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## Role of processed foods on young generation consumption in Bihar

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### Abstract

Food processing adds value to agricultural or horticultural products by grading, sorting and packaging. It is a method of making and preserving food products to increase shelf life, quality, and functionality. It includes items from agriculture, horticulture, plantation, animal husbandry, and fisheries. Food processing links agriculture and industry, which is essential for economic growth. It diversifies and commercialises farming, boosts farmer income, creates agro food export markets, and creates more jobs. Such enterprises might sell and deliver more food goods to remote regions. Food processing is India's fifth-largest sector by production, consumption, and export. Food processing was mostly limited to preservation, packing, and transportation, including salting, curdling, drying, pickling, etc. With new markets and technology, the industry has expanded. It now makes ready-to-eat meals, drinks, processed and frozen fruit and vegetables, marine and animal products, etc. Post-harvest infrastructure for food processing comprises cold storage, food parks, packaging, value addition, irradiation, and modernised abattoirs. Primary and value-added food make up the food processing industry. Packaged fruit and vegetables, milk, wheat, rice, spices, etc. make up 62% of processed food value. Value-added foods including juices, jams, and veggies make up 38% of processed food.

**Keywords:** Food processing, agricultural, grading, farmer income and packaging

### Introduction

The term 'food processing' is mainly defined as a process of value addition to the agricultural or horticultural produce by various methods like grading, sorting and packaging<sup>1</sup>. In other words, it is a technique of manufacturing and preserving food substances in an effective manner with a view to enhance their shelf life; improve quality as well as make them functionally more useful. It covers spectrum of products from sub-sectors comprising agriculture, horticulture, plantation, animal husbandry and fisheries. Food processing sector is indispensable for the overall development of an economy as it provides a vital linkage and synergy between the agriculture and industry. It helps to diversify and commercialize farming; enhance income of farmers; create markets for export of agro foods as well as generate greater employment opportunities. Through the presence of such industries, a wider range of food products could be sold and distributed to the distant locations. Food processing industry is one of the largest industry in India and is ranked 5th in terms of production, consumption and export. Earlier, food processing was largely confined to the food preservation, packaging and transportation, which mainly involved salting, curdling, drying, pickling, etc. However, over the years, with emerging new markets and technologies, the sector has widened its scope. It has started producing many new items like ready-to-eat food, beverages, processed and frozen fruit and vegetable products, marine and meat products, etc. It also includes establishment of post-harvest infrastructure for processing of various food items like cold storage facilities, food parks, packaging centres, value added centres, irradiation facilities and modernized abattoir. The food processing sector comprises of two segments- Primary processed food and Value added food. Primary segment comprises of packaged fruit and vegetables, milk, flour, rice, spices etc and constitutes around 62% in value terms of the processed foods. Value added segment includes processed fruits and vegetables, juices, jam & jelly etc and holds around 38% share in the total processed food.

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### Indian Food Processing Industry

India is one of the key food producing countries in the world, second only to China. The food processing industry provides crucial connections between industry and agriculture. To aid the growth of the food processing industry, the government has implemented schemes including the setting up of food parks, packaging centers, integrated cold chain facilities, value-added centers, and modern abattoirs.

### History of Food Processing

Food processing dates back to the prehistoric ages when crude processing incorporated slaughtering, fermenting, sun drying, preserving with salt, and various types of cooking (such as roasting, smoking, steaming, and oven baking). Salt preservation was especially common for foods that constituted warrior and sailors' diets, until the introduction of canning methods. Evidence for the existence of these methods can be found in the writings of the ancient Greek, Chaldean, Egyptian and Roman civilizations as well as archaeological evidence from Europe, North America, South America and Asia. In the 20th century, World War II, the space race and the rising consumer society in developed countries (including the United States) contributed to the growth of food processing with such advances as spray drying, juice concentrates, freeze drying and the introduction of artificial sweeteners, colouring agents, and preservatives such as sodium benzoate. In the late 20th century products such as dried instant soups, reconstituted fruits and juices, and self-cooking meals such as MRE food rations were developed.

