

MANAGEMENT O FOOD PROCESSING INDUSTRY AND ITS PROSPECTUS

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Abstract:

This paper is about bringing fresh perspectives to the challenge of feeding over a billion people—while one can rightfully argue that the onus of such a big ask is / should be spread across the traditionally understood areas of agriculture, food processing and then the downstream storage, logistics and retail services, it is clear even today as India evolves in this space, that the leadership for achieving this goal has to be from the Food Processing sector. And to understand and accept this, we have to first move beyond the traditional understanding (perhaps even bias) of considering Food Processing as the Packaged Foods sector which thrives on a pure buying / selling relationship across the food value chain, in a transactional manner. In fact, it is quite the opposite, where with increasing scale, Food Processors are and will need to invest heavily and drive productivity improvements in the “back end” value chain (i.e. farming) and drive improved, safer consumption choices for the customer. In short, it forms the vital link between the agriculture sector and final food consumption.

KEYWORDS:

Growth , Agribusiness , globalization and liberalization .

INTRODUCTION

Hence, in this report on Food Processing, challenges and opportunities across the value chain have been highlighted in a balanced manner, as they are equally pertinent to be discussed and solved for in the context of 'Feeding a Billion'. The focus of this report is to emphasize the role food processing sector can play in addressing the nutrition needs of the country, while bringing to bear significant economic and social impact facts, which should be considered favorably by all key decision makers considering investments in this sector, as this sector advocates greater congruency and implementation of policies, aimed at bridging the gap of feeding over a billion people, with safe and nutritious food.

SCOPE AND ROLE

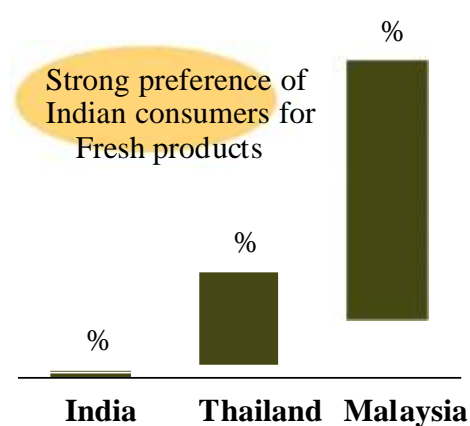
The food value chain in India is different from many other markets like U.S. due to unique consumption pattern in the country and presence of both organized and unorganized players. As a result, consumption at the retail level consists largely of non-processed products or food with very limited processing in key categories like fruits and vegetables, meat and poultry, dairy, grains, and pulses (see figure 2).

Please cite this Article as : Ashok Navale, “MANAGEMENT O FOOD PROCESSING INDUSTRY AND ITS PROSPECTUS” : Tactful Management Research Journal (May ; 2014)

Figure 1.

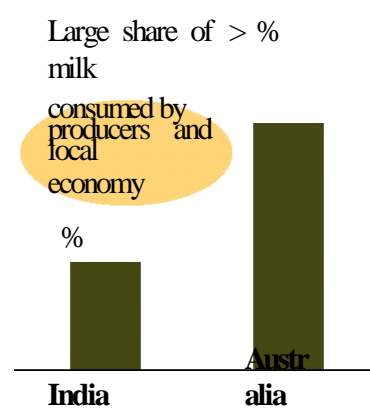
Share of processing across regions

Share of processing in fruits and vegetables across regions



Sources: Vision, Strategy and Action Plan for Food Processing Industries in India , Ministry of Food Processing Industries

Share of processing in milk and dairy products across regions



The difference in the Indian market is driven by both demand and supply driven factors:

Consumption behavior: Indian consumers prefer to procure food in unprocessed and fresh form and then convert it into a consumable form through the food preparation process either in homes or restaurants. This is distinct from many other countries where consumers prefer to purchase more ready-to-eat foods. The consumption behavior is changing in the urban centers, however, as the younger generation is shifting toward processed foods due to paucity of time.

