

**INCLINATIONS IN THE EDIFICES OF INDIAN SUN RISE INDUSTRY**  
**–FOOD PROCESSING**

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**Abstract**

*India is one of the key food producers in the world. India's Food Processing industry is one of the largest industries in the country - it is ranked fifth in terms of production, consumption, export and expected growth. Performance of food processing industry needs to be studied with the objective of understand the trends in the structure of Indian food processing industry. Period is confined to 13 years from 2004-05 to 2016-2017. Data collected from PROWESS created by CMIE. 16 companies have been selected for this study which consist four companies from Dairy sector, two companies from Grain milling sector, two companies from Meat and Poultry sector and eight companies from Consumer goods sector. In this research, Mean, Standard deviation, Co-efficient of variation, Annual growth rate and 't' test were employed Out of these Dairy sector has the highest mean - GlaxoSmithKline Consumer Healthcare Limited in terms of six variables Net sales, Net profit, Total assets, Output, Labour and Capital.*

**INTRODUCTION**

India is one of the key food producers in the world, with the second largest arable land area. It is the largest producer of milk, pulses, sugarcane and tea in the world and the second largest producer of wheat, rice, fruits and vegetables. India's Food Processing industry is one of the largest industries in the country - it is ranked fifth in terms of production, consumption, export and expected growth. Food Processing is referred any technique or method that changes raw plant or animal material into safe, edible and more palatable food.

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## **IMPORTANCE OF PROCESSING OF FOOD AND FOOD PROCESSING INDUSTRY<sup>1</sup>**

Food has been processed and packaged since the earliest days of man's history on earth. Meat and fish were salted, smoked and dried. Herbs were dried and stored for use as medicines. While most people in the world still rely on traditional foods for their basic diet those in industrialized Centre's tend more and more to purchase processed and packaged foodstuffs for convenience. The increasing number of women who now work away from home adds additional pressure for such changes. Even people with a heavily traditional diet are demanding external products either as occasional treats, such as gassy drinks or basic commodities such as white sugar and flour. To meet these demands the industrial food processing sector has emerged. Food and crop processing is generally considered to be the largest industry in most of the countries. Most of the studies revealed that in several developing countries have shown that up to 25 per cent of the urban population can be involved in making or selling ready-to-eat meals.

<sup>2</sup>Right from the cultivation and harvest of crop, up to the consumption of product by consumer, there is certain degree of value addition in every product. These activities not makes product attractive, more usable, gives choice and awareness to customers and also enhances shelf life of products. Apart from this, service rendered by intermediaries to pass on product from producer to customer is also valuable.

Food processing not merely adds value to the agro products, but also increases their utility. It is a known fact that activities in an economy are broadly classified into Agriculture, Industry and Services. Food Processing Industry is the part and parcel of agriculture and industry.

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<sup>1</sup><http://collections.infocollections.org/ukedu/uk/d/Jto01ae/3.1.html>

<sup>2</sup><http://www.insightsonindia.com/2014/11/22/food-processing-industry-concepts-issues-scenario-india-world/>

## **TYPES AND FUNCTIONS OF FOOD PROCESSING**

### **Types of Food Processing**

Food processing encompasses all the steps that food goes through from the time it is harvested to the time it arrives on consumer's plate. According to FAO (Food and Agriculture Organization), processed foods can be classified into three types viz. Primary, Secondary and Tertiary.

- The **primary processing** includes basic cleaning, grading and packaging as in case of fruits and vegetables.
- **Secondary processing** includes alteration of the basic product to a stage just before the final preparation as in case of milling of paddy to rice.
- **Tertiary processing** leads to a high value-added ready-to eat food like bakery products, instant foods, health drinks, etc.

### **GLOBAL FOOD PROCESSING INDUSTRY**

The global processed food industry is estimated to be valued around USD 3.4 trillion and accounts for three-fourth of the global food sales. However, only 6 percent of processed foods are traded across borders compared to 16 percent of major bulk agricultural commodities. The United States and European Union together account for over 60 percent of total retail processed food sales in the world. Trade liberalization policies through multi-lateral and regional trade agreements have led to a rapid growth in food processing. In the Asian region, Japan is the largest food processing market, but India and China are likely to grow at a faster rate in the next decade.