### Food Processing Industry in India

In an emerging country like India, where growth with equity is a primary policy thrust, the optimum development of the food processing sector will contribute significantly in tackling several developmental concerns such as disguised unemployment in agriculture, rural poverty, food security, food inflation, improved nutrition, prevention of wastage of food etc. By serving as a bridge between agriculture and manufacturing and by dealing with a basic need of all Indian citizens – the assured supply of healthy and affordable food at all locations in the country, this sector has the potential to be a major driver in India's growth in the coming years. In fact the food processing sector has been growing faster than the agriculture sector. India ranks No. 1 in the world in production of Milk (Fresh, whole, buffalo), Pulses, Ginger, Chick Peas, Bananas, Guavas, Papayas and Mangoes. Further, India ranks No. 2 in the world in production of Rice, Wheat, Potatoes, Garlic, Cashew Nuts, Groundnuts, Dry Onion, Green Peas, Pumpkins, Gourds, and cauliflowers. With the huge production base India can easily become the leading food supplier to the world and at the same time serving its vast growing domestic market with over a billion people. Food processing industry in India is increasingly seen as a potential source for driving rural economy as it brings synergy between industry and agriculture. A developed food processing industry is expected to lead increase in farm gate prices translating into increased rural incomes, reduce wastages, ensure value addition, promote crop diversification, generate employment opportunities as well as export earnings. With such a large and diversified production base coupled with low manpower cost and modern technology, the Indian food processing sector is

poised for growth, if the advantages are leveraged optimally. The growth is driven by the fact that the central government has given a priority status to all agro-processing businesses. Government incentives in the field of mega food parks, cold chain and exports benefits are also playing an important role in promoting food processing.

The food processing industry is still at a very nascent stage of development considering the fact that it accounts for only 2% of the total agricultural and food produce. It can be subdivided into the following.

### Segments in the Indian Food Processing Industry

- **Dairy:** Milk Powder, Condensed Milk, Ice Creams, Butter, Ghee & Cheese.
- **Fruits and Vegetables:** Beverages, Juices, Concentrates, Pulp, Slices, Frozen & Dehydrated Products, Potato Wafers/ Chips, etc.
- **Grains and Cereals:** Flour, Starch, Glucose, Corn Flakes, Malted Foods,
- Vermicelli, Beer & Malt Extracts, Grain Based Alcohol.
- **Fisheries:** Frozen & Canned Products.
- **Meat and Poultry:** Frozen & Packed, Egg Powder.
- **Consumer Food:** Snacks, Namkeens, Biscuits & Bakery Products, Ready to Eat Foods, Alcoholic & Non-alcoholic Beverages.

The food processing sector is a highly fragmented industry, it widely comprises of the following sub-segments: fruits and vegetables, milk and milk products, beer and alcoholic beverages, meat and poultry, marine products, grain processing, packaged or convenience food and packaged drinks. A huge number of entrepreneurs in this industry are small in terms of their production and operation, and are largely concentrated in the unorganized segment. This segment accounts for more than 70% of the output in terms of volume and 50% in terms of value. Though the organized sector seems comparatively small, it is growing at a much faster pace.

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### Challenges faced by the industry

High level of wastage of agricultural produces is primarily on account of the inherent disadvantages faced by the sector. This sector is characterized by preponderance of small farmers, small scale & tiny processors, outdated technology, poor infrastructure and a maze of middle men. Therefore, this sector needs support in terms of creation and strengthening of infrastructure which individual farmers and processors will not be in a position to create and sustain. Further, there is also a need for strengthening R&D activities in food processing sector for innovation of technology which suits local needs, popularization of appropriate technology, skill development and creation of an institutional framework supportive of the industry. The major challenges facing the sector are illustrated below:

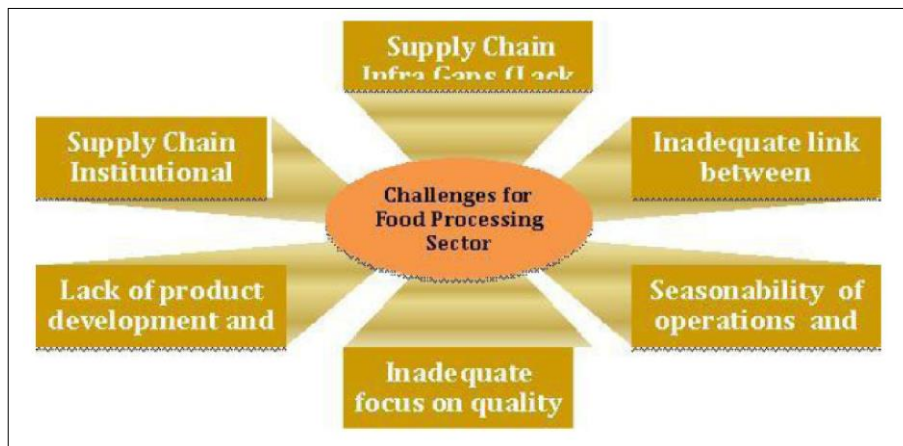


Fig 1: Major Challenges

### Government Initiatives for the Food Processing Sector

The food processing sector has emerged as an important segment of the Indian economy in terms of its contribution to GDP, employment and investment. During 2014-15, the sector constituted as much as 9.0 per cent and 10.1 per cent of GDP in Manufacturing and Agriculture sector, respectively. Food Processing Industries sector has grown at 7.1 per cent during this period. The Ministry of Food Processing Industries is implementing various schemes for providing impetus to the development of food processing sector.

