

Chapter – 3

Review of Literature

3.1 Introduction

Researcher feels that the literature is like a Co-guide for any researcher, as if not only gives an idea on the work done in the past and assists in explanation of problem area and also provides basis for integration and discussion of findings. Fleishman (1969) said better ways are needed to generate research findings from laboratory studies to operational settings, from one experimental study to another and from one operational setting to another. Literature of related study is as important as any other component of the research process. Review of literature in any research is the first step to insight about the topic as it makes link between the research proposed and research /studies already done. The review of literature involves the systematic identification, location, and analysis of documents containing the information related to the research problems. The major purpose of reviewing the literature is to determine what has already been done that is related to your research topic and how your research will be different from which already has been published on the subject /topic. That's why researchers feel that the literature is like a Co-guide for any research.

The study also stress on the fact that the FPI is as important to the nation as agriculture. Growth in the FPI has the ability to impact a large number of people. Processing would take care of both the seasonal supply and the fluctuating demand of agricultural production. The extensive forward and backward linkages of this industry ensure that it is an important employment generator. The opportunity in the FPI lies in fulfilling the basic diet required for the people of the country. It is Indian middle class that holds the key to success for the processed food market in

India. Further, the study highlights that status of the Indian Agro & FPI, with specific emphasis on the domestic market as well as global market scenarios. The study also deals with the regulatory and policy framework in India with regard to the industry. It is hoped that the study report would be beneficial for all those concerned, and would lead to better understanding of the sector.

The study also stressed on the fact that the progress of the industry towards value addition is low because of the outdated infrastructure, limited knowledge of market requirements and lack of trade enquiries from major markets due to lack of confidence. These areas of fish processing industry have been neglected so far. With the increasing number of working housewives, who can afford to pay a better price, ready to eat products which are already becoming popular in our urban supermarkets. This industry should tap this vast potential market.

S. Uma Devi (1973-74), examines the backward and forward linkages of the plantation sector and other sector in Kerala's economy by the using Rasmussen's method. For the estimation of the linkages author construct a 24 x 24 input-output table for Kerala at purchaser's prices for the year 1973-74. After the evaluation, results of this study was that the plantation sector figures high forward linkages industries only in term of output and income multipliers but not in terms of wage or employment multipliers. Plantation sector has a low backward linkages effect in terms of output, employment, wage and income multipliers. The other plantation sector has low backward linkage effects, namely tea, coffee, cashew processing, coir and coir products and the edible oil industry. Comparing the backward forward linkages of agricultural and animal husbandry sector with the plantation sector, find that agricultural and animal husbandry sector shows high backward and forward linkages on account of wage, employment and income multipliers. And continues to do so even when import leakages are included (except in the case

of income multiplier). The other sectors which show a high backward and forward linkage without including import leakages are Colton textiles, chemicals, non-metallic products, metals, construction and electricity. The limitation of the study is that it includes only registered manufacturing industries not include unregistered industries because, the lack of direct data on the input-output coefficients of unregistered sector.

K.L Sharma (1975) highlights agriculture production linkages between agricultural and non-agricultural and service sectors in Fiji Islands economy using an input-out table (1972) and covers 23 sectors at 1972 producers. These sectors are aggregated into eight main sectors namely, agricultural, food processing, other manufacturing, mining, utilities, transport and communications, building and constructions, distribution, government service, and other services. The study calculated backward-forward linkages and inter industry linkages to know the relationship among the various sectors. The result revealed that the overall manufacturing sector including FPI having higher backward linkages with agriculture sectors, the coefficient of backward linkage is 0.51 and forward is 0.02. Agricultural sector has the least inputs requirements (backward linkage) compare to non-farm sectors and contribute highest 80% to gross value added in the economy. The author concludes that manufacturing industry is highly dependent on agriculture sectors then vice-versa. Therefore, he suggests that agricultural production needs to be stepped up in order to support production in the other sectors.

C. Rangarajan (1982), examines the linkages between agriculture and industry in India and tries to determine how close are the ties between agricultural performance and industrial growth. He also highlights influences of agriculture on industry through three way of linkages- production, demand, and savings. Investment, production linkages, agricultural and industry are linked to each other through the input-output relationship. The output of the agriculture sector

provides inputs to manage industries. Demand Linkages- rural demand influenced by output changes in agricultural and by the terms of trade. If the terms of trade improve in favor of the agriculture then demand for industrial consumption goods will increase in comparison with savings and investment linkage. The important finding of study is that the consumption linkages are much more powerful than production linkages. He also points out that agricultural performance may affect the economics influencing savings and investment. The conclusion of this analysis is that agricultural exercises a reasonably strong influence on the growth of industry. The simulation shows that 1 percent growth rate in agricultural can by itself generate a rate of growth of 0.5 percent industry. This is a strong influence considering that industrial growth is not totally dependent on agricultural growth rate which is Limited. Industry cannot rely on agricultural alone to stimulate growth.

Ramon E. Lopez (1985), paper estimates a dynamic model of the food manufacturing industry in Canada. The major objectives are estimated a set of aggregate supply response, factor demand and investment equation for the Canadian FPI. The method of the analysis is based on the theory of adjustment cost as developed by Treadway. An important finding of the study is that the hypothesis of instantaneous capital adjustment to changing market conditions is statistically rejected. Capital stock adjustment to optimal levels takes approximately two and one-third years. Another results is that although the industry is responding to price changes, a general pattern of inelastic factor demand and output supply prevails in the short run, intermediate UN, The short-run and long-run elasticity tend to substantially differ, and overshooting among cross-price elasticity is not uncommon.

Bal Dev Singh (1988), examines the impact positive or negative, of the imported technology on agro-FPI in the 1985-88. The import policy of government of India have placed

equipment and machinery for food processing, food Industries and packaging under open General Licence (OGL). Thus the machinery for fruit and vegetable cutting, curing, coking, deseeding, stem removing etc; macaroni, noodles, spaghetti, vermicelli and pasta products and other manufacturing machines freely imported. One of the major positive impact of the imparted technology is that some of Indian large houses like Kotharis and Modis were entered in the FPI with foreign financial participation. Some other companies like Nestle, Lipton and Brooke Bond have expanded their range of products to include chocolates, cocoa butter, soluble coffee and tea, etc. so on the positive side, it could be said that the impact of foreign technology also stimulates the Indian industry to improve their products designs, presentation and marketing methods. On the negative side, apart from cultural alienation, it leads to methods for consumer products and large scale television and media advertising, etc. tying up scarce available resources to unproductive activity.

Ashok Mathur (1990) examines the nature of the relationship between agriculture and industries with the help of secondary time series (1950-51 to 1980-81) and cross-sectional data at National, regional and sub-regional level. Author finds out the correlation between the agricultural growth rate and the growth rate of the overall industrial sector and also between growth rate of agricultural and overall industrial sector and also growth in registered manufacturing were both non-significant for the three-decade period. These relationships were also analyzed with the help of time series data for seventeen major states. Only in Tamil Nadu and Kerala were positive correlations between agricultural and industrial growth somewhat significant. In addition, there was an experiment to exist significant negative relationship between agriculture growth and movement in the consumer price index, on the one hand, and a negative relationship between changes in consumer price index and industrial growth rate on the other.

The cross-sectional view of the relationship between agricultural and industrial growth brings out two main points, first, district level analysis shows that this relationship at a given point in time is much stronger than inter temporal agro-industrial growth relationships. This result indicates that given a sufficiently long period, agricultural and industrial development both tend to move together. However the result reveals somewhat unexpectedly that long-run relationship between the emergence of informal industries sector and agricultural development is much less strong compared to that between industrialization in the organized non-housed segment and agriculture development.

Finally, the link between agricultural and industrial growth through the channel of income distribution, as revealed by state level cross-sectional analysis, conforms only in part to the views which finds explain in the literature an Indian economic development. Where the impact of agricultural growth incidence of rural poverty does emerge to be negative, the relationship of the letter to industrial growth is statistically insignificant on the other hand, income inequality emerges to be positively associated with industrial growth performance, and not negatively as often visualize.

Sukhpal Singh and Vinod Vyasule (1990), the study examines the structure and growth of FPI in the Punjab on the bases of secondary data. The sources of the factory and small scale sector are the annual survey of industries (ASI) and the state directorate of industries respectively. The data on the unorganized sector are scanty the only available sector being the directory of manufacturing establishment (DME) survey conducted in 1978 and in 1884-1885. During the eighties, the factory sector has been the most important sector in terms of its contribution to employment and output, through the number of factories in this sector was just 900 and 2.800 in small scale sector in 1985. These 900 units mostly in the private sector

employed about 40,000 workers and 22% of the industrial output and 13% of industrial employment. In the factory sector of the state on the other hand, the small scale food processing sector in the state was selectively small only 3% of the total small scale units, 5% of employment, 13% of fixed investment and 17% of production in the early eighties. It further highlights that processing in Punjab is dominated by only three industries, two of them are rice mills and oil mills, the third industry is bared and biscuit units, 70% of employment, 60% of fixed investment and 90% of production in the small scale FPI. By the late eighties, this share went up to 73% in employment and 74% in fixed investment. But there was a relative stagnation in the share of rice shelters, due to shortage of raw material paddy.

Bhupat M. Desai and N. V. Namboodiri (1992), analyze development and financial performance, with special reference to working capital management for the four specific FPI, which are food grains milling, edible oilseeds processing, sugar factories and dairy products. These industrial factories account for more than two- thirds of output from capital labor employed in all food-processing industries in the organized sector alone. Based on criteria and considerations related to development and financial performance, the study found out that, the order of priority among these four FPI for their development is the same as stated above. The study also stresses that these industries are directly dependent on agricultural and its sustainable development is essential to their performance and for this, strengthening backward and forward linkages for transfer of a new technology by institutional system for agricultural development is essential.

Vibhooti Shulka (1992), paper has been an attempt to articulate issues and questions relating to rural non-farm employment in India and pose them in a policy relevant framework. The investigation was conducted with the help of sample, but analytically based regression

model. The major finding of the study point out towards a need for future micro level analysis of consumption linkages, labour market behavior, the technology of agro processing industries and the rural roles of small urban areas. Further author also highlight that agro processing industries are biggest source of non-farm employment directly and indirectly but lack of rural infrastructure facilities the performance of rural industry not so good. The policy implication of the exercise suggest the stimulating impact on this sector of a strong agricultural development strategy, promotion of rural non-agricultural enterprise in a manner which strengthens comparative advantage without creating inefficient location distortions and on public capital expenditure on road and irrigation projects.

