Chapter – 2
Reviews of Literature & Research Design
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REVIEW OF LITERATURE AND RESEARCH DESIGN

Review of literature gives the guidelines from past Researchers and provides foundation for the theoretical frame work for the present research. The review of past literature makes the researcher to get an insight in to the methods and procedures to be followed. This will enable the researcher to gather sources and subject them to sound reasoning and meaningful interpretation. The different issues that have emerged in the review have been discussed for the formulation of research gap and objectives for the study. The most relevant literature is presented keeping in view, the objectives and hypotheses of the study.

The reviews of literatures are presented under the following heading:

A. Export of Processed Food Products.

B. Processed food industries in India.

2.1 Export of Processed Food Products

*Kedia, Ben., and Jagpeep Chhokar (1986)* examined seventeen export promotion programs with respect to their familiarity, use and benefits on the part of 49 exporters and 47 non-exporters. The findings indicated that the low levels of awareness on the part of both exporters and non-exporters have caused the export promotion efforts to be ineffective. Among the small minority of firms who were aware of the programs, the participation rate was rather high. A large number of firms surveyed indicated a willingness to utilize the programs and expected to derive considerable benefits from such utilization. The authors suggested that a greater exposure of the export promotional efforts should occupy high priority.
Sexana, Sada, Shankar, et.al. (1987) highlight the strengths and weaknesses of fresh fruits and vegetables. According to them the strengths are particularly India’s geographical location with good logistic and suitable climate placing India in a favorable position for growing a variety of fruits and vegetables round the year, which are otherwise not possible during certain particular seasons in temperature zones.

The author highlighted some vegetables and fruits like tomato, orange and pineapple that are available in plenty in India during winter season, when the same are in short supply in USA, Russia and many European countries.

In the mean time the authors identified some areas of weaknesses, absence of production base for exports at farm level, quick and safe transportation of fresh fruits and vegetables meant for exports, poor storage facilities, comparatively higher freight rates and nonexistence of strong data base and production has affected international demand pattern at prevailing price. To overcome these weaknesses, the author suggested that it is very essential to pursue a policy of exports on regular basis in view of highly competitive nature of international markets, which calls for nurturing and measures to be taken up for export oriented products development.

Islam, Nurul. (1990) provides guidance for domestic and international policy makers or horticultural exports. On the domestic front, developing countries need to strengthen their competence position by intensifying research and development efforts on cost reducing innovations in production, by expanding their domestic markets to realize economy of scale and by developing efficient system of packaging, storage, transportation and distribution both nationally and internationally.
Developing countries need to design appropriate techniques and to organize production in ways that will facilitate the linkage of large scale marketing and distribution channels with small farmers in order to take advantage of their comparatively low labor costs. Macro-economic and exchange rate policies that generally favour the export orientation of an economy also to promote horticultural exports.

The share of transport and marketing costs in the total cost or sale price of horticultural product is high. The internal transport and marketing costs and international transport and handling costs average about 50 to 70 percent, the rest being the production costs. For air-freighted products from Guatemala to the United States, the international transport and marketing costs contributed 42 percent. International transport costs play an important role in determining the competitiveness of horticulture exports in the world market.

Singh, Banupratap. (1992) opines on the agricultural needs, that “India has three distinct advantages over other farm exporters”. Firstly, the availability of a variety of agricultural and allied products. Secondly, proximity to importing countries providing freight advantages. Thirdly low domestic farm prices.

He further suggests that, there is a need for recognizing agriculture as a major economic and commercial activity at par with industry and providing it with all the essential facilities, support and incentives, to ensure faster agricultural growth and stimulate overall growth of national economy and to overcome balance of payment and foreign exchange crisis by augmenting and promoting export potential of agriculture products.

Brahma, Prakash., Srivastava, Sushila., and Lal S. (1997) studied constraints to Indian agricultural exports, which are lack of suitable varieties and improved technology of production, low production and low exportable surplus, poor quality, high cost of production. Protectional tariff in developed
countries, stiff competition in international markets, lack of publicity and R&D support, poor market intelligence, export in the form of raw materials rather than value added product, no brand status to commodities, inadequate infrastructure, poor storage, processing and packaging system, inadequate cargo space and high air freight are the major constraints in boosting the exports of these commodities.

**Hill, Charles.W.L. (1998)** opines that one big impediment to exporting is ignorance of foreign market opportunities. Moreover neophyte exporters often become discouraged or frustrated with the exporting procedures, because they encounter many problems such as delays and pitfalls. The author suggests the ways to overcome ignorance and other problems in gathering information. Government Agencies and export management companies can help an exporter in identifying export opportunities. Many of the pitfalls associated with exporting can be avoided if a company hires experienced export management agencies and consultants.

**Gopal, Rao N. (1998)** opines that though India is the largest producer of fruits in the world having a share of 10 percent and second largest producer of vegetables with a global share of 13 percent, at present the horticultural products, particularly fruits and vegetables, are mostly meeting domestic needs. Exports of these products have been very limited, except one or two crops, in spite of their growing demand and tremendous potential in the international markets.

Horticultural products exported from India are valued at Rs. 3,144 crores in 1995-96 accounting for around 25 percent of total exports of agricultural commodities. Though exports of these commodities have increased by over 302 percent between 1983-84 and 1991-92, it has come down to 80 percent between 1991-92 and 1995-96. Andhra Pradesh exports large quantities of mangoes and onion to foreign countries while grapes are exported occasionally.
The major constraints in the way of increasing export of fruits and vegetables to the international market are poor quality, early harvesting of crop without proper ripening of the fruits leading to reduced shelf life and low sugar content, lack of adequate knowledge on packaging methods and techniques, lack of knowledge of the quality standards of international marketing, neither by the grower nor by the merchant, poor storage and transport facilities, neglect in handling of fruits and vegetables at various stage of picking, packaging and transportation.