### Review of Literature

Sreevstava, (2009) <sup>[2]</sup> in his article "Packaged Dairy Products in Demand" studied India is the largest producer of milk with a production of 102 million tonnes a year, while the US holds the second position with 85 million tonnes. The marked increase in milk production has not caused any fall in returns to the farmers because the increase in procurement and production keeps pace with market expansion. Dairy farmers are thus able to improve their economic status. The packaged dairy products are more convenient, hygienic, consistent in quality and not much expensive.

Jabir Ali, (2007) <sup>[3]</sup> in their study on "Total factor productivity and efficiency in Indian meat processing industry" evaluated the performance of meat processing industry and role of technology in acceleration of growth. Productivity and efficiency improvement of the processing industry is the key for sustainable growth. Malmquist TFP index is used for measuring productivity change in Indian

meat processing industry. Malmquist productivity index is defined as the ratio of two output distance functions.

Mohamed, (2007) <sup>[4]</sup> in "Total Factor Productivity in Indonesian Manufacturing: A Stochastic Frontier Approach" examined the patterns of total factor productivity growth (TFP) and technical efficiency changes in Indonesia's manufacturing industries over the period 1988-2000. A stochastic frontier production has been employed to decompose the sources of TFP growth into technical progress, changes in technical efficiency and scale economies effect. The analysis takes into consideration the impact of the liberalisation policies and the economic crisis in 1997 as the data is broken down into three sub periods. In addition, the results are also compared to the previous estimates for robustness check.

Rajeswaran, (2006) <sup>[1]</sup> in his study on "Food Processing Industry in India – Opportunities and Challenges" reveals that India's food processing sector covers fruits and vegetables; spices, meat and milk and milk products, alcoholic beverages, fisheries, plantation, grain produce and other consumer product groups like confectionary, chocolates, coco and the like. It is necessary to understand the role of food processing industry in triggering a virtuous cycle of growth through advantages of its backward and forward linkages for the rural economy. This can best be assured once the rural economy is developed. The complexity of the rural sector is compounded by the fact that the yields of most key products are only 25 – 40 per cent of the world-best levels. A wide range of value addition would emerge, and at each stage quality level and consistency are stressed.

Lakshmi, K. Raut, (2003) <sup>[5]</sup> in “The Effect of Competitiveness and Productivity growth on Exports of Indian Private Firms” has found the food and beverages and petro chemical industries showed a significant improvement in TFP growth in the period 1981-86. Even though few industries responded favourably to the liberalisation policies, the productive efficiency of the Indian manufacturing firms did not improve significantly in early eighties. TFP growth on firm size, exports, imports of raw materials and capital goods, did not show any significant effect in almost all industries except food and beverage industry during 1981-86. Estimate of bit model of export showed that productivity growth had no significant positive effect on exports of any industry, except petro-chemical industry in which it has negative effect.

Padmanabhan, (2001) <sup>[6]</sup> in his article on “Food processing set for a quantum jump” pointed out that initiatives was already taken by the government to promote this sector by setting up area-specific agro food parks. The national policy aims at increasing the level of food processing from the present 2 percent to 10 per cent by the year 2010 and 25 per cent by 2025. The value addition in the food sector in India is a mere 7 per cent. Moreover, the employment generation is found to be quite high in this sector. The development of the food processing sector also assumes importance in the context of the liberalized global trade regime under the WTO Agreement.

Ramaswamy, K.V. (1996) <sup>[7]</sup> pooled the data for 18 industry groups for the period 1975 to 1990 and estimated a multiple regression model with a time dummy to capture the effects of the two periods, 1974-75 to 1979-80 and 1980-81 to 1989-90. He regressed the labour productivity growth on output growth rates, net entry and capital intensity. He found that output growth has a positive effect on productivity growth. His estimates supported the hypothesis that entry in the period of industrial deregulation had a positive impact on productivity growth. He argues that it is the entry of new firms with new and improved technology and the substitution of inefficient plants by efficient plants, which leads to productivity growth. The firms that entered during this period have had presumably better access to imported raw materials and technology. The index of capital intensity is found to be insignificant in explaining labour productivity.