Vikram Malhotra (1994), this book has been originally compiled by Price Waterhouse Associates with assistance of ministry of FPI. The book provides a profile and important of Indian FPI and sub sectors of food processing sector, in sub sectors of FPI this book highlights the status of some sub sector i.e. fruits and vegetables processing industry, mild products, poultry and meat products, fisheries, grain processing beer and alcoholic beverages and other packaged foods like bread, biscuits and other bakery products, confectionery, chocolate, soya based products and ready to eat foods and drinks products. This book also highlight the status of Indian agriculture sector during the study period that has a land area of 3.29 million square kilometre of which land available for crop agriculture is 182 million hectares. Approximately 72% (128 million hectares) of the cultivated area is under food crops. He also mention the after green revolution from being a net importer of food grains, India has become self sufficient and is an occasional exporter.

Further this book discussed the business environment and opportunities for domestic investment as well as foreign investment welcomed with economic liberalization. The special

attractions include a huge potential market within country, the availability of raw materials and latent potential for further development of raw material resources and the high priority accorded to this sector by the government of India's abundant manpower, with technical education and skills at various levels, is an additional attraction. The costs of labour in India are considerable lower than the costs in developed countries. India offers an attractive low cost base for locating an export oriented unit in the food processing. The location advantages are considerable.

Sandip Sarkar (1995), examines the size structure of the agro - industry in India and discussion about factors affecting the size structure of industries such as (1) locational advantages for enterprise processing dispersed raw materials, having limited local market and with relatively high transport costs, (2) process advantages where manufacturing operations can be reported, handicrafts and operations requiring simply assemble mixing or finishing operations. Author also calculated backward and forward linkages of agro-industry based on input-output transaction matrix table of Indian economy (1983-84). It is commodity x industry absorption matrix of 115 x 115 sectors. For calculating the size of market, authors have taken the sales figure which is total output minus change in stocks. These data are taken from the final demand matrix of 115 sector input-output matrix of India for the year 1983-84. For this analysis, data on certain characteristics are presented in percentage share of each size group to total for each industry group. It is shown in 21 agro-industry sector to match the sectoral classification of 115x115 input-output matrix, the procedure for conversion of NIC (National Industrial Classification) code at the three digit level in to input-output transaction code.

This paper indicates that OAE (Smallest size group in unorganized sector) is disadvantageously positioned in terms of backward linkages, raw material concentration index and size of market factors. Further, raw material concentration index and direct backward

linkages are positive and significantly signifies that agro-industries using larger proportion of raw material inputs also have added advantage in geographically concentrated availability of raw materials used in production.

Okezie (1998) went further to explain that the prevention of post harvesting food losses is a challenge for governments, non-government organization international organization. Food processing is a major element in this fight. The well-organized improvement of food processing at household level will improve food safety and nutrition. The developments of agriculture depend on processing to reduce food losses and improve nutrition. Author also mentions that, food processing issues the necessary training for women must be at the top in the agenda regarding FPI issues.

Sanjay Sinha, Saurabh Sinha (1999), This paper traces the growth of the food processing sector and analyses the constraints and opportunities and discusses the prospects for growth and assesses the future of the small- scale fruit and vegetable processing sector. Sinha and Sinha highlights that Indian FPI is now generally regarded as a 'Sunrise Industry', its growth is expected to generate employment, reduce post harvest losses, increase from income, and contribute substantially to the gross domestic product and to reduce rural urban migration. The total estimated output of processed fruits and vegetables in 1989 was around 2, 40,000 tones and value approximately Rs.2,800 million. More than 60% of this was contributed by the organized sector apart from consumer preference for fresh fruits and vegetables, high prices differentials between fresh and processed products here also the cause of slow growth of the domestic market for processed fruits and vegetables product. After the liberalization and globalization, government realized the importance of the inter-linkages between food processing and agricultural growth and industries extremely large export potential. Further change in policies

related to the FPI, such as all agro based products have been completely exempted from excise duties and allow FDI between 51 and 100 percent in equity holding be permitted. Authors also categories licensees industries such as large scale, small scale B, small Scale A, cottage scale, Home scale and also highlight the growth of the fruit and vegetable processing industry from 1976 to 1990 by the secondary data from Ministry of FPI and Annual Survey of Industries.

K.J.S Satyasai and K.U Viswanathan (1999), examined the change in the Indian agriculture over time that have bearing on the industry agricultural linkages and measures the trend in the agricultural industry linkages. The authors used secondary data on inputs and outputs from the various sources such as, Economic Survey, National Accounts Statists (NAS) and centre for monitoring Indian economy (CMIE). The authors examine how the change in agricultural sector helped to strengthen the linkages between agricultural and industry during the post green revolution period. Any positive change in agriculture output then demand for industry output will increase. The share of commercial crops, fruits and vegetables increased over time period in the gross cropped area. Consequent production increment created demand for post harvest handling facilities such as processing packing and transportation etc. The share of the value of purchased agriculture inputs, viz, fertilizers, electricity, diesel, irrigation and pesticides in the value of inputs (excluding labor) increased from 5.28% during (1950-51) to 39.15% during (1970-71) and further to 87% during (1995-96) the authors also highlights urban consumption preferences in favor of processed foods. The size of the market for these products showed a substantial expansion during the 1990s; recorded growth also showed that the influence of agriculture on industrial outputs measured in terms of elasticity showed as increase, despite deceleration in the recent periods. That is, the elasticity of real GDP from the industrial

sector with respect to the same form agriculture is higher in the 1980s and early 1990s than in the pre 1980 period.

Simeon Ehui and Christopher Delgado (1999), paper highlights technological change on the agro-food processing sectors in sub-Saharan Africa (excluding southern Africa). A thirteen-commodity, seven-region version of the GTAP model was used and the database reflects economic conditions in 1995. Experiments were also performed on primary sectors such as grains, non-grains and livestock, to permit comparison with the agro-processing sectors. The simulations generated the following conclusions; Even a small, one-shot increase in the productivity of crop and livestock production in Africa (1.5%) was seen to lead to large welfare gains for the region (of the order of U.S. \$1 billion 1995), and to significant diversification of economies out of agriculture. This crucial point is out that, due to technological change the agro-processing industries themselves, a 1.5 percent cost reduction in the overall primary sectors appears superior to a 3 percent unit cost reduction from technical change in the agro-FPI themselves, according to a number of criteria: (a) domestic welfare improvement; (b) global welfare improvement; (c) domestic capture of welfare gains; and (d) raising the ratio of the wage rate to the price of food. He also express that technological change in the production of non-grain crops (including fruits, vegetables, oil seeds, etc.) to produce processed food appears to be superior to other types of raw-material-saving technical change. Ratios of wage rates to prices also increase, suggesting potential benefits for the poor. Employment of unskilled labor increases overall. Labor-using rather than labor-augmenting technical change in the agro food processing sectors is a more appropriate strategy.

Chilukuri Maheshwar (1999), highlights the case and the effect of post harvest losses due to gaps in cold chain storages and lack of other infrastructure facilities in India, India has

emerged as the second largest producer of fruits and vegetables in world but 30% get wasted annually due to gaps in cold chain like poor infrastructure, insufficient cold storage capacity, unavailability of cold storages, poor transportation infrastructure etc. The result of this wastages influence in instability in prices, farmers not getting remunerative prices, rural poverty resulting in farmers frustrations and suicides. Author also highlights retail prices of onions fluctuation between US\$ 1.0 during shortage period to US\$ 0.1 Per. K.g during glut period, the farmers getting a remunerative price of US\$ 0.01 (11) Per kg. of produce. In any cases onions are dumped along the highway as the onion prices do not cover even the transportation expenses incurred by the farmers who get stuck in a vicious debt trap. Suicides case of onion farmers in Maharashtra is no longer shocking news. The Onion story gets replicated for tomatoes, cauliflowers and watermelons, etc. Author further highlights the operating costs for Indian cold storage units are a whopping over \$ 60 per cubic meter per year compared to less than \$ 80 in the west. These factors make setting up to cold storages difficult, unviable and uneconomical. About 30-35% of these losses can be reduced by transporting the freshly harvested fruits and vegetables in refrigerated containers thus closing this gap in the cold chain.

Rajago Pal (1999) gives some Indian experiences on empowering the woman groups by providing the assistance of economics. These women groups are engage in the several activities such as food processing, bee-keeping, basketry, gem-cutting, weaving and knitting etc. A new culture is provided by the women groups where they were responsible for making decision to identify consumers or market and credit management.

S.D. Sivakumar, R. Balasubramanian and N. Srinivasan (1999), examine the linkages between rural and urban area and the effect of policies on agro-industries for the creation of

employment in the rural and urban were analyzed. The study area Dharmapuri district of Tamil Nadu was selected. The economy of this district is primarily based on agriculture and allied activities such as agro-industries like, sugar mill, jiggery unit, rice mill, flour mill, edible oil mills, fruit processing ginning and spinning mills, edible oil mills etc. In order to analyze the linkage effects of Agra-industrialization, a general equilibrium framework, Social Accounting Matrix (SAM) was constructed. One Taluk, namely, Pappireddipatti was selected randomly and considered as local economy for the study. In this Taluk, there were 41,136 households. The sample size of households was fixed at 102 (0.25% of total households.) Comprising an equal number (34) of cultivator households are agricultural labor and nonfarm households. The sample size of sago and starch industries was fixed at 25% of the population (seven units). The sugar factory and all the three other Agro-industries were included in the sample as there was only one in each category. There were classified under service and financial institutions was proportionate to the population under each group. The result of intersectoral linkages are that, The agricultural sector (22.48) had high forward linkages with the other sectors in the region and low coefficient of variation, implying that the output of the sector was utilized by all other sectors. It was possible due to the presence of agro-industries in the region. However, the backward linkage of the agricultural sector (0.43) was lower. The backward linkages of sugar industry (1.12), sago and starch industries (1.29) and other agro-industries (1.02) were higher than their forward linkages. The low forward linkages within the indigenous sector must be due to higher exports in each category. The backward linkage of other industries (0.69), service (0.64) and trade (0.70), were the low order maintain because the lack of their requirements was imported from across the border. Author also examines the employment multipliers in this study. The employment

multiplier was very high in sugar industry (14.14) followed by financial institution (6.07) and sogo and starch industries (3.94), the employment multiplier was the least in the service sector.