Thus what is required for export promotion of fruits and vegetables in the state in dissemination of knowledge on international standards of quality, export policies, duties, subsidies and taxes, freight, etc., from growers to the exporters and strict supervision and control for maintaining the quality of the export commodity.

Reddy, Subba. et.al. (2000) and others opined that marketable surplus is initiation by certain factors such as size of land holding (larger the size of holdings greater the quantum of marketable surplus). Level of production (higher levels of production help to generate larger marketable surplus). Higher productivity results in higher production. Productivity is influenced by the efficient use of various resources employed on the farm.

Gencturk, E. F. and Kotabe, M. (2001) argued that the usage of export promotional programs influence both export efficiency and competitive position of the firm. The authors developed a model which integrates export marketing involvement and the use of government export promotion assistance programs as critical variables affecting export performance and managerial differences among the firms involved in export marketing to ascertain the robustness of and replicate the observed differences in firms’ export marketing involvement behavior.
The finding showed that export marketing involvement of firms and firms’ usage of government export assistance programs are important export success factors. The authors concluded that the relevance of export assistance programs and the role they play vary depending on the dimension of export performance being considered.

**Henson, Spencer. and Loader, Rupert. (2001),** examined the impact of sanitary and phytosanitary (SPS) measures in developed countries on developing country’s exports of agricultural and food products. The authors identified the problems that developing countries face in meeting SPS requirements and how these relate to the nature of SPS measures and the compliance resources available to government and the supply chain. They also examined the impact of the WTO's SPS Agreement on the extent to which SPS measures impede exports from developing countries.

The authors highlighted three levels, by international institutions such as the WTO and the international standards organizations, by developed countries that implement SPS requirements, and by developing countries themselves. The WTO and international standards organizations clearly need to consider means to facilitate the more effective participation of developing countries. This might involve, for example, changes to procedures and the provision of technical and other forms of assistance.

In turn, this will require willingness for institutional reforms. Second, developed countries need to be more aware of the needs and special circumstances of developing countries and to take these into account, whenever possible when promulgating SPS measures. This does not imply that developed countries should be expected to adopt lower requirements in terms of the level of protection to human, plant and animal health.
Rather it suggests that SPS measures should minimize, wherever possible, incompatibilities with the systems of production and marketing applied in developing countries. Finally, developing countries themselves need to implement institutional structures and procedures that best enable agricultural producers and food processors to comply with the SPS requirements they face in developed country markets. It will take action at all three levels to overcome the barriers faced by developing countries as a result of SPS requirements and thus enable their better participation of members in the world trading system for agricultural and food products.

Alpay, Savas, Ismet Yalcin, and Turker Dolekoglu. (2001) studied export performance of firms in developing countries and food quality and safety standards in developed countries. The finding showed that the vertical integration, environmental performance and quality and safety index have significant positive impact on the export performance of the firms.

According to Turkish firms the authors suggested that firms based in MENA countries should try to improve their products with respect to quality and safety features; this will have positive impact on their exports into developed countries. Moreover, the current trends in food quality and safety standards in developed countries indicate that products with deficiency with regard to these standards will be banned.

In the mean time the authors identified the firms should take required steps towards products with improved quality and safety features. Government will also have important roles in such a transition. Steps towards food products with higher quality and safety should be taken not only for preserving export markets but also for public health considerations.

As per the research study in IIFT (2002) “competition in global market is a multi-dimensional concept. It involves not only price competition but also ability to deliver the contractual quality consistently at the appropriate time and
place”. The study further pointed out Indian infrastructural inadequacies which include pre and post harvest practices, often limit the ability of Indian exporters to satisfy the needs of foreign buyers. The study stresses the need for radical transformation of agro-industry and export of agricultural products in order to convert customers' satisfaction into consumers delight.

Rae, A., and Josling, T. (2003) studied the processed food trade in developing countries. They used a comparative-static approach to quantify the impacts of trade liberalization in developed and developing countries, and in agriculture and manufactures.

They concluded that in relation to processed food export growth lowering of agricultural trade barriers by the developed countries resulted in increased processed food exports from all of the modeled developing regions, their total value increasing by 6 percent above the base value, at the expense of exports from developed countries. Further (non-agricultural) trade liberalization by the developed countries made little change to this result, although some developing countries less-well endowed in agricultural resources expanded non-agricultural production in response to greater access to markets in developed countries.

Trade liberalizations made by developing countries were then introduced into the analysis, first for agriculture and then for all production sectors. Reductions in developing countries’ agricultural tariffs led to reallocations of resources between the agricultural and non-agricultural sectors, but also within agriculture. Exports of processed foods expanded further in some developing countries, for example Korea where high tariffs on raw agricultural commodities imposed an implicit tax on processed food production.
Finally, extension of developing country tariff reductions to non-agricultural commodities allowed some of these countries to further exploit their comparative advantage in textiles and/or manufacturing at the expense of agricultural and processed food production. Other developing countries, such as those in Central and South America, South Asia and Sub-Saharan Africa, further increased their processed food exports.

