, rice, pepper, potatoes, have brought prospects. Further the authors have predicted that banana, beef and veal, buffalo meat, cake of rape seed, cotton waste, ghee form cow milk, hen eggs, infant foods, lentil, oil of castor beans, oranges sesame seed, tobacco leaves and walnuts shall have also positive prospects.

Prakash et al. (1996), in their article “Impact of New Economic Policy on Export of Agricultural Commodities from India” have examined the impact of new economic policy on agricultural exports. The authors have studied the current trends in foreign trade of India contribution of agricultural exports in total exports, the share of India in the global production and export of agricultural commodities, the changing composition of major exportable commodities over time, major steps of liberalization in agricultural export import policy. They have identified the newly emerging agricultural commodities having vast potential for steady exports. They have suggested a strategy for realizing full export potential of agricultural commodities.

Mousavi and D.S. Leelavathi (2013), in their study “Agricultural Export and Exchange Rates in India – The Granger Causality Approach” have attempted to investigate the causal relationship among quantity of agricultural export and real exchange rate in India by using time series data for the period between 1980 and 2010. The
authors have used a ganger causality analysis in order to assess whether there is any potential predictability power of one indicator for the other. The study has revealed that the quantity of agricultural exports and exchange rate are not co-integrated so there is no long run relationship between agricultural exports and exchange rates. The authors have contended that the exchange rate is not a good indicator for predicting future quantity of agricultural exports. The authors have suggested that for India's agricultural exports to be price elastic, policies that increase the share of domestic goods in exportable commodities by the expansion of production base that help diversification of the pattern of export items should be prioritized. The authors have also expressed the view that exchange rate policy should not aim at export promotion in isolation instead it should balance both exports and imports growth. This in turn will help Indian firms to export more and more importantly facilitate firms to achieve a higher level of productivity and efficiency.

Nagoor (2009), in his article “Economic Analysis of Agricultural Exports of Major Developing countries Under World Trade Organization Regime” has examined the performance of world agricultural exports and performance of agricultural exports of eleven major developing countries of the world under WTO regime. The author has found from his study that during 2000-04, World agricultural exports and agricultural exports of the major developing countries have shown more variability compared to 1995-99. Further wherever agricultural exports performed well the CV value is found to
be higher. The author has found that the factors for the slowdown of agricultural exports are due to global slowdown, supply constraints and impact of Asian economic crisis during 1995-09. Further the revival in agricultural exports of the world and of the developing countries since 2000 may be due to global recovery and improvement in supply problems in these developing countries. The author has concluded that the WTO Agreement on Agriculture (AOA) has not made major impact on world agricultural exports. It is well known that domestic subsidy high tariff and export subsidy by developed countries are major constraints for agricultural exports of developing countries.

Deepa et al. (2009), in their article "Performance Analysis of Karnataka State Agricultural Produce Processing and Export Corporation" have evaluated the performance of Karnataka State Agricultural Produce Processing and Export Corporation. The authors have used ratio analysis in their study and have found that Solvency Ratio (0.70) revealed the significant dynamism of the organization. Liquidity ratio has revealed that the corporation had maintained reasonable level of liquidity position as revealed by the current ratio (3:21) and acid test ratio (0.70). Profitability ratio shows that the corporation has not maintained a fair level of profit (0.12) because it gave more importance to social obligations than of profit. The study has revealed that the operating efficiency of the corporation was high.

Sujatha et al. (2009), in their paper "Structural Changes in Pepper Exports From India - An Econometric Analysis" have found
that USA and USSR were the stable export markets for Indian pepper during pre WTO period reflected by the high retention probabilities of 0.7170 and 0.5388. Canada had a moderate probability of retention at 0.2891. On the contrary, Italy and Germany were having a probability of zero retention indicating that they were the most unstable importers of pepper during pre WTO period as well as post WTO period. The authors have suggested that there are a number of approaches enabling the removal of impediments for the day to day export business apart from quality improvement and value addition. The authors further mention that this includes compliance with stipulation under various WTO agreements for better market access, development of brands for Indian products and their promotion in major markets, development of niche markets for specified products, attracting foreign direct investments encouraging joint ventures and amalgamation.