K. Subrah manyam Subrahmanyam K.V. (2000), this occasional paper is divided into nine sections and gives an overall picture of fruits and vegetables processing Industry. Section II, deals with linkages between producers and processors, One of the problems faced by the fruits and vegetables processing Industries in the Asia is that, the supply of raw material (FAO expert Dr. Mittenndory 1974). Still at present time the same problem persists in India, for example, lack of availability of right processing varieties of fruits and vegetables and high cost of raw material. In addition to it the supply of raw material and management which will influence the costs and returns of fruits and vegetables processing units in the short as well as long run need to take into consideration both. The production and marketing factors with a procurement price policy which will establish long-term linkages between the producers and processors and the model developed will be very useful in this regard.

Rudrani Bhattacharya (2000), in his article we explores the long debated issue of the impact of agricultural development on industrialization in the safeguard of a third sector that is agro industry, which directly interfaces influence with agriculture and industry and their by provides a link between the two sectors. It is seen that agricultural productivity gain promotes industrialization in a small open economy while it may not promote industrialization in a closed economy. A three sector model is developed in this paper, having agriculture, manufacturing and agro industry manufacturing. Two major inputs unskilled and skilled workers used in these sectors. Apart from using unskilled and skilled worker agro-industries also uses agricultural products as raw material. However in general, it seems natural that it is a less skill intensive sector than others manufacturing industries. Agriculture sector uses land and unskilled labour for

the production. Land is owned by a separate class of people namely the landlords. Author also found that in the presence of agro-industry, a small primary-exporting country can develop comparative advantage in manufacturing through increasing agricultural productivity. Agro-industries contributes to on average, 37.6% of the total manufacturing value added (FAO, 1997) and 30-40 % of GDP of the developing countries (WB, FAO, and UNIDO). According to the annual survey of the industries 46 % of all manufacturing industries in India are agro-industrial and they contribute 22 % of the manufacturing value added (Gandhi, Kumar, Marsh, 2001). These are more empirically plausible result for developing countries which are indeed small open economies.

Janet Bachmann and Richard Earles (2000), This paper covers post harvest practices suitable for small-scale operations, and points out the importance of production and harvesting techniques for improving quality and storability. Various methods for cooling fresh produce are discussed for example appropriate production practices, careful harvesting, and proper packaging, storage, and transport all contribute to good produce quality. Post harvest handling is the final stage in the process of producing high quality fresh produce. Being able to maintain a level of freshness from the field to the dinner table presents many challenges. A grower, who can meet these challenges, will be able to expand his or her marketing opportunities and be better able to compete in the market place. Further author also highlights the problems to storage of agricultural products that most storage crops require low temperatures and high humidity, two factors that don't come together easily. Several others require low humidity and low temperatures. Potatoes prefer temperatures of 40–60° F and 90% humidity. Onions and garlic like it cool—32°—but require less humidity—about 65–75%. Winter compress prefer

temperatures of 50–60° F, but dry. That's four different types of storage for vegetables that will hold a month or more: cold and humid; cold and dry; cool and humid; cool and dry.

David Holland, Eugenio Figuera B. & John Gilbert (2001), paper is based on 1986 input-output table as updated to 1995 by the GTAP (Mc Dougall, R.A.A. Elberhri, and T.P.Truong. 1998). Throughout the Chilean economy the estimation on the data from Global Trade Analysis Project had taken for the fifty different industries of the Chilean economy in term of the relative economic contribution of these industries and to examine the role of the agriculture and food processing by the use of input-output model. The conclusion of the study has shown the basic flow is relatively self-evident. Most of the agricultural commodities are sold mainly to other industries as input to be processed into food or sold directly to country's households. Virtually all industries in Chile are grateful, some of their sales to their linkages with agriculture and food for related manufacturing sectors like petroleum, chemicals and mineral products. This linkage accounts for about 12 to 14 percent for their total sales .in the utility sector as well as transportation and business services industries, 10 to 12 percent of their total sales are linked to final demand for agricultural and food products.

Dr. V.S. Gopalakrishnan (May 2002), the report has outlined what is the sectoral contribution of agriculture to GDP, and how our economy has declined drastically. The decline is particularly significant in the 1990s with the liberalization process showing favored growth in the manufacturing and services sector. While the grain harvest increased three times over the last half century, in India its population has also grown roughly three times in the same period. India has reached a plateau as far as area devoted to food grain production is concerned. Thus any increase in food grains production in the country has to come through increase productivity. Further value addition should come by way of increased food processing.

Pimbert and Wakeford (2002) focused on the voice of poorest of poor in this paper to analyze the condition of them for providing food security, farming and rural development in Andhra Pradesh. They emphasized on government's vision of state food system to civilize the food and farming in Andhra Pradesh and a jury (Prajateerpu) was setup for more justice, fairness, human treatment and to improve the democratic system.

K.P. Kachru (June, 2002), has analyzed "Growth, Status and Prospects of Agro-Processing Industries in India". The study outlined the growth of agro-industry and FPI through historical perspective, historical perspective shed the light on how our FPI which was in nascent stage during British rule, now developed as a vibrant and modern agro FPI. Further the study focuses on the trends in agricultural production especially with regard to diverse agro-climatic conditions and consumer preference. The study has laid stress on extent of post harvest loss and its remedy through FPI. It has been estimated in the study that post production losses in food commodities is up to the tune of 75,000-1,00,000 crore per annum. Lastly, the study has conducted export trends and opportunities, quality control, standards and GATT & Sanitary / Phyto-Sanitary measures relating to FPI.

Sawminathan (2002), highlights the problems of the Indian agriculture sector and how we can improve this problem with the help of agro-processing industries. During the study period GDP growth rate was less than 6% which were below the planned target. Agricultural growth has dropped to 0.9% from the average of 3.9% in 1980 and 3.3% in the nineties. So the problem of agricultural sector needs to be tackled from two different angles, first to increase productivity of agriculture and delivery system and second to increase the farmers earning through efficient and effective value addition and processing. Value addition to raw food material in India is only 7% while it is 23,45 and 188 in china, Philippines and UK, respectively. Further author also points

out that agricultural growth has a strong multiplier effect across the economy. Many of the models shows that the modest incremental growth 3% in the agricultural sector would lead to another 2.6 growth for manufacturing taking the overall GDP growth up by 1.7% closer to 8% mark and above 10th plan ambitions, in the last author also recommendations that to meet the emerging challenges, agriculture must diversify in favors of high-value enterprises. The emphasis should be on production of high-value commodities e.i. Fruits, vegetables and fish with enhanced quality, specific nutritional and processing characteristics, than increasing production. Pricing policies also need to be changed, linking it with the quality of the produce area product is the basis for fixing per unit price, just as fat content in milk, the higher protein quality quantity of wheat, better aroma or cooking quality in rice and shelf life of fruits and vegetables.

N.K Chaurla, MPG. Kurup and Vijya Poul Sharma (2002), analyzed the profile of livestock products categorized into three groups namely milk, meat and inedible products including byproducts livestock products are all highly perishable and require immediate processing/preservation to enable them to move from productions to the demand centers. Markets for livestock products are generally unorganized, traditional and fragmented apart from for the organized milk and meat sectors. The organized sector comprised three sectors namely the government, the cooperative and the private and represents less than 20% of the total milk produced in the country. A little cover 30% of milk produced in the country are retained in producer household and 80% of it is traded in traditional channels. Some 45% of the milk produced are consumed as liquid milk. The organized sector handles only 10% of it as processed and largely packaged milk. Further author's highlights that meat and poultry groups are the second most important contributor to the value of livestock's. The meat is generally sold to the consumers without any processing and value addition. Hoverer, in the recent years some

processing capacities have been created in the private sector, which inter alia includes processing of 5.1% less buffaloes per annum, 1200 tones of carcass/ year, 46.2 Laos. Poultry birds/annum, 108 Lucas Chickens/annum 90.000 pigs/ annum and 1220 less eggs /annum during the study period.

D V S Sastry, Balwant Singh. Kaushik Bhattacharya. NK Vnnlkrishan (2003), this paper examines the Linkage of growth among the agricultural, industry and services sectors of the Indian economy by using an aggregated 3x3 1-0 table consisting of agricultural industry and services for different years such as, 1968-69,1979-80,1989-90,1993-94, Further, to capture the dynamic Links in the detail, the analysis is carried out using econometric techniques. Author also highlights the limitations of 1-0. tables occupy voluminous data collection; they are generally not available on an annual basis. Empirical results of this paper is that due to 1 percentage fall in agricultural output likely to cause set back to the industrial output by 0.52% points. Causing a combined effect of a fall in industrial sector that will lead to a fall in service sector by about 0.24% point. The fall in all the three sectors resulted into a deceleration of 0.52% point in the overall growth of gross domestic product at factor cast (GDPR) the results of the study thus highlight the need for a proper balancing of the ‘inward looking’ (emphasis on agriculture) and ‘outward looking’(enhancing the scope of exports) strategies. The paper suggests that these two divided strategies could generate adequate demand leading to a sustainable high growth path in the Indian economy. The conclusion, which emerges from the study, is that the share of agricultural sector in GDPR has declined and its contribution in terms of generating demand for the other sectors of economy, especially the industrial sector, has become mare prominent as reflected through the 1-0 table 1993-94. Even the share of agricultural sector is around one fourth of GDPR and supports approximately two-third of the population in the country. So in the

second generation reforms focuses should be on stimulating demand in the agricultural sector and rural areas by way of deepening economic activities. Despite the substantial increase in the share of the services sector in GDP over the year, the I-O tables suggest that the agricultural sector still plays an important role in determining the overall growth rate of the economy through demand linkages with other sectors of the economy.