For the developing countries, it would appear that comprehensive trade policy reforms taken by themselves are about as significant as those of the developed world in terms of contributing to growth in processed food exports from developing countries in total. They allow those developing countries with a comparative advantage in food production, such as those of Central and South America and Sub-Saharan Africa, to expand exports and to take advantage of increased access to other developing countries such as Korea, China and ASEAN as well as to developed country markets.

**Sharma, Kishor. (2003)** examined factors determining India’s export performance in a simultaneous equation framework. He applied annual data for 1970–1998. The results indicated that demand for export increases when India maintains the real depreciation of the rupee. Thus, inflation should be kept lower than major trading partners and reliance on flexible exchange rate be increased to ensure that the real depreciation of the rupee is maintained. Export supply is positively related to the domestic relative price of exports and a higher domestic demand reduces export supply.

This implied that tight monetary and fiscal policies are necessary especially at the time of high growth to check domestic prices and demand pressure. Foreign investment appears to have statistically no significant impact on India’s export performance although its coefficient has a positive sign. Similarly, he found no evidence to claim that infrastructure investment has an impact on export supply.
Patnaik, Gokul. (2004) concluded that “the technical, managerial and organization skills of the marketing personnel will have to be upgraded if they have to make an impact on the farmers. “The author listed out some thrust areas such as Agriculture Business Management, Total Quality Management and its implications, post harvest management, grading, standardization, quality assurance, information technologies, emerging areas in agriculture marketing, organic food and market led extension.

Makki, Shiva S., Somwaru Agapi., and Bolling Christine. (2004) examined the determinants of foreign direct investments by the U.S. food-processing industry in developed and developing countries. The finding showed that market size, per-capita income, and trade openness significantly affect U.S. food-processing firms’ decisions to invest abroad, but their influence differs between developed and developing countries. Economic development was positively associated with FDI in developing countries but negatively associated in developed countries. Market size was a major determinant of FDI only in developed economies.

Trade openness seems to be important for sales by U.S. foreign affiliates in both developed and developing countries and for exports to developed country markets. They concluded that under favorable circumstances, new opportunities will develop for food processing in emerging markets in Africa, Asia, and South America, where the demand for processed food is growing and costs of production are still relatively low. Fast-growing developing economies, including China, India, Malaysia, Indonesia, Brazil, Mexico, Chile, and South Africa, are emerging as potential growth markets for U.S. processed food products.

Kidane Hailu. (2005) examined the impediments and opportunities for Australian processed food exports on world export markets. The finding of his study have revealed that Australia is highly restricted in its access to world
processed food markets by the impact of export subsidies, tariffs and other trade barriers of overseas markets. The economic and political problems including rigid import controls are barriers to maintaining export sales on some of Australia's traditional Asian markets. Higher input costs also contribute to Australia's less competitiveness on world food products export markets.

The author concluded that, there are opportunities for Australian processed food products in the emerging markets in Asia and other world export markets. He suggested that Australia needs to give priority to diversification of export marketing, particularly in the emerging markets in Europe, Africa, Asia, the Americas and Middle East. The improvement in tariff barriers in Asia, the Americas and other emerging export markets is expected to provide improved market access and opportunities for Australian processed food.

Australia is also expected to benefit from the recently concluded free trade agreement with the USA and Thailand through the liberalization of trade. Australia should therefore implement appropriate measures to increase productivity, improve cost efficiency, and undertake market research and promotion in order to be more competitive in the long run and to capture a sizable market share from its major global competitors.

Jayasuriya S., MacLaren D., and Mehta R. (2006) examined the issues and challenges facing firms exporting from developing countries. They illustrated that the difficulties that processed food exporters in developing countries were facing with the variety of food safety standards being set by governments in food importing developed countries.

On the basis of the results of a sample survey of firms engaged in exporting processed food products, the characteristics of the firms and the nature and consequences of the difficulties faced were identified. In particular, it was found, using a constructed index of the food safety standards that these
firms face, together with a gravity model of exports from India to seven developed country markets, there were substantial potential losses to India from the strictness of the standards set and from the variation in these standards amongst the seven export destinations.

The finding showed that in several instances the standards set exceed those recommended by the Codex Alimentations Commission. While those standards could be challenged in the WTO, the evidence suggests that, in general, developing countries do not possess the legal or financial resources to mount a case in the Dispute Settlement Body.

Ashfaqul Md. I. Babool., and Michael, Reed R. (2007) studied the constraints and challenges exporters in Asia and the Pacific face in exporting food and food products in world markets. They estimated regressions based on an extended gravity model to determine the possible influence of food safety standards on export flows of six Asia-Pacific countries to ten importing countries.

The finding showed that the value of exports in food and food products was negatively affected by aflatoxin standards: the greater the food safety standards, the lower its restrictiveness, and higher the bilateral export flows. A one percent increase in food safety standards decrease exports by approximately one percent. This means that large changes in food standards (which are common these days) will have salutary, deleterious impacts on food exports by developing countries.

They concluded that economic activities in the exporting and importing countries (specifically their GDPs) have significant impacts on food exports. These variables are moving upward each year so these factors will have a positive affect on developing country food exports in the future. The results also indicated that prices and distance did not have significant impacts on food exports of developing countries. If distribution systems are established between developing and developed countries, changes in prices do not seem to deter international trade.
Shinoj p., and Mathur, V.C. (2008) studied the changes in comparative advantage status of India’s major agricultural exports vis-a-vis other Asian players during the post-reforms period (1991-2004). The findings showed that, the exports of certain commodities like cashew, oil, meat products, has been able to maintain its comparative advantage, but several others products like tea, coffee, spices, marine products, etc have been negatively affected. The authors concluded that India has been found losing out its comparative advantage in export of some of the agricultural commodities to other Asian competitors during the period after economic reforms.