Wider availability: Most food products in India, like fruits and vegetables and milk, have a wide availability across the country, which is very unique to India. This leads to lower need for packaging and preserving food for transportation over longer distances.

Limited evolution of food processing sector: In areas like core processing, warehousing, logistics, and production, the food value chain in India is still nascent with limited use of modern technology and labor-intensive processes as compared to countries like the U.S., which are characterized by large-scale contract farming, extensive cold chains, and advanced warehousing capabilities.

These differences lead to multiple challenges like higher wastage, limited opportunities for food fortification through nutrients and quality and safety risks. The food processing industry thus has a much wider role in Indian context. This role can be split in to core activities which involve:

Primary processing like cutting, cleaning and refrigeration
Secondary processing like of grain milling, manufacture of fruit pulps, frozen meat and poultry, packaged milk
Tertiary activities processing like manufacture of fruit jams and juices, biscuits, milk, products, ready to eat meals, protein supplements, confectionery etc.
These activities (illustrated in figure 3 for different food categories) help in preserving food nutrients, increasing shelf life of food, improving nutrition levels through fortification and providing wider choices for the consumer.

Figure
Segments and examples of food processing

	Primary processing	Secondary processing	Tertiary Processing
Fruit and vegetable	• Cleaning, cutting, sorting	• Pulps, pastes, slices	• Jams, juices, pickles
Grains and cereals	• Sorting and grading	• Flour, malt & milling	Biscuits, noodles, • cakes
Dairy products	Grading and • refrigeration	Cottage cheese, • cream, dried milk	Yoghurts, spreadable • fats
Meat and poultry	Sorting and • refrigeration	• Cut, fried, frozen	• Ready-to-eat
Marine products	Chilling and • freezing	• Cut, fried, frozen	• Ready-to-eat
Edible oil	• Sorting and grading	• Refined oils	• Fortified oils

Sources: Analyst Reports, Primary Interviews

In addition and equally important, the food processing sector can impact the other areas of the value chain through its forward and backward linkages.

Farming and other food production: Increasingly, the food processing companies are strengthening their backward integration through initiatives like agriculture extension services. This will drive higher productivity in the farming sector and improve quality and safety. With higher visibility of demand, food processing companies can also help in improving the crop mix in agriculture, leading to better availability and affordability of food products.

Procurement: Food processing companies can deploy more scientific methods for sorting and grading of produce. Higher involvement in procurement will also help improve price realization for farmers by reducing intermediaries and thus lowering price buildup through elimination of non-value-adding activities.

Supply chain: The increasing role of the food processing industry can help accelerate investment in storage and transport capabilities, thereby lowering wastage levels, improving nutrient retention during storage and transportation, and enhancing shelf life of products.

CHALLENGES FOR THE FOOD INDUSTRY -

There are several challenges that need to be addressed in order for the food industry to be able to achieve the availability, affordability, awareness, quality and safety goals necessary to feed India's population of over a billion. These challenges span the food value-chain from production and farming to retailing and consumption and have differing relevance for each food segment

1.Slowdown in production growth:

India's highly fragmented farming landscape with low average farm sizes is a major challenge in quantum improvements in farm-level productivity. India has among the lowest average farm sizes globally. Low farm size leads to an inability to invest in improving productivity. As illustrated in figure 24 on page 33, a 1 hectare farm has a mere INR 9,000 – 10,000 of income above the poverty line. A size of 0.6 – 0.8 hectares is the minimum break-even size of land holding for farmers. With around 67 percent of landholdings being marginal (<1 hectare), with an average size of 0.4 hectares, more than half of marginal farmers are likely to not have any excess income to spare beyond subsistence. However, the bottleneck of small landholdings can be overcome, as illustrated by other Asian countries, which have even smaller average sizes but higher yields of major crops (see figure 25). South Korea, for example, witnessed an explosion in mechanization due to training, the establishment of farm machinery service centers in rural areas, the promotion of co-operative machinery ownership and utilization, and government programs ensuring access to credit.