Vasant Gandhi, Gauri Kumar and Robin Marsh (2003), examines the importance of agro-industry in India in the context of their role in rural and small farmers development. They also highlight Mahatma Gandhi's emphasis on village based agro industry during India's independence movement, and today it is central part of the national development plan (see India planning commission 1996). Researchers use secondary data from annual survey of industries which show that 46% of all factories in India are agro-industrial and the contribution is about 22% of the manufacturing value added and nearly 43% employment in manufacturing industry. The finding of the paper also indicates that 37% of the agro-industrial firms provide food and 63% provide non food products. They highlighted that only 18% of total fixed capital is in agro industry, compared to other industries 43% share in industrial employment. The study find out that, agro industry continues to be relatively labour intensive and capital saving in comparison with other industries. Its continuing role in promoting development and reducing poverty will depend on its capacity to contribute to the small farm income and rural employment particularly among landless poor.

Institutional arrangements for linking horticultural production, marketing and processing by M. Suddha and T.M. Gaganana (2003), this paper receives the development and performance of agricultural marketing institutions in India with a focus on horticulture production. The mechanism to link production with consumption is also examined with the help of a few case

studies of tomato, mango and grapes production. In contrast to the case of tomato, mango and grapes growers from the different parts of India. It highlights the institutional linking among the farmers, marketing and processing units. A number of measures have been taken by the government of India to promote horticultural sector. The budget allocation was increased significantly from 20 million in the VII plan to Rs. 10000 million in the VIII plan for the horticultural sector. The Government of India also established the National Horticultural Board (NHB) in 1984 and the Agriculture and Processed food products Export Development Authority (APEDA) in 1988. A number of cooperatives were established, some of these are Mother Dairy Scheme of the National Dairy Development Board (NDDB) New Delhi, FRESH (Hyderabad, Andhra Pradesh), and the Horticultural producers Cooperative Marketing and Processing Society Ltd. The main purpose of these cooperative societies is to bridge the gap between producers and consumers and to minimize the role of the conventional market intermediaries such as PHC and commission agents. The study also highlight that there is an urgent need for institutional support for facilitating the linkages between productions and processing. Government of India announced number of incentives to promote such type of linkages. However it should be noted that this type of incentive only promotes a contractual agreement and kind of forward-backward linkages between production and marketing through processing.

Anjani Kumar and Praduman Kumar (2003), paper explores the opportunities of trade liberalization and challenges put for word by the Sanitary and Python Sanitary (SPS) and Technical Barriers to Trade (TBT) agreements with special reference to India's fisheries exports. The main objectives of this paper are to estimate the cost of performance of food safety measures and its implications on the competitiveness of the fisheries sector, to estimate demand and supply elasticity of fish and fishery products and the like impact of food safety regulations on the

fisheries sector index small country assumption. Author use primary as well as secondary data fill-feel these objectives. The cost of compliance with SPS and TBT measures were estimated on the basis of primary data collected from the fish exporting firms. The competitiveness of fish and fishery products were measured by computing nominal protection coefficient (NCP) as a ratio of domestic price to border price of fish, it was computed under the exportable hypothesis with and without complying with food safety measures. A ratio of less than unity implies a competitive advantage. Further author highlights, many developing countries including India are facing difficulties due to lack of investment in this sector. The investment requirements for HACCP plants are large as most of the capital goods related to plant need to be imported from the developed countries. The installation cost of HACCP plants varies from Rs 10 million to Rs. 25 million further; on an average an export processing firm is estimated to spend about Rs. 2 million per year to maintain a HACCP plan.

G.K. Chadna and P.P. Sahu (2003) this paper is based on secondary data which collect from various round of National Sample Survey (NSS) and Annual Survey of Industries (ASI). Authors extend their analysis to a three-digit level of industrial classification for three variables, namely the number of enterprises, number of workers and per worker productivity. Result of this study is that agro-industry suffered a huge productivity declining during 1994-95 to 2000-01 in comparison with 1984-85 to 1994-95. The growth rate of per worker productivity declined from 6.2% during the pre reform decade to a mere 1.5 % during the post- reform years. The worst situation in rural unorganized agriculture based manufacturing enterprises, and amongst them, the groups of tiny own account enterprises, which constitute a very big proportion of the agriculture based industries. The extremely low level of productivity in these segments is the real weakness of this sector.

Matthias Grossmann and Mark Poston (2003), in this paper highlight importance of the agricultural sector and agro industries to poverty reduction in the developing countries, because three out of every four people in the developing countries live in rural areas and directly or indirectly depend on the agricultural sector. So agricultural led development strategies need to be at the core of any poverty reduction program, as agro industrialization, i.e. The transition towards a more commercialized agriculture system, can bear positive effects for the poor, such as inform and off-farm sector and increased economic growth. The authors have also highlighted that the importance of the Indian agriculture sector is also reflected in the size of agra-based industries. More than 45% of all industries are agro-based industries, with a value added nearly 22% and FPI account for 16.69% of all manufacturing industries in India. Authors also stress specific skill needs that accrue at different levels of agro industrialization through Agricultural Education and Training (AET) to face the challenges with agro-industries faced. Different skills are needed at different stages of agro industrialization. All other levels of agricultural development, these skill needs are largely on contracted on forming techniques and skills to run small businesses in the immediate off-farm sector. One observation come out from case studies of India, Australia and Africa in this paper were that, during the agricultural transformation, the reason for skill deficiencies in the agricultural sector seem to shift from supply side problems to demand side problems in India any many African countries the problem is rather a supply side problem as the existing facilities do not appropriately address the skill requirement of the rural poor people. The author also observes that due to globalization, greater market integration also put pressure on employees in the food industries and the AET system. The reason is that in order to benefit from a large market size in the long run, the quality of labor and technology need to be close to the top

competitors in the global market otherwise, there is the danger that unqualified labor will be locked into low skilled job that are directly linked to the use of new production techniques.

P.G. Chengappa: (2004) have analyzed current status, emerging trends and key issues related to agro-processing and food processing in India. Food production and processing account 26% of India's gross domestic product and more than 60% employment in this sector. India is the world's second largest food producer and growth potential of the food industry is enormous considering the vast domestic market. Author also mentions that, India's processing of fruits and vegetables are only 2% of total production in comparison to other countries it is very low. The size of the processed food sector is around Rs. 1.440 billion (CII-MC Kinsey, 1997) and ranked fifth in size accounting for 6.3% of gross domestic product with 6% of industrial investment during the study period. The FPI is very small with an infrastructure of 820 flour mill, 418 fish processing units, 5,198 fruits vegetables processing units, 171 meat processing units, 609 sweetened and aerated water (soft drinks) units, 266 milk product units, and so on. Processed food exports fetch Rs. 120 billion per annum, and account for 18% of total exports. The size of semi-processed and 'ready to eat' packed food industry is over US\$ 1 billion and is growing at 20%. In addition to it, the author also suggests that effective linkages among the R & D institutions, farmers, processing industries will facilitate in expanding the range and types of processed products and in standardizing the post harvest management.

Mahendra Dev (2004), his paper highlights GDP growth trend pre and post reform period in India. GDP growth in the 1980s was 5.6 percent per annum while it was 5.8 per cent per annum in the 1990s. The post reform period show that the growth rate decelerated in the Ninth Plan. In 2002-03, GDP growth was only 43 percent the excitement about India shining was intensified with the growth of 8.1 percent in 2003-04. GDP growth rate in period 1997-98 to

2003-04 was higher than ninth plan. This paper also examines some others important indicators relating to rural India and finds out that rural India is not shining. To make rural development more broad based and balanced, investment, technology and appropriate institutions are needed. Author has suggested ten areas viz. increasing employment, public investment, agriculture sector, water management rural institutional reforms health, education and reduction in regional personal and gender disparities. The author also focuses on rural non-farm sector especially on labor intensive employment. The development of agriculture and food processing mentioned above will improve employment and wages in rural area. India is one of the largest producers of raw material for FPI in the world; the industry itself is under developed. Expansion of this sector is an ideal way of bringing industry to rural areas, expanding the value chain of agriculture production. Providing assured markets for farmers enabling them to diversify in to higher value of horticultural crops and expanding employment by creating high quality non-agriculture work opportunities in rural area.

Myrna Van leevwen (2005), in his paper examines the importance the agro-food industry-for the local economy and employment of 30 selected European towns by using inter-regional SAM (Social Accounting Matrix). These town differ from each other concerning their size (small- medium- sized), type (agricultural tourist, peri-urban) and country (Netherlands, France, Portugal, Poland and UK), and also highlights the higher degree of integration of the agro food sector in the local economy, the larger its role for the rural town and its hinterland. The paper also provides some insight into the consequences of expected demand effects e.g. agricultural policy reform for the local economies. In addition, the SAM analyses show the impact of a demand change in the agro-food sector located in one zone of the town on the other zone of the town. It helps policy makers to understand the economic and social strengths and

weaknesses of the agro-food industry in their towns. Author also found that the agro-food industry of the small agricultural towns in Poland, Portugal and UK, the medium-sized peri-urban town in the Netherlands and the medium-sized tourist town of Douarnenez in France generate the highest values in terms of output and income in the local economy. The total number of jobs linked to the agro-food industry seems to be most significant for the Polish studied areas, followed by the Dutch and Portuguese towns.

Employment opportunities in farm and non-farm sectors through technological interventions with emphasis on primary value Addition by M.S. Swaminthan (2006), stresses employment opportunities in farm and non-farm sectors through the technological intervention with emphasis on value addition and food processing and other non agriculture sector. Author used secondary data from various sources on employment in farm and non-farm sectors. During this study period around 56.7% of the total work force is engaged in agricultural sector, 12.1% in manufacturing sector and 31.2% in the service sector. The change in the sector-wise employment during the nineties, show that numbers of employment increase in manufacturing and service sector's out of 2091 million additional jobs created between 1993-94 and 1999-2000, 51% in trade, hotels and restaurants sector, 28% in manufacturing sector, 19% in construction sector and 18% in transport, storage and communication sector. In additional author also focuses on employment generation through value addition to agricultural products like food grains, fruits, vegetables, and sugarcane and livestock products. The employment potential is also very high in production of bio-fuels and application of science and biotechnologies in agriculture activities in addition to the areas identified in the paper, there are several other agricultural crops like parley, coconut and medicinal plants which also provide considerable potential of employment creation in primary value addition activities

Dr. Venkatrayappa Chikkasubbana (2006), identify the importance of postharvest technology lies in its capacity to meet the food security of growing populations by reducing losses and increasing the production of nutritive food items from raw materials through processing and value addition. Postharvest technology also has the potential to create rural industries postharvest management of agricultural production. In India where 80% of the population lives in the villages, 70% of whom are dependent on agriculture, the process of industrialization has shifted the food, feed and fibre industries to urban areas. This has resulted in a capital drain from rural to urban areas and has decreased employment opportunities as well as economic growth and development in the rural areas. Author also analysis that the total market for food processing goods in India yield approximately USD69.4 billion in 2004–2005, of which value-added products will account for USD 22.2 billion. Processed food exports and value-added agricultural products will witness further rapid growth in their respective industry segments in the coming years. Author also highlights the major problems to postharvest management which faced by the industries for example lack of quality raw material for horticultural crops, low educational level coupled with poor technical training extension facilities available to farmers, lack of transportation facilities and other infrastructural facilities etc.