Kumar, Nalini Ranjan., Rai, A.B., and Rai, Mathura. (2008) studied the performance, competitiveness, major destinations and determinants of cucumber and gherkin export from India. They used export performance ratio to estimate that the competitiveness and log linear type of demand function to determine the export determinants. They observed that India has made tremendous progress in the export of cucumber and gherkin products during the past 15 years (1990-2005). The export has increased by about 128.5- times with an impressive annual compound growth rate of 37.46 per cent, as against only 4.38 per cent in the world market.

They identified that the major export destinations for cucumber and gherkin as France, USA, Russia, Belgium and Spain. An increasing and high value of Revealed Comparative Advantage (RCA) and a positive and increasing value for Revealed Symmetric Comparative Advantage (RSCA) have indicated high potential in their export, particularly for the provisionally-preserved and prepared/preserved products.

The finding showed that One per cent increase in volume of international trade in cucumber and gherkin may increase the demand from India by 5.96 per cent. This indicates that India is highly competitive in export of cucumber and gherkin and has ample scope to further increase its export. They concluded that exchange rate is a more dominant determinant of export from India than price of commodity.
Jongwanich, Juthathip. (2009) examined the impact of food safety standards on processed food exports in developing countries. The author developed a panel data econometric analysis of processed food exports in developing countries. The Sanitary and Phytosanitary Standard (SPS) was incorporated into the model to capture the impact of food safety standards.

The empirical model showed that food safety standards imposed by developed countries could impede processed food exports from developing countries. This could emerge because practically, SPS is less transparent than tariffs or quotas. There is ample room for developed countries to tweak the standards stronger than necessary to achieve optimal levels of social protection, and to twist the related testing and certification procedures to make their competing imports more competitive.

In addition, limited supply-side capacity of developing countries, especially in terms of resources, manpower as well as institution, constrains the countries to overcome food safety standards. Because of the potential benefits that could emerge from imposing food safety standards such as a reduction in transaction costs and trade friction, developing countries should view SPS not just as a trade barrier but also as an opportunity to upgrade quality standard and market sophistication. Supply-side capacity in developing countries needed to be improved, especially upgrading the agriculture sector.

Multilateral efforts are also needed to mobilize additional financial and technical assistance to help redress constraints in developing countries in meeting the required food safety standards imposed by developed countries.

Jongwanich, J., and Magtibay-Ramos, N. (2009) studied the key characteristics and growth patterns of processed food exports in developing countries. The authors examined the determinants of structural change towards processed food exports in developing countries and used panel data econometric analysis. They suggested that trade policy openness, large domestic markets, good macroeconomic management especially in terms of price stability adequate financial support and infrastructure are the key factors influencing the shift towards processed food exports.
**Yazdani, S., and Vaezi, L. (2009)** examined the current level of protection in agricultural sector in Iran and other countries. The results indicated that the PSP (Producer Support Policy) in Iran is much higher than the OECD (Organisation for Economic Co-operation and Development) and is close to Japanese and Korean PSE percentage (i.e. 58 and 64 percent).

The broadest indicator of support representing the sum of transfers to agricultural producers (PSE), expenditure for general services (GSSE), and direct budgetary transfers to consumers, reached 83 billion Dollars per year in 2001-2005 which is almost equivalent to 13.4 percent of Iran’s GDP in this period which is much higher than the OECD average and implied a relatively high burden of agricultural support on Iran’s economy.

**Patil, Suresh S., Vishweshar, Shripad., Kulkarni, and Girish N. (2009)** examined the impact of liberalization and export policies on India's export and import of agricultural commodities. They used secondary data from various publications and through the internet and analysis was based on time series data for the last II years. For the analysis of data they employed the techniques like index numbers, coefficient of variation, and semi-log trend analysis.

The finding showed that the liberalization policy of India in 1991 and WTO had positive impact on export and import of agricultural commodities. This policy had positive effect both on imports and exports. However, the gap between imports and exports have been widening therefore, the government should work out strategies to increase its exports and decrease the gap.

The authors suggested the government to promote exports may adopt some strategies like improvement of post-harvest technology, improvements in agricultural productivities, increase irrigation potentials and encourage the farmers to adopt least-cost production methods to reduce cost of cultivation through strengthening of extension services and to provide necessary infrastructural facilities at the regional level to promote farm exports.
Serrano, Raúl., and Pinilla, Vicente. (2010) studied the causes of the growth of international agricultural and food trade in volume terms from 1951 to 2000. The finding showed that income growth has been the principal reason for this expansion, while exchange rate stability and the real price of agricultural products played only a minor role.

Multilateral trade liberalization and trade costs, given their long-term stability, are not elements that could have stimulated their growth. Finally, the intensive liberalization of trade which took place in various economic regions, especially in Europe, became a key factor in promoting agricultural trade among the countries participating in regional trade agreements. The authors concluded that the determinants of trade growth for these goods were different from those for other goods and other periods.

Kumar, Nalin C. (2010) identified the potential difficulties in the Indian agricultural export supply chain that hamper the delivery of goods which ensures compliance with the importer–mandated regulations.

The author examined the issues of food safety and trade facilitation and the problems of quantifying the trade effects in the context of Indian marine exports and argued that a comprehensive consideration of these issues leads to a better policy solution and aids in the quantification of the trade effects.

