



Current Scenario of Food Processing Sector in India

Pratibha^{1*}

Corresponding Author- Ph.D. Research Scholar, Department of Food Business Management & Entrepreneurship Development, National Institute of Food Technology Entrepreneurship and Management, Plot No. 97, Sector-56, HSIIDC, Industrial Estate, Kundli-131028 (Haryana), India.

Sanjay Bhayana²

²Associate Professor & HOD, Department of Food Business Management & Entrepreneurship Development, National Institute of Food Technology Entrepreneurship and Management, Plot No. 97, Sector-56, HSIIDC, Industrial Estate, Kundli-131028 (Haryana), India.

Abstract

India is the largest country in food production, processing, supply, and consumption at the global level. The food processing sector of India is poised for huge growth and contribution to increasing economic growth of the country. Food processing sector in India has emerged as a highly profitable sector due to value addition and emerging technologies. The food market of India has 6th rank with 70% of sales and 5th rank in production, consumption, and export in the world. India export 13% of the total manufacturing and 6% of the industrial investment. India contributes to Gross value added 8.80% and 8.39% through manufacturing and agriculture sector. The Government of India contributes to the development and growth of food processing sector with the help of the Ministry of Food Processing Industries (MOFPI). It is working on these aspects with the help of different schemes and subsidies. It also works on foreign collaborations for investments and 100% export oriented units in the food processing sector. The organic food market of India will increase three times by 2020 (expected). The foreign direct investment (FDI) received around US\$ 7.54 billion by Indian food processing sector till April 2000 - March 2017. According to the report of Confederation of Indian Industry (CII) expected, the next 10 years food processing sector of India will receive foreign investment around US\$ 33 billion and also generate the employment. The online seller companies like and global e-commerce giant are also planning to invest US\$ 515 million in the food retailing sector by next five years. The present study focal point of the current scenario and foreign investment in the Food Processing Sector of India.

Keywords: Food Processing Sector, Economic Growth, Food Market

Introduction

India is the largest country in food production, processing, supply, and consumption at the global level. The Food processing sector of India has enormous significance for country development due to the synergies and vital linkage. Food processing sector of India plays an important role in the country's economy of industry and agriculture sector. India is achieving favorable terms in the global market due to the development of growth, value chain in the food sector. The postharvest losses (25-30%) of selected agriculture and horticulture products due to improper handling and processing (ASSOCHAM

India, 2017). The food processing sector of India helps to reduce postharvest losses through technology and management and also work on improving farmer's income level. According to the report, India moved a position of scarcity to surplus in food. The food sector of India creates opportunities for investment in human, technological, capital, and the financial sector. The food production of India expected to double in next ten years. Globalization, rapid urbanization, and rising income are the created demand for the processed food in the global market (ASSOCHAM India, 2017). The developing countries are appealing for carbohydrate-rich and basic staple food products.

The food sector of India has 5th rank in production, consumption, and export in the world (IBEF, 2017). The Government of India provides opportunities and priority for food processing sector with the help of different schemes and planning for initiating food processing sector. The "Make in India" is also part of an ambitious initiative of the food sector (ASSOCHAM India, 2017a). India is the largest biodiversity-rich country, which has 26 types of different climatic conditions, 127 'Agro climatic zones', and 46 varieties of soils (INSIGHTS, 2014). The food processing sector of India is pegged around US\$ 121 to 130 billion (ASSOCHAM India, 2017b). India is the largest producer of agriculture and horticulture commodities such as fruits & vegetables, cereals, milk, and eggs. These commodities are the base of food processing sector (MOFPI, 2017).

Around 60% of the total population of India is based on agriculture sector for livelihood. The Indian agriculture sector contributes 17% of the total gross domestic product (GDP) of the country (ASSOCHAM India, 2017). After the higher production of agriculture and horticulture commodities, the Indian food processed sector is limited. India produces 14% fruits and 17% vegetables of total global production (IBEF, 2017). In 2012-13 the total value added in food processing sector of India shares 9.8% GDP, manufacturing (ASSOCHAM India, 2017).