### **STRUCTURE AND COMPOSITION OF INDIAN FOOD PROCESSING INDUSTRY<sup>3</sup>**

Food processing is a large sector that covers activities such as agriculture, horticulture, plantation, animal husbandry and fisheries. It also includes other industries that use agriculture inputs for manufacturing of edible products. The Ministry of Food Processing Industry, Government of India has defined the following segments within the Food Processing Industry:

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<sup>3</sup>[https://www.ibef.org/download/Food\\_Processing\\_270608.pdf](https://www.ibef.org/download/Food_Processing_270608.pdf)

- Dairy, fruits & vegetable processing
- Grain processing
- Meat & poultry processing
- Fisheries
- Consumer goods including packaged foods, beverages and packaged drinking water.

While the industry is large in terms of size, it is still at a nascent stage in terms of development. Out of the country's total agriculture and food produce, only 2 per cent is processed. The highest share of processed food is in the Dairy sector, where 37 per cent of the total produce is processed, of which 15 per cent is processed by the organised sector.

Primary food processing like packaged fruits and vegetables, milk, milled flour and rice, tea, spices, etc. constitutes around 60 per cent of processed foods. It has a highly fragmented structure that includes thousands of rice-mills and hullers, flour mills, pulse mills and oil-seed mills, several thousands of bakeries, traditional food unit fruits, vegetable and spice processing units in comparatively unorganised sector. In comparison, the organised sector is relatively small, with around flour mills, fish processing units, fruits and vegetables processing units, meat processing units and numerous dairy processing units at state and district levels.

#### **FOOD PROCESSING INDUSTRY IN INDIA<sup>4</sup>**

As per an estimation of IBEF, India's current food processing industry is estimated at USD 130 Billion and expected to attract huge domestic and foreign investment. Some of the key factors which are likely to increase the demand for processed food and consequently the food processing industry in the coming years are

- India is a country of over 1.25 billion population. With rising middle class having a considerable disposable income, the domestic market offers 1.25 billion opportunities for the sector.

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<sup>4</sup>IBEF India Brand Equity Foundation. Food Processing, Market & Opportunities. *Report, Fastest growing free market democracy*, 1-25.

- India ranks first in the world in the production of milk, ghee, ginger, bananas, guavas, papayas and mangoes. Further, India ranks second in the world in the production of rice, wheat and several other vegetables & fruits. If the surplus production of cereals, fruits, vegetables, milk, fish, meat and poultry, etc are processed and marketed both inside and outside the country, there will be greater opportunities for the growth of the sector.
- Next to China, India is among the fastest growing economies in the world. The recent quantum jump in the ease of doing business ranking of the World Bank (from 130 to 100) indicates the conducive business climate in the country and it is expected to attract foreign investment into this sector.

### **NEED AND IMPORTANCE OF THE STUDY**

The food processing industry is one of the largest industries in India; it has gained prominence in the recent years. This sector serves as a vital link between the agriculture and industrial segments of the economy. Since, it is one of the key industries in Indian economy. It contributes to Gross Domestic Product (GDP), significantly generates vast employment opportunities, it is the source of foreign exchange earnings, and it encourages a huge amount of Foreign Direct Investment (FDI). Contribution of food processing industry in economic development is significant. Hence, the performance of food processing industry needs to be addressed.

### **SCOPE OF THE STUDY**

The key facts about the segments of food processing industries are that, India has the largest irrigated land in the World. India produces annually 400 million liters of milk (higher in the world), 86.6 million metric tonnes of fruits and 169.4 million metric tonnes of vegetables (second largest), 512.1 million livestock (largest), 265.04 million tonnes of food grain (third largest), 11.41 million tonnes of fish (second largest), 729.2 million poultry and 88.1 billion of eggs. The scenario of the food processing industry has changed drastically with improved technology and trade liberalization policies have generated great growth opportunities in the food processing industry. So, performance of food processing industry needs to be studied.

### **STATEMENT OF THE PROBLEM**

There are some bottlenecks faced in production of food products by the food processing industry. Small and dispersed marketable surplus due to fragmented

holdings, low farm productivity, high seasonality, perishability and intermediation result in lack of distribution on supply and quality, and in turn, impede processing and exports. The food processing industry has a high concentration of unorganized segments, representing almost 75 per cent across all product categories. Thus, explaining the inefficiencies in the existing production system, ascribed to the debility of small regional players to invest in technology up gradation and diversify into alternate product categories. Despite conferring numerous incentives for establishing new processing units, proportionate results have not been achieved. At this juncture of this research, the following question were probed by the researcher.