The application of the SPS regime in the agricultural commodity exports in India was focused only on the food safety dimension. In the post-WTO period, the complexity of SPS regime seems to have significantly constrained market access in the developed countries, particularly EU and a few OECD countries for Indian agri-food products. To a great extent, this can be attributed to imperfect information.
The particular sampling techniques for testing, and the practice of frequently changing the sensitivity levels for testing results, the resort to emergency notification clauses and suggesting a testing procedure or an equipment which does not exist in the exporting country are indeed trade distorting.

A major challenge with regard to regulations on commodities that developing countries face is the fact that there are no commodity-specific standards defined at the international level. However, the restrictiveness of such regulations is not clear as far as the genuine aspects of quantification are concerned. Several challenges still get in the way of empirical research in SPS measures and trade facilitation.

The relationship between SPS measures, trade facilitation and trade flows is a complex and challenging empirical design and estimation. However, conceptually distinct measures of the variables and the simulation under various regulatory scenarios will give a better feedback for decision makers at the policy level.

Idsardi, E. (2010) studied the exports of South Africa’s traditional agriculture and indentified ten agricultural export products which showed a significant increase in exports over the last years.

The author applied a gravity model to investigate factors such as transaction cost, market size, the stage of economic development, exchange rate fluctuations and the impact of trade agreements on the export flows of the selected products. The finding of gravity models were population (physical market size), GDP of the trading partner (economic market size) and GDP of South Africa (supply capacity). The author suggested some following guidelines from a marketing perspective for the future of South Africa’s agricultural trade diversification.
The enhancement of food security in the rest of Africa by focusing on the exports of grains to large populated countries. Economic and physical market size does play an important role in agricultural export growth, so those markets should be targeted first, whether it’s a bulk or niche product.

Economic growth in South Africa spurs growth in agricultural exports, and growth in agricultural exports stimulates economic development. Thus a synergetic relationship between the two exists, possibly rationalised by an increase in investor’s confidence. South Africa’s neighboring markets are small and are not able to absorb large amounts of agricultural exports.

The stage of development of an export market is not of trivial importance to agricultural export growth. Thus export diversification should focus on markets at all stages of economic development: developing, emerging and developed.

**Jaydeep and Tanya Sinh. (2010)** suggested that, to achieve India’s percentage share of global merchandise trade within the next five years, the new trade policy (2009-14) should propose measures for improvement in infrastructure related to export, bringing down transaction costs, and providing full refund of all indirect taxes and levies.

**Yannopoulos, Peter. (2010)** studied the usefulness of the export assistance programs available to Canadian exporting firms. A number of managers of small and medium sized Canadian firms were interviewed about the usefulness of certain support and advice services available to them through, mainly, the various governments and through private organizations. The author found that not all support services are equally useful or used to the same degree by Canadian exporters as some of these services are found more and others are less useful to the firms that participated in his study.
Most useful services were foreign market information followed by training in export documentation, finding agent/distributors, identifying and arranging exhibitions, and information about product standards. Least useful services were language training, export business planning, advice on logistics, and help with producing sales material. When the participating firms were segmented by stage of export development, percentage of revenues from exports, and size, the analysis of Variance showed some differences among the different firms.

But the large majority of Canadian SMEs reported very little difference in the perceived usefulness of the export assistance programs. He suggested the government not to discontinue programs that are found less useful but to put more emphasis on those services that are most useful and used most often in order to maximize the effectiveness of these export support efforts.

Gahukar, R. T. (2011) in his study on Food Security in India expressed several strategies for crop production and food distribution and emphasized the need for a second Green Revolution. He suggested that the government should reform the agenda on agriculture, particularly in regard to tenancy legislation, contract farming, the freeing up of credit and insurance, introduction of risk-mitigation instruments, public expenditure (with a shift from input subsidies to rural infrastructure, particularly water and power), removal of adverse price signals through administratively determined output prices/MSP, research and extension, removal of state controls (production, storage, and distribution), removal of intermediates, creation of skills, regulation and enforcement of seeds and fertilizers, and encouragement of off-farm employment.

Promotion of postharvest operations can be initiated at the village level to increase farmers’ income. Farmers should be given subsidy and fixed cash support to ensure a fair living standard. This rate can be revised every year depending upon availability of food and market prices.
The Mission for a Green India and the National Water Mission, in conjunction with National Rural Employment Guarantee Act (NREGA), can certainly enable planning for a new dimension of sustainable growth that also enhances livelihood options. Schemes such as Rashtriya Krishi Vikas Yojana, the National Horticulture Mission, and the National Food Security Mission have been introduced to maximize returns to farmers by getting states to increase their investment in agriculture and food stocks.

In the context of Farmers Income Commission the National Food Security Mission may provide an excellent opportunity for states to leverage funds to promote agricultural growth and introduce a second Green Revolution. This would empower people and their participation would make it possible for them to feed themselves with assured food security.

Angles, S., Sundar, A., and Chinnadurai, M. (2011) examined the production and export performance of turmeric in India for the period from 1974-75 to 2007-08. The authors stated that the growth in production and export of turmeric has been reported significant, because of the high demand coupled with inflation. Instability index has been worked for the production and export for pre liberalization and post-liberalization periods. Instability has been observed high for production, export and prices of domestic and international markets and domestic and international prices have shown high integration.