T.A. Bhavani, Ashok Gulati (2006): highlights the structure and structural changes in the FPI using data for the period 1984-85 to 2002-2003. The empirical evidence shows that there is a definite scaling up in the food processing sector in India. The level of output and capital input per firm has gone up substantially in almost all FPI during the study period. Empirical results also indicate a good degree of churning out in the industry in terms of entry into new areas of production and exit from of the existing areas of production through mergers and acquisitions. The findings of this study suggest that the organized segment is raising its share in output and

fixed capital while unorganized sector remained dominant in terms of number of manufacturing units and employment. The gap between the organized and unorganized segments in the specified structural ratios such as scale of operation and capital deepening has widened over time further author also mention that organized segment continues to be dominated by six traditional industries involved in primary processing namely, sugar, grain mills products, vegetable and animal oils, dairy products, tobacco products and other food products including tea and coffee. In sum, the empirical evidence is clearly indicating consolidation and scaling up in the FPI. However, it requires further analysis of unit level data to detect the underlying factors for this trend such as technical progress and scale economies. Rapid urbanization, growing middle class exposure to electronic media, women's participation in the workforce, and demographic factors are also having positive impact on the demand for processed foods.

Ivi Chakraborty (2006), in his research article he has estimated that roughly 30% of the fruits and vegetables get wasted, and the cost of this wastage is estimated approximately Rs. 25,000 crore each year and compare the processing level with others countries and post harvest. This huge amount of wastage is due to inadequate knowledge about pre-harvest and post-harvest. The 70 billion dollar Indian FPI (including 22 billion dollar value added products) is characterized by the predominance of small and tiny units over the country. Today there are about 5,500 fruit and vegetable processing units in the country of which 13% are large-scale units. Almost 75% of the units are either operated from home, cottage and small industries. The installed capacity of fruit and vegetable processing industry increased from 894,000 tones to 2,110,000 tones between 1991 and 2001. However, the capacity utilization continues to remain low at 45-50 % for several years (1994-2001). Article has computed that the growth potential of fruits and vegetables processing sector is enormous and it is expected that the production will

double in the next 10 years, making improvement in consumption of value added fruits. The agro and FPI is of utmost significance in terms of employment and income generation, poverty alleviation export promotion, and foreign exchange earnings.

S.K Goyal (2006), paper is based on secondary data from various sources i.e. Annual Reports of the Ministry of FPI, Government of India, FAO, Production Year Book, FAO, Trade Book, Economic Survey of India etc. To study the consumption pattern of fruits and vegetables the income elasticity of demand was calculated to check the changes in demand for fruit and vegetable products. Total consumption expenditure of households has been taken as a proxy of income and double log function used for determining the income elasticity of demand. This paper also highlights the status, growth and potential for fruit and vegetable processing industry in India. The study found that number of processing units has growth by about 3.68% per annum during 1992-2003. Capacity Utilization was about 47%, because of the low capacity and poor capacity utilization, processing is at very low level. With regards to exports, there is lack of process able varieties of fruits and vegetables. However, dried and preserved vegetable constituted the largest share of processed fruits and vegetables exports. Processed exports were 41.63 % in 1992 declining to 39.88 % in 1993-94, then increasing and reaching 63.08 % in 1997-98, before falling 46.48 % in 2002-03. Author says India has the potential to become a Leading exporter of processed fruits and vegetable products and to achieve this there is a need to remove the constraints facing by the industry.

K. K. Salimonu, A. O. Gafar and J. O. Akintola (2006), the study examine the utilization of domestic agricultural raw material by the industries and investigate the installed capacities of the food and beverages industries in the Nigeria. A time series data and capacity utilization of the industries for the period of 1975 to 1999 was used for the analysis. The secondary data were

obtained from the Annual Reports and Statistical Bulletins of Central Bank of Nigeria and the Raw Material Research and Development Council of Nigeria. The analytical tools employed in the study were time trend and growth rate as well as coefficient of variation. The time trend analysis revealed declining average capacity utilization over the period of study while the coefficient of variation signified an overall instability in the raw material utilization. All these results are indicators to under utilization of resources in the food and beverages industries and under development of the industrial sectors of the economy. In addition to it study also highlights that are food, beverages and tobacco industries contributed as much as 34 % of the value added of the manufacturing sectors in Nigeria, textile and associated activities accounted for 17 %.

Dr. Helmut Albert and Dr. Andreas Springer- Heinz (2006), in this article study the conditions under which new opportunities deriving from value-added chains and agricultural trade liberalization may be utilized to advance development. In the era of liberalization, privatization and globalization the trade of food chains are changing dramatically all over the world. The global value added chains that link agricultural production of developing countries with global markets are especially promising in terms of broad-based and sustainable economic growth, employment creation and poverty reduction. The benefit from the trade of value-added chains is affected by global trade rules, agreements and by the way in which the integration into value chains takes place. The protectionist agricultural policies of many developed countries especially in the US and Europe are creating unfair competition for developing countries, in 2000 the producer subsidies equivalent of these policies, in the OECD countries was US\$ 330 billion equal to Africa's entire annual GDP. That's why these countries are kept artificially low prices in the world market. At the same time, tariff increase on a number of commodities prevents

expiating countries from ever come their traditional dependency on unprocessed standard commodities the value of which has been following a secular trend downwards.

Meeta Punjabi (2007), this study is a part of FAO's South Asia Regional Study to understand the emerging agribusiness environment in the countries in this region. The overall objectives of the paper is to get an overview of the emerging agribusiness sector, characteristics of an enabling environment and address critical issues in the way forward. Specific questions addressed in this paper are: 1) What is the current situation of agro industries in India?, 2) What are the challenges to development of a processing sector?, What are the future prospects-what is the vision for the industry, characteristics of an enabling environment and what are critical issues from development and what are critical issues from development prospective?

This paper is based on literature on the emerging changes in agriculture and agribusiness environment in India and other countries. The study also highlights that the near absence of agro-industry and agribusiness resulting in low level of value addition of agriculture commodities has been one of the main cause for stagnation in rural income and employment.

small scale agro-industry in India

Kalippa kolirajan and Shashanka Bhide (2007), this paper provide an analysis of India's food processing sector, which is expected to play an important role in accelerating the growth of the agricultural sector and contributing to poverty reduction. The study is based on the secondary database called "prowess" developed by the Centre for Monitoring the Indian Economy (CMIE) which is a compilation of the information relating to income and expenditure of the companies based on annual report and balance sheets. The study uses the Cob-Dougllass production relationship for the estimation of the various parameters. The Cobb - Dougllass function

represents the output as a function of the inputs (1) labor (2) capital and (3) raw materials plus power and fullness. Further many other variables may influence the level of output of food sector. The results show significantly higher levels of productive inefficiency, particularly in the use of labor input and overall general firm level productivity. The result show that while there has been technological progress over time the production frontier has shifted upward the catch up by the firms has been poor, one reason for the sharp divergence in performance between the best performers and the others is the heterogeneity within the broadly defined food processing sector. The limitation of this study is that the analysis has been done using firm level data for food processing sector in the organized sector. There for study does not cover small scale firms in the unorganized sector and also in the home based industry.

Gunjeet Kaur, Sanjib Berdolol and Ray Rajesh (2007), examines inter-sectoral linkages in the Indian economy by the 1-0-model and the econometric exercises using co-integration and state space models with the help of I-O matrix tables for 1968-69, 1979-80,1989-90,1993-94,1998-99 and 2003-04. This paper also discussed the literature on inter- linkages the different sector of the Indian economy. (Rangarajan (1982), Ahluwalia and Ranga Rajan,(1989) Bhauacharya an and Mitra (1990) and Hansda (2001), Sastry etal (2003), Bathla (2003). This paper also highlights sectoral growth trends and altering sectoral composition and sectoral composition of the GDP. Share of agricultural sector is on decline since 1950, with industry remaining nearly constant and the share services sector rising in the GDP. The analysis of the I-O tables from the production side reveals that inputs demand of the service sector is industry intensive rather than being farm intensive. Further that the farm sector is significantly dependent on industry for inputs. The demand linkage examination sufficiently demonstrates that the

agriculture sector exhibits strong linkages with industrial sector, while the connection in terms of the services sector were observed to have strengthened vis-à-vis the industrial sector overtime.

The co-integration analyses find out long term equilibrium relationship among primary, secondary and tertiary sector. At the sub-sectoral level, existence of long-term equilibrium was observed between trade, hotels, transport & communication and the manufacturing sector. Further the financial sector's activities in the banking and insurance sectors were noticed to be co-integrated with manufacturing and primary sectors analysis based, on state, state space model using kalman filter also corroborates the out come of the co integration analysis results capture variations in one sector influencing the other sector's performance over time.

Dr. K. Devadasan, (2008), his study conducted on "Processing Potential in Marine Fisheries Sector" has concluded that diversification and value addition are the key words for success in improving living standards of the population. The study revealed that the Indian fishery industry gives employment to over 7 million people directly or indirectly. Currently India ranks 4th in fish production of the world. The fish processing industry is also the largest single foreign exchange earner for the country annually bringing in foreign exchange to the tune of Rs. 6,500 cores, with a humble beginning in the fifties and early sixties. With the support and guidance from various organizations of the Government of India, especially the Central Institute of Fisheries Technology, Cochin, the Industry has made a rapid progress and gained international approval and acceptance.