Food processing sector is a path to transform raw food ingredients into consumable nutritive food products with the help of technologies. It also prevents food products from microbial spoilage and extends the shelf life of the food products to make attractive and marketable. The food processing technologies such as grading, sorting, and packaging helps to preserve and provides a shelf life of the food products.

Economic growth of Food Processing Sector

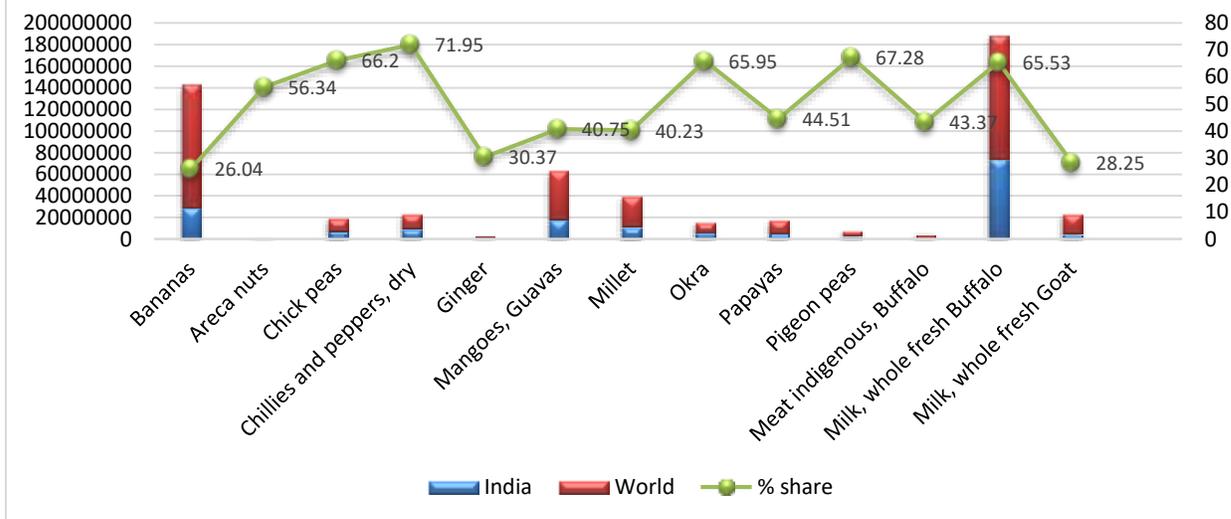
The food processing sector of India has important roles in the economy of the country; it contributes to GDP, investment, and employment. The 17% of agriculture and 9.8% of the manufacturing sector of contributing in GDP of India in 2012-13 (ASSOCHAM India, 2017). The food processing sector has been increased during last five year ending of 2012-2013. During 2015-16 the annual growth rate (7.0%) increase in both agriculture and manufacturing sector, 4.9% and 8.06 %, respectively (MOFPI Annual Report 2016-17).

The food processing sector helps to promote crop diversification, reducing Agro-food wastage, improve value addition, increasing farmer's income, generation of employment and increase export of food products. It also provides food security, food safety, and management. The government of India helps in various ways, which abundant the supply of raw materials, increase in demand for food products. Gross Value Added (GVA) by Food Processing Industries at Constant 2011-12 Prices shown in Table 1 (MOFPI Annual Report 2016-17). The growth rate (annual) of food processing sector, agriculture, and manufacturing sector during 2015-16 was 7%, 4.9%, and 8.06% respectively (MOFPI Annual Report 2016-17).