2.Limited alignment and clarity on production incentives:

While government involvement in procurement and distribution of non-perishable foods including staple food grains and oilseeds is critical for food security in India, it is also a major source of demand-supply mismatches in food value-chains (see Figure 28 on page 36). Through the 1990s, Minimum Support Prices (MSP) increases for rice, wheat and other food grains outstripped increases for oilseeds. The high level of government procurement (estimated to be around 30 to 40 percent of total food grain production currently) drove increasingly favorable returns from food grains and resulted in diversion of land away from oilseeds. However this distortion of incentives led to a huge increase in import dependence, with edible oil imports rising from 3 percent in 1992 to around 50 percent by 2000 and 57 percent currently⁹. The huge impact that government price setting and procurement can have on crop patterns highlights the need for an integrated strategy from agricultural production to consumer nutritional demand, in order to ensure sufficient food across income classes. Alternatively, better demand-supply matching can be attempted through the involvement of private players. For example, contract farming, would give an assured market for farmers and hence improve the influence of private sector demand signals on the farmer crop production.

3. Low coverage of organized procurement and limited transparency in current setup:

Access to organized procurement can be an important enabler to improving food production and food availability, by providing farmers a better guarantee of volumes and better price realization per unit sale. For example, the dairy co-operative movement was fundamental in transforming the fragmented rural milk production industry from self-consumption and local sale to consistent marketable surplus. Even in the case of dairy co-operatives, however, coverage of farmers is still low. As seen in figure 29 – only around 8 percent of milk production in India flows through the organized co-operative route.

4. Poor procurement and supply chain infrastructure:

Various factors contribute to the poor infrastructure levels in the food supply chain. Primarily these include the high consumer demand for fresh or live-cut produce, the large share of unorganized players in the supply chain and operating commercial viability challenges (see figure 31). As a result, regional imbalances in food production and demand become difficult to address. For example, the high share of 'wet' markets for poultry – estimated to be as high as 80 to 90 percent – limits the ability to shift poultry from excess to deficit regions, due to the high mortality and shrinkage associated with transportation of live birds.

5. Low value-added in processing:

There is major fragmentation of food processing capacity, with a large unorganized segment and widespread use of primitive processing. This results in lower value-added at the processing stage, especially from a nutritional point of view. Powerful ideas like fortification of flour with micronutrients that have been adopted globally¹⁰, would be difficult to implement and monitor in India, given this large unorganized presence and difficulty in ensuring adoption of improved technology. For example, the 58 percent of iron currently lost in India, during the processing of 15 to 18 million tons of wheat to flour could ensure a daily availability of around 40 to 50 milligrams of iron per capita – almost double the recommended dietary allowance of 30 milligrams (see figure 32 on page 40). The high consumer sensitivity to price means that greater value-addition, which would increase the cost of foods, is difficult. Lack of scale limits the ability to increase value-addition through cost-effective adoption of new technologies. The processing industry also has limited incentives to drive this. For example, under current regulation, a premix of ingredients for fortification would incur VAT, whereas tax breaks have helped improve cost-effectiveness in global examples.

Imperatives for Food Security of India –

The country today faces several issues across the food value chains that impact food availability, affordability, quality and safety, and consumer awareness (see figure 34). There are many government and private initiatives in place to help overcome these challenges. However, the success so far has been mixed due to scale of the industry, limited resources, and gaps in implementation. India requires a fresh look at the existing initiatives to enhance effectiveness and remove impediments in implementation. The success of these initiatives will require private enterprises as well as government to focus on priority areas like regulatory standardization, consolidated food and food processing policy, stronger implementation of policies in select areas such as food safety and consumer awareness, and innovative models in areas of farm extension services and commercial viability of food chains.

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