Dr. Hafiza Ahran (2008), also highlights like some other authors that India is the largest producer of fruits in the world and second largest producer of vegetables in the world, and level of processing fruits and vegetables in comparison to other countries, its production of fruits per

capita is only about 100 gm per day. Wastage of fruits and various steps of the postharvest chain reducing per capita availability of fruits to around 80gm per day which almost half the requirement for a balanced diet during the study period.

Dipankar Saha and R.K. Samanta (2008) the main objectives of this paper are (i) is to present sustainable development as both a vision for a better world and an obligation to realize it. (ii) is to argue that the UN's Millennium Development Goals (MDGs) provides the road map for achieving sustainable development as of by our Common Minimum Programme of Government of India (GoI) and (iii) that the successful implementation of the MDGs requires action on three fronts, first defining what must be done if the MDGs are to be met, second agreeing on and effectively applying the partnerships needed to be achieve the MDGs and finally resolving the challenges facing developing countries, especially those within South East Asia in implementing the MDGs and government of India's action plan. They further highlighted the Eastern region was reputedly the most prosperous region in the county till the fifties. Maintaining a lead over the other regions with highest food-grain yield of 644 KG per hectare in northern regions. However, it lost its leading position after the green revolution. Now Bamboo, Jute and Tea are main cultivation of the Eastern region. The emphasis to the eastern region should be on facilitating the utilization of the latent potential and bridging yield gaps so as to impact on overall human development aimed at improving the quality of life providing multiple livelihood opportunities contributing to income enhancement extending improved health nutrition and higher level of literacy and education accompanied by improvement of the people leading to evolution of a better and more equitable social structure.

Anjani Kumar and Dhiraj K. Singh (2008), highlights the profile of livestock and their changing dynamics across different agriculture eco regions of India with the help of secondary

data from various sources. The main objectives of the study are (1) to examine the changes in the pattern of livestock population and status of growth. (2) to investigate the adoption pattern of crossbreed/better, livestock species across different agriculture eco-regions and (3) to identify the factors influencing decision to participate in livestock nurture. A logit model was estimated to identify the factors, which influence rearing to livestock at the household level.

Further the author's highlights that the livestock composition has changed in favor of milch animals and the percentage of crossbred/improved animals has been increasing. Wide regional diversities have been observed in the adoption of crossbreed/improved cattle. The imbalance in the concentration of livestock and availability of fodder resources in different regions was clearly visible and hampering the prospects of livestock development in different regions in the study, which is a major source of livelihood for the landless, marginal and small farmers. Authors also successes that there are clear need to augment feed and fodder resources to keep the process of live stock.

Kacherloveleen (2009) examined the poor women's states, who are the member of self-help group. It was focused on a women development project which was implemented to strengthen the processes, and create an environment for empowerment of women. This project tried to access economic empowerment, social empowerment, skill development and convergence of series.

Vijay Subramaniam and Michael Reed (2009), paper is an attempt to identify the pattern of changes in sectoral composition that characterizes the economic dynamics of two transition countries (Poland and Romania) by applying a multi-sectoral endogenous growth framework. The objectives of this study are (1) to understand the linkages between agriculture and the rest of

the economy (2) to investigate the existence of long-run growth relationships among different sectors, and (3) to determine the impacts of the transition on agriculture and other sectors. To achieve these objectives authors used the Johansen Procedure of co integration analysis to identify the existence of long-run and dynamic short-run inter-sectoral linkages among different sectors in the economy of Poland and Romania time series data 1979 to 1981 the empirical findings from the analysis verify that the different sectors in the Romania and Poland economies moved together over the sample period, and for reason their growth was interdependent. This implies that once the sectors deviate from the stable, long-run path the sectors have the tendency to return to the long run equilibrium. The results show that during the transition process the agricultural sector in Poland has established three long-run relationships in the industrial and services sectors. The positive sign of the industrial sector in all three relationships suggests that there exists a strong positive relationship to the agricultural sector. This implies that an increase in the industrial sector will affect the agricultural sector positively, holding all other variables that effect the agricultural sector constant. During the transition period the labor movements from industries to agricultural and agricultural to industries, agriculture to other sectors are well documented. Author also gives the example of Boeri and Terrel (2002) that during the period of 1989-98, the agricultural labor in Poland and Romania increased by 0.6 and 12.1 % while the industrial labor contracted by 7.9 and 14.2 %, respectively.

Claudia Genier, Mike Stamp and Maro Pfitzer (2009), has stressed in this article “Corporate Social Responsibility for Agro-Industries Development” review of corporate social responsibility (CSR) in the development of agriculture food sector by providing a landscape of opportunity win and lost and encourages the most promising strategies and collaborative approaches. This article explores the CSR starts agriculture food companies that have potential to

preserve and improve the natural environment community welfare, and increase the inclusiveness and competitiveness of agriculture food companies. As primary research authors builds on an analysis of a number of standards and codes, as well as several case studies of value chain innovations driven by companies for business reasons. It further integrates secondary research from relevant publications on sustainable agriculture. To understand the current state of standards and codes as tools to promote sustainable agriculture and impact they have had, an extensive literature review was conducted and 14 schemes selected for detailed analysis from a list of over 100. In addition, ideas and hypothesis were tested with external experts from the agriculture food industry, standards organization and the non-profit sector.

N. Sambavsina Rao and Umesh Mishra (2009), this article highlights the status of production and wastages of the horticulture production. The first and foremost reason for underdeveloped horticulture industry is high level of wastage across the value chain. This wastage in various stages due to poor quality farming technique, post harvest losses, shortage losses, transportation losses and weight loss, further it highlights status of FPI in India which is still in a sorry state. The rural population comprising 70% including small cities, consume less than 10% of the processed foods and vegetable, whereas 60% of processed food is consumed in four major metropolitan cities and 30% in the state capitals and big cities. Another fact is that 40% of the processed food and vegetable produced in the country in terms of value are bought by institutional buyers like hotels, restaurant and defense etc, further it highlights the demand for high value commodities particularly fruits; vegetables and milk would go up significantly during 2010 and 2020 in India. It is expected that the demand for fruits would go up from 56 million tons to 77 million tons (2010-2020), Vegetables 113 to 150 million tons (2010-2020) and 104 to 143 million tons (2010-2020) for milk, as projected by IARI. The paper also highlights major

key players in agri-business such as Pepsi, Dabur, Marico, Priya Food, Mother Dairy Tasty Bite etc. Majority of food and vegetable is considered fresh special in low income market, only 10% is consumed processed where as in high income markets, 50% of fruit consumption is in the processed form. However, the trade in fruits and vegetables is growing rapidly than any other agriculture commodity. In the last there are several scheme of government of India which provides technical, logistics, MIS, consultancy and marketing supports.

Jeabir, Surendra, P. Singh and Enefiak Ekanam (2009), This paper evaluates the efficiency and productivity changes in 12 broad segments of food manufacturing industries during pre and post liberalization periods, covering a period of two decades, from 1980-1981 to 2001-2002. The nonparametric Data envelopment Analysis CDEA approach is used to compute the Malmquist Total Factor Productivity (TFP) Change, which has been further decomposed in to efficiency and technical change. There are very few empirical evidences regarding the contribution of technology to the growth of the FPI at the disaggregated level. However, evidences from the food industry as a whole during different periods of time indicate varied contributions of technology to the growth of the FPI. The average growth of total factor productivity (TFP) an Indian manufacturing was sluggish during 1650 to 1979 and relative contribution of TFPG to output growth was meager (Goldor 1986). There was negative TFP growth in Indian food processing during 1959-1986 (Ahluwalia 1991). Author here quotes Mitra, (1998) who analyzed the impact of available infrastructural facilities on TFP and Technical Efficiency (TE) in Indian manufacturing and estimated positive TFPG in food processing during 1976-1992. Other empirical analysis also show mixed TFPG in organized food processing sector. Findings of the study clearly indicate that maximum inefficiency comes from inefficient use of raw material, which is the major cost factor of the food processing units. Government

interference in raw material sourcing for food processing units is quite critical, and necessitates policy reforms to allow direct private participation of food processing in procuring their raw material from the farmers.

Spencer Henson and John Cranfield (2009), aim of this paper is to explore the political case for agro-industrialization in developing countries, highlighting both the likely benefits and the areas where caution is needed, and where critical actions can steer this process along the most beneficial path. Paper is based on secondary data and the main objectives of this paper are: 1. What is the characteristics of the agro-industrial sector? 2. How are the processes of agro-industrialization proceeding and what are driving these? 3. What impact is agro-industrialization having on developing countries? 4. What are the challenges for developing countries in promoting agro-industrialization in a manner that is of maximum benefit? The results of this paper are that the development of agro-industries in the contemporary context provides opportunities for significant gains to developing countries, although exploiting the opportunities in a manner that these gains exceed the losses is far from certain. Certainly, there is a political case for promoting agro-industrialization in developing countries, although at the same time the development of agro-industries must follow a clearly defined path that avoids the multiple pitfalls that inevitably go with such fundamental processes of economic and social change. This suggests a gradual approach rather than a 'great leap forward' in promoting the agro-industrial sector.

John Wilkinson and Rudi Rocha (2009), in this paper present an empirical outlook of the agro-processing sector, selecting the most recent data for each country and identifying dynamic trends whenever possible. The paper highlighted total production and value added, contribution to GDP and participation within the total manufacturing sector, the level of formal employment,

its gender composition and differences in productivity in agro-processing industries. With a broader focus on the agricultural food system, authors also investigate changes in consumption and international trade patterns. Food processing and beverages are the most important sub-sector of agro-industries in terms of value added, accounting for more than 50% of the total formal agro-processing sector in low income countries and lower middle income countries, and more than 60% in upper middle income countries. For the African countries included Ethiopia, Eritrea and Senegal, food and beverages represent more than 70% of agro-industry value added and roughly 30–50% of total manufacturing. According to the ILO, on average, 60% of the workers in the food and beverages industry in developing countries are employed in the informal economy, occupying jobs that are often unstable in terms of social safety. The consumption trends, the primary driving force of the agro-processing sector and its most dynamic feature. Global sales of food and beverages were estimated at US\$4 trillion¹ in 2002, around 80% of which corresponded to processed food and beverages (US\$3.2 trillion) with over 40% accounted for by the food service sector. Further authors say that policies for agro- industry should occupy a central position in developing country strategies and those domestic initiatives should now receive special attention.