Table-1 Gross Value Added (GVA) By Food Processing Industries at Constant 2011-12 Prices (Rs. in Lakh Crore)					
Economic Activity	2011-12	2012-13	2013-14	2014-15	2015-16
All India	81.07	85.47	90.84	97.27	104.27
Manufacturing	14.10	14.95	15.80	16.67	18.22
Agriculture, Forestry and Fishing	15.02	15.24	15.88	15.84	16.04
Food Processing Industries*	1.47	1.33	1.35	1.43	1.53
(%) Growth					
Economic Activity	AAGR	2012-13	2013-14	2014-15	2015-16
All India	6.50	5.43	6.29	7.08	7.19
Manufacturing	6.63	6.05	5.65	5.53	9.29
Agriculture, Forestry and Fishing	1.67	1.50	4.19	-0.25	1.25
Food Processing Industries	1.18	-9.69	1.91	5.78	6.71
(%) Share in Total GVA					
Economic Activity	2011-12	2012-13	2013-14	2014-15	2015-16
Manufacturing	17.39	17.50	17.39	17.14	17.47
Agriculture, Forestry and Fishing	18.53	17.84	17.48	16.29	15.38
Food Processing Industries	1.81	1.55	1.49	1.47	1.46
(%) Share of Food Processing Industries					
Economic Activity	2011-12	2012-13	2013-14	2014-15	2015-16
Manufacturing	10.42	8.87	8.56	8.58	8.37
Agriculture, Forestry, and Fishing	9.78	8.70	8.51	9.03	9.51
Source: National Account Statistics, 2016/Central Statistical Office, and MOFPI Annual Report 2016-17					
Note: All GVAs have been adjusted for Financial Intermediation Services Indirectly Measured (FISIM).					
* Calculation of GVA- Food Processing Industries for 2015-16 is based on the assumption that the Percentage share of GVA of Food Processing Industries in total GVA from Food Products, Beverages, and Tobacco for 2015-16 is same as the Percentage share of GVA from Food Processing Industries in total GVA of Food Products, Beverages and Tobacco for 2014-15.					

India has the first rank in the world for the production of agricultural and related commodities like bananas, mangoes, guavas, millet, papayas, milk, chickpeas, peppers, ginger, and etc. Further, India ranks 2nd in the production of beans, wheat, paddy, garlic, lemons, onions, potatoes, meat, etc. It means that in India has the highest opportunity in the food processing sector for the future (MOFPI Annual Report 2016-17 and ASSOCHAM India, 2017).

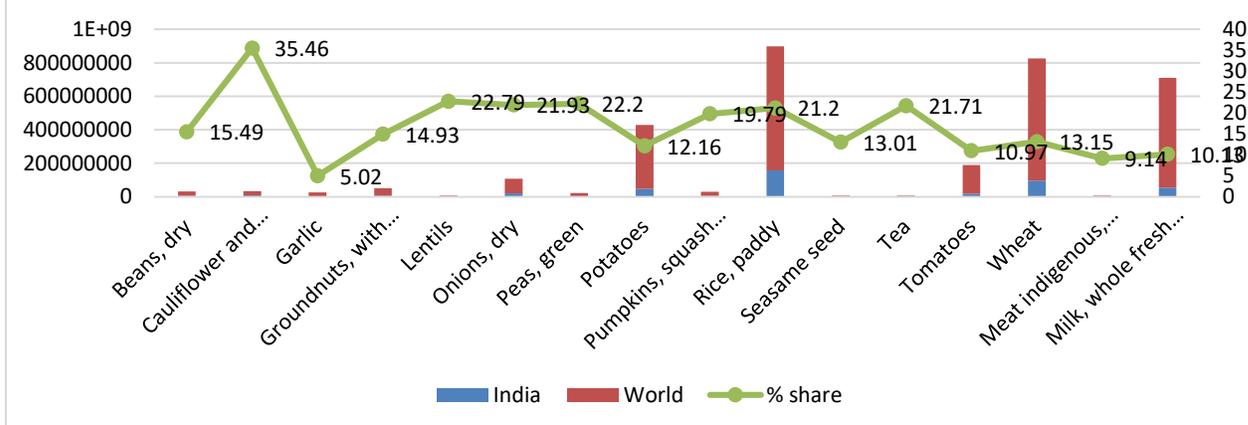
Figure 1. India ranking 1st in the production of agricultural and related commodities for 2014 (Value in MT)



Source: FAOSTAT website accessed on 06/01/2017 and MOFPI Annual Report 2016-17.