The authors proposed Markov chain model for the assessment of direction of trade. The data regarding country-wise export of turmeric has shown that the previous export share retention for Indian turmeric has been high in minor importing countries (pooled under others category) (87 %), followed by UAE (49 %), Iran (41 %) and UK (35 %). The countries such as USA and Japan have not been the stable importers of Indian turmeric. The findings showed that the growth of turmeric export is satisfactory but the direction of trade gives a warning. Liberalization and globalization had a well-

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defined impact on the turmeric export and this gives a positive signal. The authors suggested that more importance should be given to the R&D on quality of turmeric.

Looking into the importance of international demand, export earnings and domestic needs, government should increase and stabilize its outlay of funds for research on turmeric under the spice development programs. The government should be more conscious regarding the policies pertaining to the above aspects and also WTO implications to protect Indian farmers and to maintain Indian monopoly in international markets. Appropriate export promotion strategies and policies have to be evolved to maintain the market share of Indian turmeric.

**Francis, Smitha. (2011)** cited that the recent trends in India’s export and import structures point to its increasing participation in FDI-driven production networks centred on ASEAN. She concluded that neglect of the development needs of the domestic agricultural sector and manufacturing base for expected gains from service sector liberalisation with ASEAN, together with the known problems in service sector liberalisation, are likely make India’s employment and livelihood issues even more challenging.

**Mohan Sushil., Khorana Sangeeta., and Choudhury Homagni. (2013)** applied the case study of coffee, tea and cocoa to analyse whether tariff escalation constitutes a barrier to market access that thwarts diversification efforts of developing countries into exports of value-added agriculturally processed products.

They also examined the extent to which non-tariff barriers act as market access barriers that constrain developing countries from developing their exports of agriculturally processed products. The finding showed that tariff escalation is not the main barrier; rather it is the prevalence of non-tariff
barriers (including domestic non-tariff barriers) that limits the ability of developing countries to increase their agricultural processed exports. The authors suggested that important policy implications in terms of the emphasis that trade negotiators and policy planners should place on addressing non-tariff barriers.

2.2 Processed food industry in India

Jugale, V.B. (1998) studied the different channels of export marketing and reviews that trend of exports of Maharashtra and also deals with the various problems and constraints facing horticultural exports in the state. The major items of exports of horticultural products from Maharashtra State include banana, grapes, mango, onion, orange etc., and vegetables and processed products.

The role of the co-operative is significant in motivating the producers to cultivate exportable quality products. Private traders, co-operative and government organizations normally handle export business. The export business faces a number of problems with regards to productivity, quality, post-harvest operations, infrastructure, market intelligence and marketing finance etc. The study suggests the need to formulate a strategy to promote market oriented / export oriented production techniques, post-harvest handling and integration of policies and institutional help to promote exports.

Anandaraj, N., and Venkatapirabu, J. (1999) India is a potential world market player for fruits and vegetables, especially processed and value added agricultural commodities. It is the largest producer of fruits in the world and stands second in vegetables production after China. Its share in world production in these two items in 11 percent and 7 percent respectively. Because of its varied agro-climate conditions which are of temperate, subtropical and tropical nature it can produce a wide variety of fruits and vegetables.
A number of processing units have been set up in different parts of the country. These units are capable of processing many kings of fruits and vegetables. According to the estimates of APEDA (Agricultural and Processed Food Products Export Development Authority), India was exporting about 1,45,000 tonnes of processed fruits and vegetables in the year 2000, 2001 and 2002. In spite of the bright and prosperous opportunities for processed and value addition of agricultural commodities and exporting them, there are many crucial problems lying as hurdles across the development path of these industries.

Subrahmanyam, K.V. (2000) explains the benefits of both the processing industries and the producer to have linkages between them out of three types of linkages viz. contract farming, captive farming and co-operative farming. In the author opinion, most of the processing industries feel that contract growing of fruits and vegetables with farmers needs to be promoted on a large scale with government help. It is in this context that the contract farming has come into being as a horticultural business proposition. The ministry of food processing has also formulated a scheme to encourage contract farming.

Gandhi, VasantP., and Namboodiri, N.V. (2002) examined regulated wholesale markets for fruits and vegetables in the Ahmadabad city area. They studied infrastructure, operation and status, and the value chain - from farmer to wholesaler to retailer to consumer. A variety of facilities and services are provided at the three regulated wholesale markets studied. The rating by farmers, commission agents and retailers indicates that location is the most important, followed by godown facility, yard maintenance, weighing, price display, and banking facilities.

They found that the Agricultural Produce Market Committee of Ahmadabad (APMC) has put up significant infrastructure including three regulated wholesale markets with many facilities and services. The objective of this is to improve the marketing and its efficiency for fruits and vegetables.
They highlight the extent of contact between farmers and commission agents as low and needs considerable improvement. They also showed that the adoption of open auctions in the markets is very low and so much potential for gain in market efficiency has not been realized.

The finding showed that, the share of the farmer in the consumer rupee works out to only 48 percent for vegetables and 37 percent for fruits. Further, the explicit marketing costs work out to only a very small percentage of the price difference between the farmer and the consumer, and the profit margin works out frequently to 80 to 90 percent of the price difference. These figures are indicative of relatively poor efficiency of the marketing system despite the presence of the APMC and the regulated markets.

The authors suggested that the measures required to improve this efficiency should include wide and necessary adoption of open auction, measures to increase the number of buyers and sellers in the market, improvements in market infrastructure such as storage facilities, cold storages, loading and weighing facilities, and improving transparency through supervision, and making available up to date market information through various means including internet at the market.

**Sidhu, M.S. (2005)** cited India is the second largest producer of fruits and vegetables in the world but yet the country's share in the world trade of horticultural products is miniscule - less than 1 per cent and the commercial processing of fruits and vegetables is less than 2 per cent. The meager domestic consumption of processed items is due to economic reasons and due to habit. Indian consumers by and large prefer fresh fruits and vegetables.