Ralph Christy, Edward Mabaya, Norbert Wilson, Emelly Muthmbatsere and Nomathemba Mhlanga (2009), have stressed in this paper “Enabling Environment for Competitive Agro-Industries”, that agro-industries are an engine for growth in rural economies and the agro-industrial sector plays a vital role in the economic development of low- and middle-income countries. The rise of global markets based on competitive advantage is, however, increasingly forcing policy makers to make assessments of the ‘enabling environment’ for agro-

¹ One trillion = 1,000,000,000.

industries. After an evaluation of selected measures and indexes of an enabling environment authors conclude that standard measures, both macro and micro, are inadequate for evaluating the competitiveness of agro-industries within emerging economies. Further, authors find that agro-industry exhibits unique characteristics that distinguish it from the wider economy, while at the same time vast segments of the food and fibre markets are becoming well integrated into the general economy. Distinguishing characteristics of agro-industries are embedded in the type and nature of risk inherent in the sector. In formulating public policies to mitigate against such uncertainties, thereby creating an enabling environment. we established a hierarchy of enabling needs for agro-industry competitiveness to inform public policy makers. Authors then went beyond this linear hierarchy to discuss the dynamic role of the state based on sector risk and capacity that must be considered in reforming public policy.

Colin Dennis, Jose Miguel Aguilera (2009), in this paper considers the various drivers for technological change that will undoubtedly have a substantial impact on the development of the agro-food industry in developing, emerging and developed countries. These include specific processing and packaging technologies as well as the cross-cutting nature of generic technologies such as biotechnology, bioinformatics, nanotechnology and information and communication technology. Such technologies are discussed with respect to delivering health and well-being, ensuring food safety and contributing to more sustain-able food supply in a competitive global market. Emphasis is given to the fact that technologies are not applied in isolation, but require commitment and investment from the private sector in a political environment where public policies stimulate entrepreneurship. This involves the availability of an appropriately educated and trained workforce, fiscal incentives for R&D and innovation and international regulations that are not unnecessary barriers to trade.

Bill Vorley, Mark Lundy and James Mac Gregor (2009), describes a range of business models for inclusive market development within the context of agricultural food products restructuring and modernization. It focuses specifically on models that improve the inclusiveness, fairness, durability and financial sustainability of trading relationships between small farmers and agribusiness (processors, exporters and retailers). It also alerts us to the needs of external providers, such as financiers and training agents. The gap in basic services in rural economies, such as appropriate extension and credit, needs to be bridged before FDI can live up to its promises. Although authors highlight what producers need to do to compete in modern dynamic markets, and the role of facilitating public policy, our focus in this paper is more on the buyers and their role as partners in development.

N. Chandrasekhara Rao and Sukti Dasgupta (2009), it is an attempt to assess the employment potential, structure and nature of the food processing sector, The structure and nature of employment in the food processing sector have been analyzed from the data of the Annual Survey of Industries and the reports on unorganized manufacturing segment of the National Sample Survey Organization (NSSO). A field study conducted to detail the wages, conditions of workers, employment security, social security, gender bias, etc, The food processing sector forms 2.06% of the gross domestic product on its own and 2.28% along with the manufacture of tobacco products, while the manufacturing sector as a whole constitutes 15.08% of the gross domestic product (2006). The unorganized segment dominates the sector in terms of number of enterprises and employment, whereas the organised segment produces the maximum share of output with 78% in 2000-01. Despite producing a lower share of only 22% of output, the informal segment employs 84% of the workers in the sector. On the whole, the importance of the FPI can be seen from the fact that both

the organized and the unorganized segments of this sector contributed to 18% of output and 18% of employment in the total manufacturing sector. The regional distribution of both organized and unorganized segments of food processing activity shows that Maharashtra (17%), Uttar Pradesh (13%), Tamil Nadu (9%), Andhra Pradesh (9%), West Bengal (7%) and Karnataka (7%) accounted for 62% of the total gross value added in 2000-01 in the manufacture of food and beverage in the country.

Rohana Kamaruddin (2009), study is to examine the long run effects of per capita income, population, exports and skill on the value added of food and beverages industry with the help of ARDL Model. Results based on the ARDL analysis of manufacturing food and beverages value added shown that manufacturing output growth can be partially explained by the expansion of manufactured exports and consumption effects as indicated by positive per capita income, population and export coefficients for the majority of industrial groups. In the long run, the impact of per capita income is found to be positive in four equations, and significant in three out of five equations. The magnitude of the coefficients ranges from as high as 4.2863 for sector 151 to 0.5340 for sector 153. The coefficient for population in the long run ranges as high as 12.7825 to 10.5645 for only two sectors 151 and 155. This result provides some support for “domestic consumption effect.” The impact of export on relative value added growth rate is found to be positive in four equations and significant in only two, with the range of 0.6564 to 0.6657. This implies that manufacture of grain mill products, starches and starch products and prepared animal feeds and manufacture of beverages are export oriented. In general, the study concludes that the growth of value added in food and beverages industry depends closely on per capita, population and export. This empirical result hopefully would help make Malaysian aspiration of becoming a hub for the halal food industry a reality.

Tanvir Mahmud Bin Hossain and Eleni Papadopoulou (2010), This paper confronts a computable general equilibrium (CGE) model of the Bangladesh economy to measure and evaluate the impact of policy trade off scenarios comprising opening more trade opportunities and improved productivity. This study appraises and suggests the best effective policy reform options to increase competitive capacity for output in the domestic market and increasing the export potential of the agro-processing sector. The food processing sector accounts for 2% of GDP of the Bangladesh economy. In the period 1996-2007, the production growth rate of agro-based industry was 5%. Agro-processing sector accounts for 22% of total manufacturing production and engages 20% of the national labour force. The average annual growth rate for export of all food products was 10% and imports 15% in the period 1991-2007. In this study, the processed food and milled grain sectors are jointly included in the agro-processing sector for convenient discussion. The percentage of distributional share among the sectors is 2.17% and milled grain is 2.4% of total value added of all sectors. In terms of total imports, the share of processed food is 6.78% and milled grain is 2.13%. For total exports, the share of processed food is 6.95%, while milled grain does not have a share in the export account. Domestic consumption is comprised of 3.17% imported milled grain and 15.94% processed food. 11.13% of the production of processed food is exported.

The study concluded that trade liberalization will help to generate export potential and domestic sector competitiveness if increased productivity is ensured through factors such as technological progress through increased import of technology and by the non-trade factors such as improved technical efficiency through enhanced quality, management and knowledge etc. In addition to it authors says that, efficient knowledge and a proper utilization environment for new technology are also important issues for a country like Bangladesh. Increased technology import

alone is not enough for increased productivity unless the country has the adaptive capacity and knowledge for efficient utilization of imported technology. Import of technology will not be fully effective until the non trade induced TFP factors are improved and create a supportive environment to maximize the benefits of imported technology.

Amir Ullah khan (2010), highlights characteristics, features and importance of agriculture and FPI in India. Agriculture production has shown a growth of 2.7% over the last 40 years which is not sufficient for growing population. Further he says the growth of the agri-business sector is positively affected by agriculture productivity, changing in consumption patterns away from food staples, improvements in transport communications, infrastructure, international trade and supportive government policy in India, components of commercial agriculture such as fruits and vegetables oil seed and sugars are growing faster than food grains. Such supply behavior has its counterpart in consumption patterns changes, which has also seen a more rapid growth in the consumption of items such as fruits and vegetables oils and milk production than in food grains. Author also highlights data related to the level of processing and wastage of agricultural products. The value of wastages in the food chain is estimated to be Rs 50,000 crores. Our production of 127 million tones of fruits and vegetables are one of the highest in the world. However, India wastage 35 % of total production of fruits and vegetables every year which is more than the total consumption of U. K and the level processing is less than 2% of horticultural produce as compared to Brazil and 78 % in Philippines. The wastage of food-grain is 20 million tons at the first stage of harvest is equivalent to Australia's entire production. He also gives some suggestion to increase the growth rate of agricultural sector such as: increasing in food production, utilization and market the food produce through wastage reduction and value

addition create an enabling environment focus for exports. All these steps will help the India to reduce disparities in incomes and increase the prosperity of our people.

K.D. Sharma Pathania, M.S. and Harbanslat (2010), the study was based on primary data which were collected from the selected processing units through survey method for the year 2006-07. The primary data comprised information on size, type, location, installed capacity and utilization, capital investments, labour employment, sources of raw material and supply mechanism cost of processing, value addition etc. The specific objectives of the study were to analyze the structure of capital investment and extent of a value addition in various types of agro-processing units in Himachal Pradesh, and also to examine the financial efficiency of different categories of commodity specific agro-processing in the state and also test the backward and forward linkages of agro-processing industries. The study found out that maximum value addition has been observed in fruits and vegetables processing (133 percent) followed by bakery and confectionery units. The financial viability ratios computed from financial accounts have revealed high current ratio but lower quick ratio in most of the processing industries, showing that many industries have substantial unsold inventories. However, financial ratios have been found more favorable in case of small units as compared to large units. A direct relationship has been found between size of the firm and number of its backward and forward linkages. An average processing industry had 85 backward linkages and 123 forward linkages.

Monika Hartmann (2011), highlights the relevance corporate social responsibility in the food sector and supply chain. This paper provides an overview to the empirical findings on the impact on CSR on companies' financial performance, and on selected stakeholders' performance, on selected stakeholders perception and behaviour. The results of four mathematical metaanalysis (Frooman 1997; Orlitzky and Benjamin, 2001; Orlitzky et al.2003;

Margolis et al., 2007) indicate a positive relationship between CSR and corporate financial performance (CFP). The investigation by Frooman, 1997 is based on 27 event studies, all of which examined stock market reaction to social irresponsible or illegal behaviour. The results show that revealed corporate misdeeds negatively impact on share holder's wealth, an effect which is significance and substantial across these studies. The meta analysis by Orlitzky et al., 2003 is based on 52 studies while the one another author Margolis et al.,2007 covers 167 research papers. The results hint at a positive albeit small relationship between CSR and CFP, the size of this effect depends on the area of CSR, as well as the performance indicator employed.