Goldar, (1986) <sup>[8]</sup> analysed the inter industrial differences in TFP growth for 37 three digit industries of India during the period 1960- 70. He found that a positive and significant relationship between output growth and productivity growth (partial and total). He also used other variables in his analysis of inter-industrial differences in productivity growth during the period 1960-70. Using the effective rate of protection as an indicator of trade policy his analysis revealed a negative but statistically significant link between the trade policy and TFP growth.

### Need of the Study

Bihar is the seventh largest economy in India in terms of food production. The economy is primarily agrarian with agriculture contributing to more than 38% to the Gross State Domestic Product (GSDP). Bihar is the eight largest producers of food grains in the country. The major agricultural products of Bihar are cereals, pulses, oilseeds and cash crops. The major cereals are rice, wheat and maize and major pulses are gram, arhar, mung, and masoor. In

addition, the major cash crops are potato, sugarcane, jute, tobacco and spices. Bihar is the third largest producer of vegetables in India after West Bengal and Uttar Pradesh and the sixth largest producer of fruits (8.3 million MT) and (3.03 million MT) respectively.

### Objective of the Study

1. To conceptualize food process industry in India.
2. To evaluate the level of awareness among the youth consumer about the processed foods.
3. To evaluate the awareness level about the effects of processed food higher among males or females.
4. To study the reasons of this increasing awareness.
5. To evaluate the marketing implications of this awareness.

### Scope of the Study

Topical scope of the study confined to the impact of processed foods on young generation consumers with special reference to Bihar. The analytical scope is restricted to the testing of hypothesis. The functional scope of the study is limited to identifying food process industry in India in general and Bihar in particular.

### Significance of the Study

The food processing is mostly depends on agriculture and food processing industry has tremendous significance in human life and its evolution. The present study covers one of the important issues which affect various segments of the economy. It is useful to enterprises to conduct the day-to-day management. It would help to the entrepreneurs to manage their business, in proper way for solving their general and specific problems. The present study will provide policy prescription to the government to improve the support to such enterprises. The study of young generation consumers and their awareness about the processed food its advantages and harmful effects on the health would help us to know future trends of the different types of foods lie the latent need of organic food being available at an affordable price. The changing lifestyles and buying patterns and even modes and places of buying are changing. The study is also help us to know the disposable income and the future spend on the different types of foods available in the market.

### Research Methodology

The study is based on primary and secondary data. Secondary data is collected from various books, magazines, newspaper, journals, and websites. Primary data for this study is collected through a pre-tested questionnaire which the respondents would to fill up.

The following methodology is used to conduct the proposed research work:

### Universe of the Study

As per the topic we have the whole Bihar as our population.

### Sampling Technique

Multistage convenience sampling techniques is used because they are accessible to the researcher this technique is considered easiest, cheapest, and the least time consuming.

### Sampling Design

The population of Bihar is approximately 10.38 crore. So it is not possible to contact and collect data from such a vast mass and conduct the research in Bihar percentage of young (age 15-24 years) to total population is 16.8% and percentage of adult's age is 18 or above to total population is 54% as per census 2011. So we can say that Bihar is a young state with its majority of population being youth. So far this reason sample size of 360 respondents, out of which 300 youth of selected cities which population is more than 1 lakh and 15 dealers and distributors of selected cities of Bihar.

### Limitations of the Study

Despite of maximum efforts, there are several limitations of the study; they can be mentioned as under:

1. The study is conducted based on primary data so there are chances of personal bias while getting the questionnaire filled up.
2. Customer perspective, Learning and Growth and Awareness perspective is measured through primary data, so limitations of data will affect the conclusion of research.
3. The study will also depend on the secondary data so it has its own limitations.
4. The study will focus on packaged and processed food only and hence results of the analysis will not be applicable to any other type of industry.

### Conclusions

The Indian food industry presents a very large opportunity to every stakeholder. This is primarily driven by a robust consumer demand, the changing nature of the Indian consumer, who is more informed and willing to try new products; and the strong production base of the country. Needless to add, the several gaps in the current production and delivery systems actually present a huge opportunity for the growth of companies willing to bet long term in this sector. However, the growth of food processing companies has been sub-optimal because of high cost, low-level of productivity, high wastage and lack of competitiveness of Indian food products in the global market. Therefore, to fully leverage the growth potential of the sector, current challenges that are being faced by the industry need to be properly addressed and steps need to be taken to remove the bottlenecks hampering the sectoral growth.

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