The domestic market mostly comprises of defense purchases and hotels and restaurants. Nearly 45 per cent of total processed fruits and vegetables are exported.
The household sector mainly uses the items like ready to serve beverages and ketchup. The processing industry's growth in the post-reform period is attributed to various fiscal relief and policy initiatives like the delicensing of food processing industries, declaring a number of them a high priority industries, permitting foreign equity investment up to 51 per cent of the paid up capital as also removing restrictions under the MRTP Act. In spite of all these policy initiatives the capacity of utilization of the industry has remained below 50 percent in the post-reform period.

The Indian fruit and vegetable processing industry cannot be at par with those in the developed countries on account of various economic, technological, institutional and other factors. Increasing the value addition to 35 per cent and processing to at least 10 percent of production would require an investment of Rs 1, 50,000 crore in the next 10 years. About 53 per cent of this investment is proposed for five states vise, Maharashtra, Tamil Nadu, West Bengal, Kerala and Karnataka.

It is a big challenge to attract huge private investment in a processing industry, already facing the problem of meager demand. Therefore, as long as there is endemic poverty and low purchasing power, it is difficult to build a heavyweight fruit and vegetable processing industry in India.

Goyal, S. K. (2006) highlights that the consumption of fruit and vegetables in India and the status, growth and potential for fruit and vegetable processing. According to him the production of fruit and vegetables grew at an annual rate of 4.35 and 5.74 percent, respectively during 1992-2002. Consumers’ expenditure on fruit and vegetables has been rising over the years in India. Consumers’ demand for fruit was more responsive than was the demand for vegetables to increased income.
The finding showed that the number of processing units has grown by about 3.68 percent per annum during 1992-2003. In the meantime, the author identified that the capacity utilization was about 37 percent in 1992, which has now increased to about 47 percent. Because of low capacity and poor capacity utilization, processing is at a very low level and with regard to exports; there is a lack of processable varieties of fruit and vegetables. The author suggested that, firms must be innovative and need to anticipate and respond to the requirements of consumers for their survival and sustained growth.

Rakotoarisoa Manitra. and Gulati Ashok. (2006) in their study on Competitiveness and trade potential of India’s dairy industry determined how world dairy policy reforms would affect dairy production and trade in India and the competitiveness of its dairy industry. They measured nominal protection coefficient for India’s dairy products to determine level and change in competitiveness between 1975 and 2001.

They estimated parameters of domestic demand for and supply of raw milk and whole milk powder to determine how a world price increase would affect domestic milk production and whole milk powder exports. The finding showed that India’s dairy products lack export competitiveness. But with less distorted world dairy markets, India could be competitive and would emerge as a net exporter of whole milk powder, benefiting dairy industries and milk producers in India.

Khosla, Rajiv., Sidhu, H. S., and Dhillon, Sharanjit Singh. (2008) opined that the Agro processing industries in India have not been developed on scientific lines, as is the case in the developed countries of the world. Lack of proper infrastructure, inadequacy of capital, lack of entrepreneurial environment and the absence of proper policy framework are some of the constraints that did not allow this industry to grow on scientific lines.
They studied the performance of agro- industries in Haryana state and analyzed what their relative position as compared to the other states of the union. They identified a set of agro-processing industries like Manufacture of bakery products, spinning, weaving and finishing of other textiles, sawing and planning of wood, Manufacture of special purpose paper, Manufacture of prepared animal feed, Manufacture of leather footwear, Knitting in mills and Dressing and dyeing of fur etc., on the basis of pattern, performance and scope of the industry within the state and comparative advantage vis-à-vis other states of India.

They suggested a major effort is required from the government as well as the private sector to provide critical infrastructure in order to bring a new revolution, which is agro-industrial centric in nature.

Sreenivasa, Murthy K., and Himachalam Dasaraju. (2011) in their study on problems of fruit processing industry in Andhra Pradesh finding that Fruit Processors’ effort to run the Industry throughout the year with other fruits is not successful due to lack of market facilities and involvement of huge capital and the interest burden on the Industry being heavy. For Working Capital each Bank is charging 12% to 15% as rate of interest which amounts to lakhs of rupees and which is more than the profit margin earned. Sometimes many Units have become sick due to lack of Working Capital and support from Financial Institutions.

The heavy burdens of Interest accumulated month on month have become a big liability. The study showed that The Fruit Processing Industry in Tirupati Region is facing several financial crises in the District. They suggested that the fruit processing industry needs lot of encouragement from the Ministry of Food Processing Industry, APEDA and Horticultural Department of Andhra Pradesh and also the entrepreneurs need financial assistance by way of subsidized loans from the government, subsidized power, modernized packing system to export fruit pulp and serious efforts should be made to expand external market as processing industry is rapidly increasing throughout the country.
This task of expansion of foreign market should be undertaken by the Central government, state government of Andhra Pradesh, Ministry of Food Processing Industry, APEDA and other organizations specially created for the purpose.