Randeni. RKD (2011) study an attempt to explore the factors contributing to the low use of Sri Lankan agricultural products in manufacturing industries and the potentials for promoting the use of farm products in agro-based industries. The North Central Province (NCP) was selected for the study as it is a leading agricultural area. A pre tested and structured questionnaire was used to collect primary data by a random sample of 270 farmers. Data gathered through observations as well as from available secondary sources were also used during the study. Having tested for the reliability and validity of data, inferential statistics were used to analyze the data. Finding of the study is that market availability & competition, technology, financial facilities, labour availability, are vital factors that have motivated people to use agricultural products as input in to industries. If necessary actions were taken to motivate people by providing adequate facilities, there is a huge potential for innovative people to establish agro-based industries and develop existing agro-based industries.

Dilip Saikia (2011), this paper examines the inter-sectoral linkages among the three major sectors of the Indian economy who with the help of input-output frame work. The author

used I-O tables which prepared by the central statistical organization (CSO) of the govt. of India. There are 8 such national I-O matrices tables for the years of 1968-69, 1973-74, 1979-80, 1988-90, 1993, 1999-00 and 2003-04 were used. The paper finds out that the Indian economy has been undergoing structural changes and the traditional 'agro-Industry' linkage has been declining during the pre-and post-reform periods. While the agro-Industry linkages were mainly through the production channel in the 1960s and 1980s, its translates primarily through the demand channel since 1990 both the production and demand linkages were primarily from industry to agriculture in the pre-reform period. Further agriculture's linkage with service is very weak from both the production and demand sides and even it has declined in the post- reform period, where as Industry has very strong production and demand linkages. With services and it has improved in the post-reform period. Author also used existing literature which not only provides conflicting result but also do not provide a clear trend on the inter-sectoral linkages in India because Satyasai and Viswanathan (1999), found that the output elasticity of Industry with respect to agriculture sector was 0.13 during 1950/51 to 1965/66, to 0.18 during 1996/97 to 1983/84 and then remained at the same level 0.18 during 1984/85 to 1996/97. Rangarajan (1982) has found that a 1-0% growth in agricultural production increase industrial production by 0.5% and thus, GDP by 0.7% during 1961 to 1972 further, the service sector has been ignored in the literature. The present paper fills this gap by analyzing the interdependence among the three major sectors agricultural, industry and service using the input-output frame work.

Dr. Pawan Kumar Dhiman; Amita Mita Rani (2011), paper is an attempt to find out the status of rice mill industry in the Patiala district of Punjab and to analyze the various problems being faced by them. The study is based on primary as well as secondary data and literature. It has been found that Rice mill industry in Patiala district is in the crisis and facing the various

problems regarding lack of financial assistance, improper marketing channel, high degree of breakdown of finished products and non availability of research lab for quality control. It has been observed that agro based rice mills are facing numerous financial problems as lack of finance by the financial institutions. Majority of the surveyed units have given 1st ranking to the lack of finance whereas second priority was given to high interest rate and least priority was given to cost overrun. The data also depicts that the highest average scale was 3.57 for lack of finance. In addition to it industries are also facing stiff competition, changing conditions of market and lack of appropriate and viable market for the product with calculated weighted average score of 3.00, 1.52 and 1.89 respectively. It clearly indicates that if rice mill units do not fetch appropriate market to sell their products at competitive prices the units may be at the stage of closure. However, if this sector will be properly developed, it can make state Punjab a major player at the global level for marketing and supply of processed food for billion plus mouths to feed.

Hylmee Matahir (2012), investigates the consistency of causality direction between agriculture sector and industrial sector. Production in Malaysia, it is applicable interlink ages between these two sectors, policies to improve one sector could also improve the other sector. The significance of this study is that the new Malaysian government policy whereby to achieve a high income countries beyond 2020 through economic transformation program. Author investigates the agricultural industrial sectors relationship in Malaysia for the period from 1970 to 2009. Author used secondary data for two series of annual value added output data from the world bank data to examine the agriculture and industrial link and find out the following results, that unit root tests find out the variables are stationary at first differencing, and granger and causality tests show a unidirectional causality from industrial to agriculture sector both in the

short and long run. This result shows a consistency with Johansen (1992) co-integration that at least one co-integration relationship is exists. The result of this paper is contrast with the previous studies by Hye (2009), Subramahiam and Reed (2009), Seka (2009) Choudhuri and Rao (2004) which early explain the existence of bidirectional causality between these sectors. This paper may provide some useful information about the interlink ages between these sectors for the use of policy makers.

B. Gowr and K.P. Vas (2012) the objectives, of this study are to assess microbial quality of food items prepared by women who are involved in food processing trade in the unorganized sector with regard to various parameters like adopting food safety and hygienic methods, food safety laws for food production. To full-fill these objectives authors have selected 200 women from women's self help group by using the purposive random sampling method in the Din Digul district of the Tamilnadu for the study. The investigator met the respondents and collected their background information including socioeconomic background, knowledge about food safety using interview and observation method. The study period was February 2009 to February 2011. The findings of paper are that nearly 29% of the respondents belonged to the age range 20-30 years, nearly 63% of the respondents were from nuclear family and rest of the from joint family. Based New Delhi (HUDCO 2000) 30% below poverty line 40% belonged from low income group. Nearly 30% had their education up to secondary school level, followed by 20% had higher secondary level, 20% of the women SHGs had their education up to primary level and 11% were Graduates. About 19.5% were illiterates. Information regarding food hygiene and sanitary condition of the food selling units of the respondents, majority 70% of the respondents used serving utensils 40% of the respondents vessels found to be clean and the food items were

covered properly. Only 40% of the respondents either wiped or dried their vessels after cleaning the vessels.

Dinkar P. Takale (2013), identify the importance of Indian sugar industries in the world scenario and the trends of production, yields and area of sugarcane cultivation in India. The study has also discussed the comparative growth of sugarcane production and sugar industries in Maharashtra and Uttar Pradesh states of India. The present study is based on secondary data. Data collection of sugarcane production, sugar production, per hectare yield of sugar, number of factories etc. is essential for understanding the development status of these agro-based industries. The data are collected from the socioeconomic survey of India, sugar statistics for sugar cooperative monthly publication of the National Federation of Cooperative Sugar Factory Ltd. The study has revealed that India is the second largest producer of sugar in the world. India has produced 24394 thousand tones sugar from 527 factories in the year 2010-11. The study has also found that near about 61 percent of total sugar production in India has been produced in Maharashtra and Uttar Pradesh states only. The area under sugarcane was 1022 thousand hectares and 2162 thousand hectares for Maharashtra and Uttar Pradesh respectively. Uttar Pradesh area under sugarcane cultivation is two-fold as compared to the area of Maharashtra. In the year 2011-12, total sugarcane production is 357667 thousands tones in India. Out of this production, about 128819 thousands tones (36 per cent of total) production was produced in Uttar Pradesh and about 81859 thousands tones (22.88 per cent of total) production was produced in Maharashtra in the year 2011-12. Sugarcane production of Uttar Pradesh is higher than the production of Maharashtra, but sugar production of U.P. is lower as compared to India. Author also say that Agro-based industries play a vital role in the development of Indian rural economy. India's 70 per cent of total population directly

depends on agriculture and agro-based industries. The sugar industry is one of the most important agro-based industries in the development process of rural India.

3.2 Conclusion

Since the defining of I-O model by Leontief (1936) the growing number of literature are available on the structure of globe economies for different period. The linkages analysis had been carried on by Hirschman (1958) and Rasmussen (1958). In the context of Indian economy, a good deal of literature on the sectoral inter-linkages. Researchers have attempted the aforementioned techniques extensively. Many authors examine inter-sectoral linkages and structural changes in the Indian economy by the I-O model and the econometric exercises using co-integration and state space models such as: S. Uma Devi (1973-74), Rangarajan (1982), Ahluwalia and Ranga Rajan,(1989) Bhauacharya an and Mitra (1990), Ashok Mathur (1990), Bhupat M. Desai and N. V. Namboodiri (1992) Hansda (2001), Sastry etal (2003), Bathla (2003). D V S Sastry Balwant Singh. Kaushik Bhattacharya. NK vnnlkrishan (2003),Gunjeet Kaur, Sanjib Berdolol and Ray Rajesh (2007), Dilip Saikia (Dec, 2011), K.J.S Satyasai and K.U Viswanathan (1999). Thus , the existing literature examine the linkages among agriculture, industries, and services sector, however, researcher didn't found a single study which check the interdependency and BL&FL between agriculture and FPI in India. According to researcher best source only a single study by K.L. Sharma (1975) of the South Pacific Suva, Fiji Islands which was calculated backward-forward linkages and inter industry linkages to know the relationship among the agricultural and non agricultural sectors and this study is very helpful for the present study. Some other authors highlighted the cases and the effects of post harvest losses of F&V due to gaps in supply chain and lock of other infrastructure facilities in India. Sandip Sarkar (1995),Chilukuri Maheshwar (1995, Janet Bachmann and Richard Earles (2000) S.K Goyal

(2006), Dr. Venkatrayappa Chikkasubbana (2006). Some others, M.S. Swaminthan (2006), stresses employment opportunities in farm and non-farm sectors through the technological intervention with emphasis on value addition and food processing and other non agriculture sector. K. Subrah manyam Subrahmanyam K.V. (2000), Matthias Grossmann and Mark Poston (2003), N. Sambavsina Rao and Umesh Mishra (2009), S.D. Sivakumar, R. Balasubramanian and N. Srinivasan (1999), M.S. Sawminathan (2002), Matthias Grossmann Mark Poston (2003), Anjani Kumar, Harbir Singh, Sant Kumar and Surabhi Mittal (2011), discussed the employment by agro-based and food processing.

Rajago Pal (1999) Pimbert and Wakeford (2002), Kacherloveleen (2009), B. Gowr and K.P. Vas (2012) gives some Indian experiences on empowering the woman groups by providing the assistance of economics though FPI. These women groups are engage in the several activities such as food processing, bee-keeping, basketry, gem-cutting, weaving and knitting etc. Pimbert and Wakeford (2002), Dr. Venkatrayappa Chikkasubbana (2006), Kalippa kolirajan and shashanka Bhide (2007) and Anjani Kumar, Harbir Singh, Sant Kumar and Surabhi Mittal (2011) focus on food security through agro-based and food processing.