Cong Thanh and Baldeo Singh (2006), in their article “Trend in Rice Production and Export in Vietnam” have made study of rice production trend and export in Vietnam during the 40 years from 1965 to 2004. They have analyzed Compound Growth Rates (GRS) for the period relating to rice area yield and production in Vietnam. The findings have revealed positive and significant growth at the rate of 1.34:2.60 and 3.97 percent level of probability. The authors have found that the instability analysis for overall period (1965-2004) showed that overall area yield and production were high instability as compared to each sub-period. In rice export growth rate from 1965-
2004 was very high at 25.39 and 26.09 percent per annum for export, quality and value respectively. The authors have found that there are positive and significant trends at 1 percent level of probability.

National Academy of Agricultural Sciences India (1999), in the policy papers (5) "Sustainable Agricultural Export" has observed that the new economic regime, initiated since early nineties has led to resetting of the goals of Indian agriculture towards global competitiveness and export orientation without compromising the basic premise of self reliance. The emergence of the concept of sustainability of agricultural production has made the task more difficult for all those who are associated with agricultural production systems in the country. The Report has pointed out that the present goals of Indian agriculture warrant reformation of strategies and action plans. During the past economic reforms period the value of agricultural exports has almost doubled. The share of exports in agricultural GDP has been rising. However the share of agricultural exports in total exports has remained stable. Commodities such as marine products, oil meals, rice, coffee, tea, spices, cashew, tobacco, castor oil, groundnut, sesame, fresh fruits, vegetables, pulses etc are important export earners and are being exported to more than 110 countries.

The Report has appreciatively stated that the encouraging results of goal oriented Green Revolution, White Revolution, Yellow Revolution etc enthuse the agricultural fraternity of the country to set a new goal for Agri-Export Revolution which is not only the need of the
hour but also a compulsion to strengthen and revitalize the economy of the country. While India holds an important position in the export market for a set of traditional agricultural commodities new areas and new commodities are likely to emerge such as live animals and animal products, fruits, vegetables, horticulture, medicinal plants and processed agricultural products.

Ghufran and Syed Fahad Ashraf (2012), in their article “Impact of Economic Crisis on Export Diversification of Agricultural Commodities: The Case of Indian Horticulture Market” have argued that the present external environment is conducive to export-expansion and emerge India as an important exporter for agricultural commodities. However the author have expressed the view that the post crisis slump in the world commodity market and declining commodity process forced India to diversify export of its agricultural commodities from traditional to non-traditional exports to recover from the slowdown. The authors perceive that the economic recession of September 2008 which first emerged as a financial crisis in one country has now spread its had in almost all corners of the globe, but the developing economy like India which is still in slowdown stage and not yet in recession is struggling tough to vanish this. The authors have made an attempt to examine some of the important trends of India’s exports of overall agricultural commodities in general and horticultural commodities in particular during the last decade. The authors have used Herfindahl index to analyse the export diversification in agricultural commodities. They have rightly asserted
that diversification is one of the effective measures to mitigate the risk during crisis. Hence their analysis is supposed to provide practical insights for exporters and policy makers for designing effective framework to promote exports.

The authors have found clear indications from the HI value that there has been diversification in the export of agricultural and horticultural commodities. Further the price competitiveness of India’s horticultural commodities like that of any other traditional commodities has determined their export performance over time. The authors have assertively states that while technological upgradation and associated institutional changes are identified as thrust areas for future development of the horticulture sector, exports are considered to be most important for the growth of the sector. India can retain its price competitiveness in horticultural commodities with a depreciating currency in addition to India’s low cost conditions can look forward to emerge as a major producer of horticultural commodities and thus secure reasonable market access for its agro exports, which are largely dependent on the competitive technologies that will help in enhancing export potential. The authors have concluded that the window of international demand for the horticultural products is very small. Hence a planned core marketing strategies has to be implemented to target the markets which will help in future expansion of the domestic and international markets by overcoming export barriers.

Sridhar (2006), in his analysis of “India’s Agricultural Exports: Opportunities and Challenges” has rightly observed that the most
significant positive aspect of our agricultural exports is that a majority of the items in the agricultural export basket are net foreign exchange earners with negligible import content unlike high import content in many manufactured products. Despite increase in exports in absolute value terms the share of agriculture in total exports has come down. India's major agro exports include rice, oil meals, cashew, spices, tea and wheat. Non-traditional exports include horticulture and floriculture products such as vegetables, fruits and their processed products. The author has positively asserted that there is need for further diversification in commodity composition and market diversification of agricultural exports. The author has strongly argued for making India a food factory of the world by generating more exports of food items. He has suggested that the following measures in this direction.

❖ Significantly increase level of processing and achieve high growth through value addition.
❖ Increasing India's share in global food trade from 1 percent to 3 percent.
❖ Achieve quality image for Indian food products in domestic as well as overseas market.