2.3 Research Gap

The literature survey revealed major constraints for slowdown of India’s export. They are trade policies, infrastructure, lack of managerial and organizational skills of Indian exporters, research and development, quality management, absence of proper communication channels and so on. Therefore in the view of the above constraints revealed by the research studies which resulted under performance of export trade of agriculture products, specifically point out APEDA and its role and its purposes in promoting agricultural export trade and put forth the following questions to take up the present research study:

- Has APEDA addressed the issues raised by the above said research studies?
- Should agricultural products export trade through the government’s agri-trade promotion bodies, APEDA are attaining the objectives?
- How, the APEDA is providing assistance and services to agro-based export oriented units?
- Are APEDA assisted EOUs of agri-products achieving commodity concentration and diversification of agri-product export?
RESEARCH DESIGN

2.4 Statement of the Problem

The several research studies revealed that Exporters of Indian agricultural processed food products are handicapped on account of constraints. The major constraints faced by exporters are:

- **Marketing**
  - Packaging
  - Promotion

- **Infrastructure**
  - Storage and Grading
  - Environmental Control

- **Quality**
  - Quality Control System:
    - ISO Series
    - HACCP
    - TQM
    - KOSHER

- **Research and Development**
  - Technology Development through R&D

- **Transportation**
  - Transportation Assistance to Individual Countries

Keeping in view the above facts the present research study is undertaken to study the promotional schemes of APEDA in overcoming the constraints faced by the EOUs of agricultural processed produces.

2.5 Need for the Study

In Karnataka, there are 194 agro-based export-oriented units operating agricultural produce export. Karnataka produces a wide variety of agricultural products which are exported. Agricultural export from Karnataka accounting for about 20 per cent of export of agricultural commodities of the country.
Agriculture export marketing has always been riddled with a variety of problems with a number of intermediaries ruling the roost. This is primarily because exporters are not aware of certain potential risk areas in order to find remedies to accelerate export of agricultural processed food products and inadequate post harvest infrastructure for packaging, processing and marketing is a major limitation.

APEDA is a government’s agricultural export trade promotion body. There is a need to study the specific schemes of APEDA in all the aspects of export operation of agricultural processed food products starting with product development, adaptation, selection of suitable distribution channels, infrastructure, market promotion, media, compilation and dissemination of market information from time to time.

Hence the present research study has been taken up with a focus on schemes of APEDA in agricultural processed food products export in Karnataka.

2.6 Objectives of the Study
The main objectives of the study are:

i. To study the Export Promotional Schemes for Agricultural Processed Food Products in India.

ii. To examine Export Promotional Schemes implemented through APEDA.

iii. To examine Export Promotional Schemes through APEDA for selected EOU’s of Agricultural Processed Food Products in Karnataka.

iv. To study the effectiveness of APEDA’s schemes in Export of Agricultural Processed Food Products.

v. To evaluate the Quality Development Scheme of APEDA.

vi. To offer suggestions based on the study to improve the Export of Agricultural Processed Food Products.
2.7 Hypotheses

In carrying out the research study, the following hypotheses were formulated:

Hypothesis 1: “The export promotional schemes of APEDA positively impact on export performance of EOU’s of Agricultural Processed Food Products.”

Hypothesis 2: “Realization of Expected Export Performance of EOU’s is positively associated with the adherence to the International Quality Standards.”

2.8 Scope of the Study

The study is confined to the role played by the APEDA through its Schemes in development of Agricultural Processed Food Products export in Karnataka. The study specifically aims at evaluating the comprehensive schemes and support by APEDA to accelerate the export of selected agricultural processed food products EOU’s in Karnataka.

2.9 Methodology

The study is purely descriptive and analytical research. The survey method was undertaken in APEDA and all sample units of EOU’s assisted by APEDA. Both primary and secondary data were used for the study.

2.10 Sources of Data

2.10.1: Primary Data

The primary data were collected through questionnaire from the sample units. In addition to the questionnaire, schedules were also used to collect unpublished information from the APEDA.
2.10.2: Secondary Data

The secondary data is collected to supplement the primary data. The annual reports of sample units, Publications of APEDA, CMIE, Economic Survey of India, Publications of Ministry of Commerce and Agriculture, Bulletins Working and Occasional Papers of EXIM Bank, Occasional Papers and Statistics on Indian Economy of RBI, Periodicals and Journals of Foreign Trade of Agricultural produce, Publications of IIFT etc., were used as important sources of secondary data for the study.

2.11 Sampling plan

The study is based on random sampling by selecting 20 EOUs from a total of 194 EOUs in Karnataka. This accounts for 10.31% of the EOUs of Agricultural Processed Food Products in Karnataka.

2.12 Techniques of Analysis

The collected data for the study is used to compute the statistical results. The important tools of statistical analysis of data were Average, Standard Deviation and Co-efficient of variation, depending on the relevance and requirement to analyze the data for the study.

In addition to these techniques, t-Test and Analysis of Variance (ANOVA) were used for testing the hypotheses. Computer packages were used for analyzing the data and the assistance of statistician was also made use for arriving meaningful results.

2.13 Limitation of the Study

The study has been focused on exporting units located in Karnataka. The units under study are producing only certain type of products. There are a number of factors involved in production of agricultural products. Soil condition, topography, involvement of the farmers etc., are the determining factors in the products produced.
Therefore generalizing the findings across all the states may not be appropriate. The data considered for the study is between the financial years 2007-08 and 2011-12. There is fluctuation in the currency exchange rates which has been more volatile in the recent past. This has some effect on the study.

2.14 Chapter Scheme

The result of the research study has been presented in the following six chapters.

1. Introduction
2. Reviews of Literature and Research Design
3. Schemes of APEDA in Export of Agricultural Processed Food Products
4. Profile of Sample Export Oriented Units in Karnataka
5. Analysis and Interpretation of Data
6. Summary of Findings, Conclusions and Suggestions
   - Appendix
   - Bibliography