*Ranks are based on Quantity of the production. Ranks are based on the quantity.

Figure 2. India ranking 2nd in the production of agricultural and related commodities for 2014 (Value in MT)



Source: FAOSTAT website accessed on 06/01/2017 and MOFPI Annual Report 2016-17.

*Ranks are based on Quantity of the production. Ranks are based on the quantity.

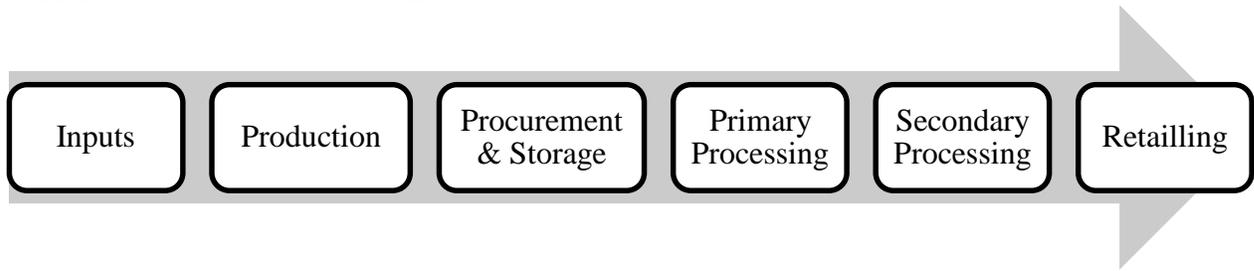
Stages of the supply chain in Food Processing Industries

The food processing sector can be divided into 3 levels of processing – primary, secondary and tertiary. The primary processing can be transformed from raw agricultural produce, milk, meat, and fish into a commodity that is fit for human consumption. In this stage involves the following steps.

- Cleaning
- Grading
- Sorting
- Packaging etc.

Food Processing Industries usually deal with higher levels of processing where innovative or higher value-added food products are manufactured (MOFPI Annual Report 2016-17). The different stages of processing of food are shown in the flowchart below.

Supply Chain in Food Processing Industries



Source: MOFPI Annual Report 2016-17

Food Market in India

India has 2nd rank in food production and processed food followed by China. The consumption rate is very high in India with \$181 billion market size. The Indian food market has the current market size approx. \$258 billion (2015) and it's expected to grow \$482 billion by 2020 (MOFPI Annual Report 2016-17 and ASSOCHAM Report 2017). The Indian government is providing facilities and support for food processing sector. This sector provides linkage between farms to fork. This sector is most important in terms of production, consumption, and exports. The Indian government provides subsidies and financial support to promote value addition, commercialization to agricultural produce, waste minimization, export growth and employment generation. India shares 18% higher value-added products (ASSOCHAM Report 2017). Easy marketing and distribution tasks, consumer's convenience, hygiene, increased food consistency, around the year availability of product, food product's shelf life, etc. are the key factors, which are attracting the food processing technology to be geared up. India has highest cultivable land for farming. It produces highest milk in the world (90 million), fruits and vegetables (150 million), livestock (485 million), poultry and eggs (489 and 45,200 million) (Dave, 2013). After the huge production in India, their food sector is less. The food processing sector potentially requiring investment and development to grow the sector. The Government of India, working for the development and refinement of traditional foods and processing technology to produce high quality and capacity food products (ASSOCHAM Report 2017).

The Indian government organization, Ministry of Food Processing Industries (MOFPI) is working on these aspects. It provides different schemes and subsidies for a food processor and farmers become an entrepreneur. It is also working in collaboration with foreign countries for increased investment and 100% export oriented units in the food processing sector (IBEF, 2017).