What extent the growth of food processing industry in India has been recorded?

### **OBJECTIVES OF THE STUDY**

The study deals the performance of the food processing industries in India.

The main objective is given below.

- To understand the trends in the structure of Indian food processing industry

### **LIMITATIONS OF THE STUDY**

- The findings and inferences derived in the study are applicable only to the Indian Food Processing Industry for the specific period.
- This study has selected 16 companies on the basis of sales turnover with above 1000 crores on an average. So, the other companies did not considered for this study.
- The nature of ownership was not classified as private, public or foreign.
- The study is based on secondary data, it has its own limitations.

### **REVIEW OF LITERATURE**

Though many literatures are available in these areas, only a few important related works are considered and reviewed here.

**Pramod Kumar, (2010)<sup>5</sup>** sought in the research to assess the growth and perspectives of the Indian food processing sector. The objectives of this study were to

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<sup>5</sup> Pramod Kumar, (2010). Structure and performance of food processing industry in India. *Journal of Indian school of political economy*. 127-163.

compare the growth of the food processing industry vis-a-vis all industry, to identify among the 15 sub groups of the food processing industry the best performing and to measure the impact of growth on employment and creation of net value added (NVA). The period of study was 1989 to 2008. In order to understand the structure and performance of food processing industry various structural and financial ratios were computed and compared such as Working capital, Invested capital, Short term capital, Gross Value Added, Net value added, Net income, Profits, Distribution of NVA and Profit rate. It was found based on the growth performance two groups of food processing industry were identified like traditional and emerging sectors. It was concluded that the food processing industry had a strong potential in India.

**Ruhul Salim and Kalirajan, (1999)**<sup>6</sup> examined that the sources of output growth in Bangladesh food processing industries during both the pre-reform and the post-reform periods by decomposing output growth. The sample data for this research was taken from the Census of Manufacturing Industries (CMI) conducted yearly by the Bangladesh Bureau of Statistics (BBS). For this purpose, firm-level cross-section data was investigated in 3 individual years, viz., 1981, 1987 and 1991. They performed Minimum, Maximum and Mean analysis for this study. The results revealed the input growth contributed significantly to output growth in almost all the industries, although TFP growth improved from the early to late 1980s and in many industries input used increased approximately at the same rates as output growth. The results concluded that there was a substantial unrealized productive capacity in the Bangladesh food manufacturing sector which could be eliminated.

Among the different Industries of reviews, no one reviews does not handle the food processing industry in India with continuous 13 years of data from 2005 to 2017 and above 1000 crores sales turnover companies. So, the present study attempts to fill the existing gap.

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<sup>6</sup> Ruhul A Salim, & Kalirajan, K.P. (1999). Sources of output growth in Bangladesh food processing industries: A decomposition analysis. *The Developing Economies*, XXXVII-3, 355–74.

## **RESEARCH METHODOLOGY**

The methodology relating to the current study entitled *“Inclinations in Edifices of Indian Sun Rise Industry – Food Processing”* is examined under the following headings.

- Period of the Study
- Selection of the Sample
- Tools of Analysis

## **PERIOD OF STUDY**

- Study period is confined to 13 years from 2004-05 to 2016-2017.
- Data collected from PROWESS created by CMIE (Centre for Monitoring Indian Economy).

2004-05 was the base year for WPI; it indicates that it is the normal year where normal economic activities were taken place. So from 2004-05 to 2016-2017 were taken into considerations.

## **SELECTION OF THE SAMPLE**

- Food processing industry has been categorized into five heads such as Dairy, Grain milling, Marine, Meat & Poultry and Consumer goods.
- Based on the availability of data, 142 companies were shortlisted from 1499 companies.
- Criteria that the companies which have continuous 13 years of data and above Rs.1000 crores sales on an average have been determined.
- If sales value is too small, the value will be overestimated and the results could not be effective. In order to get correct inferences, the criteria have been fixed.
- 16 companies have been selected for this study which consist four companies from Dairy sector, two companies from Grain milling sector, two companies from Meat and Poultry sector and eight companies from Consumer goods sector.
- With regard to the Marine sector, no company fulfilled the criteria so it is exempted from the sample.