The author has suggested for setting up of an Agricultural Development Fund for the promoting.
❖ Export hubs which act as an integrated aggregators for agricultural product exports by providing both physical infrastructure and market related infrastructure.
Agricultural Exports Zones as may be approved by Government of India.

Export related agricultural infrastructure including cold chains, multi chamber modified atmosphere containers, storage facilities, grading, labeling and packing facilities.

Seed development business diver R&D.

Setting up/augmenting e-commerce solutions such as agri-business portals for promoting agriculture exports.

The authors have emphasized the need enlarging the production and export base of all agro-processed commodities with focus on export items in which India has proven competitive advantage and agro products that are with low volume and high value characteristics. Further strategy according to the author, should rest on encouragement of export oriented crops by providing necessary input support and developing necessary infrastructure.

Tantri and R.S. Deshpande (2010), in their paper “WTO and Agricultural Policy in Karnataka” have examined the export trade of Karnataka during the last decade. They have observed that Karnataka recorded significant gains in the export of some agricultural commodities during the last decade. Export earnings improved significantly during the last decade bit the share of agricultural exports to total exports has been declining mainly due to the growth in the export of non-agricultural commodities. The authors have highlighted some implications of AoA of WTO on the state agricultural trade. They are mentioned below:
The post liberalization era has facilitated a trade oriented environment in the state for agricultural commodities as a whole. The setting up of the SEZ's for specific commodities has contributed to this commercialization to some extent.

A new trend has been observed in the trade of non-traditional commodities as well. Export of unusual commodities like gherkins, rose onions and silk products has increased.

The authors have found the emergence of horticulture as the most important field of diversification of India's agricultural exports. However they are in favour of improvement in productivity and quality of horticultural commodities to make them globally competitive. The demand for horticultural produce is on the rise due to increasing population, changing food habits, realization of high nutritional value of horticultural crops and greater emphasis on post harvest management and value addition. The authors assert that there is also considerable potential to exploit export opportunities provided challenges like the fast eroding gene pool, rapid population growth, shrinking land and other natural resources, serious production constraints both biotic and abiotic and huge post harvest losses are properly handled.

Khandare, Dilip Misal and Digambar Kharat (2012), in their study “Indian Agriculture: Growth Performance and Trade Patterns” have examined the growth performance and trade patterns of Indian agriculture during 1990-91 to 2010-11. Their study has revealed that on an average the percentage share of agricultural imports and
exports to total national imports and exports was 4.76 percent and 14.79 percent respectively. Further they have found that the percentage share of principal agricultural products in total agricultural imports and exports was 88.19 percent and 66.09 percent respectively in 2010-11. The imports of agricultural products into the country mainly comprises of vegetable oil, pulses, wood and wood products which account for 77.71 percent of the total agricultural imports in terms of value in 2010-11.

Sharma and Dinesh Jain (2011), in their study "High Value Agriculture in India – Past Trends and Future Prospects" have observed that given the declining share of traditional agricultural commodities in production, consumption and trade, horticulture and other non-traditional high value agriculture represent an important area of potential income growth in rural areas. The authors maintain that despite the potential, the contribution of high value agricultural exports is small but increasing. The authors have found from their study that trade in high value products has increased during the last decade. Overall fresh fruits and vegetable exports represent a very small share of domestic production and agricultural exports but have increased significantly. Further during 2000s the growth rate in value of exports of rice, sugar, marine products, tea, etc. declined while high value exports grew by about 18 percent annually. The authors maintain that Indian exports face many constraints in major importing countries on account of quality and food safety issues. While there is an opportunity for increasing exports of high value
products, there is a huge and increasing domestic demand which needs to be tapped. The authors have suggested for increased investment in technology development and dissemination of basic infrastructure, etc. for development of high value agriculture.

Rajkumar and Varsha Dadhich (2008), in their article “Growth and Performance of India’s Agriculture Export” have ascertained the growth and performance of India’s major agricultural exports during the post reform period (1991-2010). In exports of certain commodities like rice and cereals India has been able to maintain its growth rate but several others like tea, coffee, pulses, sugar, etc. have been negatively affected. The authors have found from their study that even though there is an increase in the absolute quantum of agricultural exports there is consistent decline in the percentage share of primary products in total export from 17.9 percent to 10.5 percent during the post reform period. Growth of percentage share of the commodity groups indicates improvement for all except tea and coffee which has negative growth.