MOFPI is also working on the implementation of their policies and plans for this sector. The vision 'Make in India' initiative by the Indian government for generating business opportunities and employment. Become a largest producer and consumer of food India has an overwhelming impact on global demands and supply of food products in the future (FAO 2012). India has the potentiality to become one of the largest food producer and supplier at the global level ((MOFPI Annual Report 2016-17). MOFPI released a vision document, "vision 2015". This vision main motive was enhancing the processing level of food, value addition and share in global trade by 2015. The Mega food park Modernization of Abattoirs scheme and Integrated Cold Chain are the scheme which is also initiated by MOFPI (MOFPI Annual Report 2016-17). The Mega food park is based on the "cluster" approach for the development in the food processing sector (ASSOCHAM Report 2017). Research and

development (R&D) sector of the food processing unit play an important role in the development of energy efficient and innovative cost-effective technologies for the preservation and packaging of the food products. The MOFPI allotted the fund in 10th plan was US\$ 37.5 mn and that has been revised to US\$ 1088.5 mn for 12th plan. MOFPI has augmented development in the food processing sector infrastructure of the country. The growth sector has been identified with the reduction of losses at farm levels, higher value-added products, increasing no. of export, and doubling farmer's income (MOFPI Annual Report 2016-17).

Table No. 2 shows the losses (%) of the major producers, it helps to know the losses the crops during 201 and 2015 (CIPHET, 2015)

Table 2. Percentage of losses estimated for major producers										
Crop		Cereals	Pulses	Oil Seeds	Fruits & Vegetables	Milk	Fisheries (Inland)	Fisheries (Marine)	Meat	Poultry
Cumulative wastage (%)	2010	3.9-6.0	4.3-6.1	2.8-10.1	5.8-18.0	0.8	6.9	2.9	2.3	3.7
	2015	4.65-5.99	6.36-8.41	3.08-9.96	4.58-15.88	0.92	5.23	10.52	2.71	6.74

Source: Comparative Harvest and Post-Harvest losses of major crops and commodities in India as per Study Reports of CIPHET, Ludhiana released in 2010 and 2015.

The Indian food market has the 6th rank in sales (70%) at the global level. The market can be divided into 4 major segments, depending on the level of maturity and processing.

The Developed Countries have a high demand for organic and functional which involves high technology.

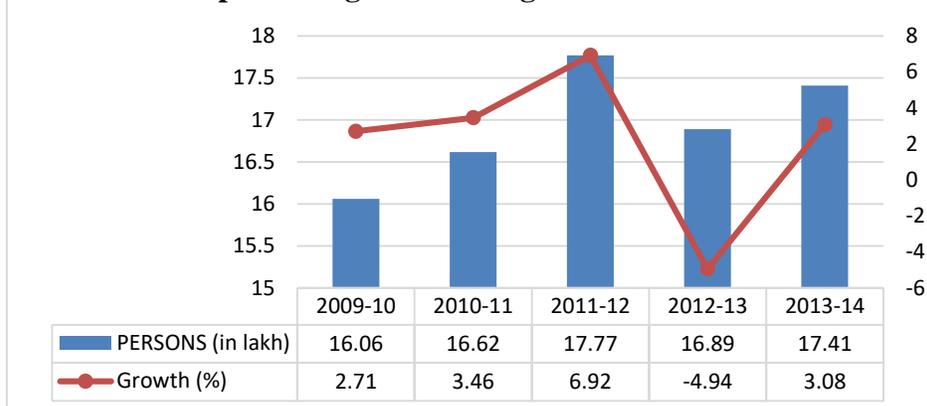
- The Eastern European Countries contend for quality and hygiene factors of food products.
- The high demand for snack items, ready to eat products, prepared meals and processed meat.
- The high demands of the carbohydrates and nutritive food products in the market.