## **FRAME WORK OF ANALYSIS**

In this research, Sample Company has taken 16 companies in food processing industry in India. For examining the growth of the food processing companies, the variables like net sales, net profit, total assets, output, labour and capital have been considered. The 13 years data of the four sector companies were taken for this research. In this research, Mean, Standard deviation, Co-efficient of variation, Annual growth rate and 't' test were employed.

## **CONCEPTS**

### **i) Output**

Value added reported in CMIE does not allow for non-industrial costs. So contribution to GDP as output which equals value of production minus industrial cost minus net non-industrial cost.

### **ii) Capital**

Capital consists of land and building, plant and machinery and other fixed assets which are expected to have a productive life of more than one year and are in use by the establishment for the manufacturing activity.

### **iii) Labour**

Labour includes employees, working proprietors, unpaid family workers and home workers.

## **TRENDS IN THE STRUCTURE OF INDIAN FOOD PROCESSING INDUSTRY**

For examining the trends of the food processing industry, the variables like net sales, net profit, total assets, output, labour and capital have been considered. Past 13 years data were used and descriptive analysis was made. Further, growth rate has been identified through annual growth rate and significance also was examined through 't' test.

**INCLINATIONS IN THE EDIFICES OF INDIAN FOOD PROCESSING INDUSTRY:**

<b>Variable</b>	<b>Tools</b>	<b>Dairy</b>	<b>Grain milling</b>	<b>Meat &amp; Poultry</b>	<b>Consumer goods</b>
<b>Net Sales</b>	<b>Mean</b>	GCHL	BIL	APL	NIL
	<b>CV</b>	GCHL	BIL	APL	NIL
	<b>AGR</b>	All companies	All companies	All companies	6/8
<b>Net Profit</b>	<b>Mean</b>	GCHL	BIL.	FCAL	NIL
	<b>CV</b>	GCHL	MIFL	FCAL	NIL
	<b>AGR</b>	All companies	1(2)	All companies	6/8
<b>Total Assets</b>	<b>Mean</b>	GCHL	MIFL	FCAL	CCIL
	<b>CV</b>	HFL	BIL	APL	DCM
	<b>AGR</b>	All companies	All companies	All companies	All companies
<b>Output</b>	<b>Mean</b>	GCHL	MIFL	FCAL	DCM
	<b>CV</b>	GCHL	MIFL	FCAL	CCIL
	<b>AGR</b>	All companies	All companies	All companies	6/8
<b>Labour</b>	<b>Mean</b>	GCHL	MIFL	FCAL	NIL
	<b>CV</b>	GCHL	BIL	FCAL	DCM
	<b>AGR</b>	All companies	All companies	All companies	7/8
<b>Capital</b>	<b>Mean</b>	HAPL	MIFL	FCAL	NIL
	<b>CV</b>	GCHL	BIL	FCAL	CCIL
	<b>AGR</b>	All companies	All companies	All companies	7/8

GCHL - Glaxosmithkline Consumer Healthcare Limited

HFL - Heritage Foods Limited.

HAPL - Hatsun Agro Products Limited.

BIL - Britannia Industries Limited.

MIFL - Mondelez India Foods Pvt. Limited.

APL - Allansons Pvt. Limited.

FCAL - Frigerio Conserva Allana Pvt. Limited.

NIL - Nestle India Limited.

CCIL - Cotton Corporation of India Limited.

DCM - D CM Shriram Industries Limited.