European Commission DGA and RD (2007), in its report “India’s Role in World Agriculture” has observed that India’s agriculture has made huge strides in developing its potential. The green revolution massively increased the production of vital food grains and introduced technological innovations into agriculture. This progress is manifested in India’s trade position where once India has to depend on imports to feed its people since 1990 it is a net exporter of agrifood products. Its agriculture is large and diverse and its sheer size means that even
slight changes in its trade have significant effects on world agricultural markets. However the report has reservations about India's capacity to compete in global markets under the current farm structure and farm policy. The report has emphasized that as the service economy grows the share of agriculture will diminish which may also have implications for India's stance on trade and agricultural policy in the future.

Athukorala (1991), in his article "An Analysis of Demand and Supply Factors in Agricultural Exports from Developing Asian Countries" has examined relative importance of external demand conditions and internal supply factors for agricultural export performance. The study is based on experiences of India, Indonesia, Malaysia, Pakistan, Philippines, Sri Lanka and Thailand over the period 1960-1986. The author has stressed the need for appropriate domestic policies by developing countries for expanding their exports under given market conditions by improving upon their market share in their traditional exports and diversifying into new export lines. The author's study has revealed that countries which maintain open type economies with flexible adjustments to changing world market conditions are able to switch from one line of agricultural exports to another. The author has observed that relative export success of individual countries emanates mostly from active supply side policies as against passive acceptance of external demand conditions. The author has concluded that external demand constraint is not a valid criterion in determining the relative emphasis placed on agriculture
and manufacturing in the formation of development policy in traditional agricultural exporting economies.

Bhalla (2006), in his paper "Globalization and Agricultural Policy in India" has observed that the demand and supply scenarios have brought out the limits to globalization of Indian agriculture. If agricultural exports are to be treated as a vent for surplus over domestic demand is not likely to be substantial. He has further observed that excessive optimism regarding export of food grains from India is more of mirage than a reality. The author has argued that instead of talking about export of food grains a more fruitful course would be to concentrate on the export of high value crops and allied agricultural products like dairying, horticulture, floriculture, fisheries, etc. Further Mr. Bhalla has contended that besides being high value these crops have much more labour intensive than food grains in which employment intensity is rapidly decreasing. It would be possible to export these products if it is possible to create a large surplus through increased investment. The author has concluded that there do exist opportunities for deriving large benefits through massive increase in agricultural exports especially exports of high value labour intensive allied agricultural products.

1.15 **Organization of the Research Study**

The research study is organized into the following six chapters.

**Chapter-I : Introduction and Research Design**

The discussion in this chapter is focused on providing an introduction to the theoretical and practical significance of export
sector and its relationship with economic growth. A brief analysis of exports and trade policy in India has been explained pointing out the significance of agricultural exports from India and the growth trends in this direction during the last two decades. The analysis is followed by emphasizing the need for the present research with particular reference to exports of agricultural commodities from India. The other aspects in this chapter include the objectives of the research study, hypotheses and methodology of the research work. Another important aspect covered in this chapter relates to a comprehensive review of contemporary research work done by other researchers in this area of export of agricultural commodities at national and regional level.

**Chapter-II : Agriculture and Agricultural Policy in India**

The focus of discussion in this chapter of the thesis related to an economic analysis of agriculture in India. The discussion is intended to provide the agricultural economy supporting the export trade at national level. The production pattern of agricultural commodities at national and its impact on exports of agricultural commodities has been analysed in this chapter. Agricultural policy in India is discussed in the second part of this chapter.

**Chapter-III : Export Performance of India’s Agricultural Sector**

The discussion in this chapter is focussed on the major trends in agricultural exports in the Post-Economic Reforms in India. The analysis in this chapter provides a good backdrop for the subsequent analysis of commodity composition and direction of agricultural exports from India.
Chapter-IV : Structural Dimensions of Agricultural Exports of India

The focus of the analysis in this core chapter of the thesis is on a detailed analysis of the commodity wise exports from India during the last decades. The time series data regarding the exports of major agricultural commodities from India have been used and yearwise growth trends have been analysed to arrive at appropriate conclusions.

Chapter-V : Country-wise Analysis of Exports of Agricultural Commodities from India

The export destinations of agricultural commodities from India have been identified and the growth trends have been established. This aspect has been the main refrain in this another core chapter of the thesis.

Chapter-VI : Summary of Major Findings, Conclusions and Suggestions

This last chapter of the thesis contains a summary of major research findings and conclusions. Based on the findings some suggestions for improvement have been offered in this chapter.
References