The organic food market of India will increase three times by 2020 (expected). The foreign direct investment (FDI) received around US\$ 7.54 billion by Indian food processing sector till April 2000 - March 2017. According to the report of Confederation of Indian Industry (CII) expected, the next 10 years food processing sector of India will receive foreign investment around US\$ 33 billion and also generate the employment. The online seller companies like and global e-commerce giant is also planning to invest US\$ 515 million in the food retailing sector by next five years (ASSOCHAM Report 2017).

Employment Generation in Food processing Sector of India

The food processing sector is playing an important role in the employment-intensive segments. According to Annual Survey of Industries (ASI), the registered food processing sector was 17.41 lakhs in 2013-2014. The food processing sector employment and average annual growth rate (2.25%) was increased during last five years ending of 2013-14. The food processing sector employment scenario is shown in the figure 3 (MOFPI Annual Report 2016-17).

Figure 3 Number of persons engaged in registered food processing units during 2009-10 to 2013-14



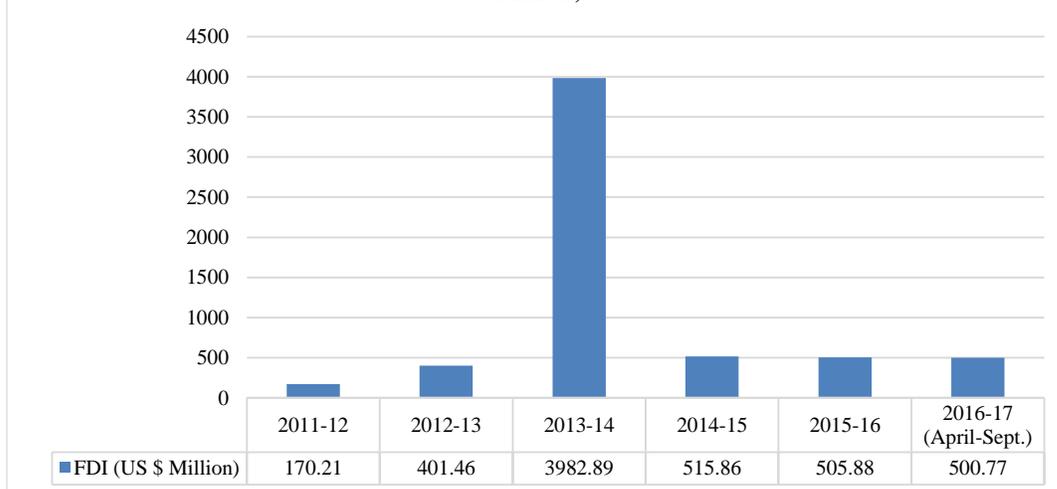
Source: Annual Survey of Industries, MOFPI Annual Report 2016-17

Government Initiatives in Food Processing Sector in India

Indian government takes major initiatives for improving the food processing sector are as follows (ASSOCHAM Report 2017):

- Increasing the growth of food processing sector through foreign direct investments and initiate its state and central level through both state and central government, and also focus to develop supply chain infrastructure.
- Create opportunities for 100% foreign direct investment through the automatic route in food processing sector.

Figure 4. Foreign Direct Investment (FDI) in Food Processing Sector (US \$ Million)