The trends of Indian food processing industry, the research has taken with the variables net sales, net profit, total assets, output, labour and capital. In the case of **Net Sales**, the company Kwality Limited has recorded *high growth* in Dairy sector, Mondelez India Foods Private Limited in Grain Milling sector, Frogerio Conserva Allana Private Limited in Meat & Poultry sector, Varun Beverages Limited in consumer goods sector. The companies Kwality Limited in Dairy sector, Britannia industries Limited in Grain Milling sector, Allanasons Private Limited in Meat & Poultry sector and Hindustan Gum & Chemicals Limited in Consumer Goods sector have recorded high growth in its **Net Profit**. While considering **Total Assets** of the selected companies, the companies Kwality Limited in Dairy sector, Mondelez India Foods Private Limited in Grain Milling sector, Allanasons Private Limited in Mean & Poultry sector, Hindustan Gum & Chemicals Limited in consumer goods sector have found the highest growth during the study period. Output is one of the important variables for finding the performance of the selected companies and so the companies, Kwality Limited in Dairy sector, In the case of **output**, the companies Kwality Limited in Dairy sector, Britannia industries Limited in Grain Milling sector, Frogerio Conserva Allana Private Limited in Meat & Poultry sector, Varun Beverages Limited in Consumer Goods sector have registered the highest growth during the study period. The companies Kwality Limited in Dairy sector, the company Mondelez India Foods Private Limited in Grain Milling sector, Allanasons Private Limited in Meat & Poultry sector and Varun Beverages Limited in Consumer Goods sector has accounted the highest growth rate during the period of the study in **Labour** variable. The variable capital has found the highest growth from the companies Kwality Limited in Dairy sector, the company Mondelez India Foods Private Limited in Grain Milling sector, Allanasons Private Limited in Meat & Poultry sector and Varun Beverages Limited in Consumer Goods sector.

Also it is revealed that in Dairy sector, *highest mean* value was recorded in GlaxoSmithkline Consumer Health care Limited in terms of Net sales, Net profit, Total assets, Output, and Labour. In Grain milling sector, Britannia Industries Limited has the highest mean value in terms of net sales and net profit, Mondelez India Foods Private Limited has the highest mean value in terms of total assets, output, labour and capital. In Meat and Poultry sector, Frigerio Conserva Allana Private Limited has recorded the highest mean value in net profit, output, labour and capital; Allanasons Private Limited has recorded highest mean value in net sales and total assets. In Consumer

goods sector, Nestle India Limited has realized the highest mean value in terms of net sales, net profit, Labour, and Capital and total assets was realized by Cotton Corporation of India Limited, output was realized by DCM Shriram India Limited.

In terms of **co-efficient of variation**, GlaxoSmithKline Consumer Health care Limited has more stable in terms of net sales, net profit, output, labour and capital in Dairy sector. In Grain milling sector, Britannia Industries limited, has more homogeneous in net sales, total assets, labour and capital and Mondelez India Foods Private Limited has more homogeneous in net profit and output. Frigerio conserva Allana private Limited has more consistent in terms of net profit, total assets output, labour and capital and Allana sons private limited has more consistent with net sales in Meat and Poultry sector. In Consumer goods, DCM Shriram Industries Limited has more stable in net sales, total assets and labour, Nestle in net profit, Cotton Corporation of India Limited in terms of output and capital.

Thus companies have shown mixed trend.

#### **RECOMMENDATIONS**

Collaborations, joint venture, attracting foreign direct investment, fiscal incentives etc. are various ways to tap this potential. There is urgent need for training and retaining the labour for skilled job profile to strengthen the Food Industry. Hence there is a potential to increase the output of the food processing sector with the existing resources.

**References:**

**Books**

Bhall, V.K. (1998). *Financial management and Policy*. New Delhi, Anmol Publications Pvt. Ltd.

Brealy, Richard. A., & Myers, Stewart. C. (1991), *Principles of Corporate Finance*, McGraw Hill Higher Education.

Kothari, C.R. (1990). *Research Methodology Methods & Techniques*. New Delhi, Wishwa Prakashan.

**Journals**

Alexander Yu. Apokin, & Irina B. Ipatova, (2016). How R&D expenditures influence Total Factor Productivity and technical efficiency?. *Working paper, National Research University Higher School of Economics*, 1-52.

Pramod Kumar, (2010). Structure and performance of food processing industry in India. *Journal of Indian school of political economy*. 127-163.

Ruhul A Salim, & Kalirajan, K.P. (1999). Sources of output growth in Bangladesh food processing industries: A decomposition analysis. *The Developing Economies*, XXXVII-3, 355–74.

**Reports:**

IBEF India Brand Equity Foundation. Food Processing, Market & Opportunities. *Report, Fastest growing free market democracy*, 1-25.

**WEBSITES**

1. <http://collections.infocollections.org/ukedu/uk/d/Jto01ae/3.1.html>

2. <http://www.insightsonindia.com/2014/11/22/food-processing-industry-concepts-issues-scenario-india-world/>

3. [https://www.ibef.org/download/Food\\_Processing\\_270608.pdf](https://www.ibef.org/download/Food_Processing_270608.pdf).