Source: MOFPI Annual Report 2016-17

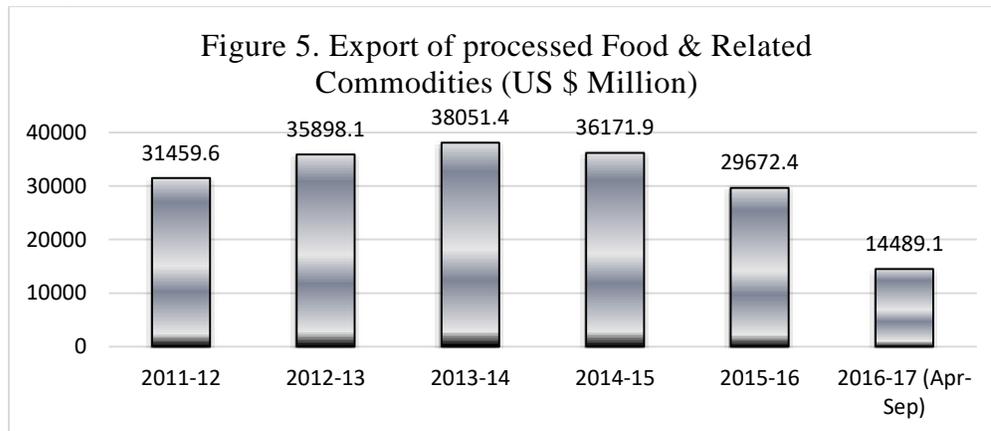
- Indian Council for Fertilizer and Nutrient Research (ICFNR) provides good quality fertilizers for farmers at an affordable rate and help to achieve food security.
- Ministry of Food Processing Industries (MOFPI) announced Human Resource Development (HRD) scheme in the food processing sector of India. This scheme being improvements in the

food sector economy and employment with the help of state governments under the national mission on food processing. This scheme of food processing sector has 4 components, they are followings:

- Creation of infrastructure facilities for degree/diploma courses in food processing sector
- Entrepreneurship Development Programme (EDP)
- Food Processing Training Centres (FPTC)
- Training at recognized institutions at the State/National level

Exports in food processing sector

Indian food processing and agriculture sector have great potential for global trade. It shares approx. 12% of the total exports. The export of processed food was increasing at a CAGR of 23.3% during 2011-2015. The processed food export order was US \$ 37.79 Billion (total export US \$ 312 Billion) during 2013-2014. The Indian government focal point is to initiate various policies in the food sector to provide an initial capital grant, tax incentives, and duty-free export. It's also working on encouraging the private sector; there are allowed 100% export oriented units for sell up to 50% of the produce in the domestic markets. Figure 5 shows the export status in the Food Processing Sector. India shared 2.36% of processed food export at the global level during 2015 (MOFPI Annual Report 2016-17 and IBEF 2017).



Source: DGCI&S and MOFPI Annual Report 2016-17

Conclusion:

This paper helps to understand the current scenario of the Food processing sector in India. In this discussion related to the current status of food processing sector and discuss the economic rate in India. It also covers the employment generation, government initiatives and export-related scenario in the Indian food processing sector. This study helps to understand the problems and solutions of the food processing sector.

References:

- ASSOCHAM India (2017). Food Processing Sector: Challenges and Growth Enables. ©2017 Grant Thornton India LLP. Conference Proceedings 10th International food processing summit & awards, Food retail, investment, infrastructure organized by ASSOCHAM, India at New Delhi. Retrieved from http://www.grantthornton.in/globalassets/1.-member-firms/india/assets/pdfs/food_processing_sector.pdf

- CIPHET (2015). Comparative Harvest and Post-Harvest losses of major crops and commodities in India as per Study Reports of CIPHET, Ludhiana released in 2010 and 2015.
- IBEF (2017). Indian Food Processing, June 2017 of the India Brand Equity Foundation (IBEF). Retrieved from <https://www.ibef.org/download/Food-Processing-June-2017.pdf>
- INSIGHTS (2014). Food Processing Industry: Concepts, Issues and Its Scenario in India and the World. Retrieved from <http://www.insightsonindia.com/2014/11/22/food-processing-industry-concepts-issues-scenario-india-world/>
- MOFPI (2017). Annual Report of Ministry of Food Processing Industries (MOFPI) 2016-17. Retrieved from [http://www.mofpi.nic.in/sites/default/files/english annual report final-ilo.pdf-compressed_1.pdf](http://www.mofpi.nic.in/sites/default/files/english%20annual%20report%20final-ilo.pdf-compressed_1.pdf)
- Rina Dave and Ankur Amin (2013). Indian processed food: recent trends and future prospects. International Journal of Research in Business Management (IJRBM) © Impact Journals, 1(1), 11-18.