International Journal of Education and Science Research Review
E-ISSN 2348-6457
Volume-2, Issue-2 April- 2015 P-ISSN 2348-1817
www.ijesrr.org Email- editor@ijesrr.org

Role of Organized and Unorganized Food Processing In India

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ABSTRACT
India's agricultural base is quite strong but wastage is very high and processing of food products is very low. The country's processing sector is small and processing of food to consumable standards in India has reached only 10% recently. India's share in exports of processed food in World trade has remained at about 1.5 percent or $3.2 billion. This paper examines trends and status of the food processing industry, identifies and discusses constraints/problems slowing down its growth. Though there are many promising dynamics which support the potential for growth of this industry, there are still some significant constraints which, if not addressed sooner, can impede the growth prospects of the Food Processing Industry in India.

Keywords: India, Food processing, Industry, Constraints, Commodities

INTRODUCTION

Agro-processing industries refer to those activities that transform agricultural commodities into different forms that add value to the product. "Agro-based industries are those industries which have either direct or indirect links with agriculture. Agro-processing industries, especially food manufacturing, tobacco and textile processing dominate the commercial industrial sector. In this sense the agro- processing could be defined as set of techno economic activities carried out for conservation and handling of agricultural produce and to make it usable as food, feed, fiber, fuel or industrial raw material. Hence, the scope of the agro-processing industry encompasses all operations from the stage of harvest till the material reaches the end users in the desired form, packaging, quantity, quality and price. Ancient Indian scriptures contain vivid account of the post harvest and processing practices for preservation and processing of agricultural produce for food and medicinal uses. But, inadequate attention to the agro-processing sector in the past put both the producer and the consumer at a disadvantage and it also hurt the economy of the Country.

Over the years, the agricultural transformation through creation of forward and backward linkages with industry has been emerging as an important option to overcome the increasing challenges of creating employment opportunities for increasing labourforce and sustaining the livelihood of households in rural areas. Most important point in the agro-processing is that a sizeable portion of raw material processed in them being rural based it has a very high employment potential with significantly lower investment. Further the agro-industry generates new demand on the farm sector for more and different agricultural outputs, which are more suitable for processing. On the other hand, development of these industries would relax wage goods constraints to economic growth by enhancing the supply of their products. In this context there is a need for improving the capacity of the agro-industries to harness backward linkages with agriculture and allied activities in order to efficiently convert part of the output to value added products acceptable to the domestic and international markets. This would generate employment opportunities for different types of skills through food processing, packaging, grading and distribution. At the same time this will transfer a size margin to farmers through market linkages.

Similarly, there is a need to establish and strengthened the vertical and horizontal, backward and forward linkages among the farmers, processors and R&D organizations to improve economic efficiency and realize the economies of scale. Since the week integration of the farmers and processors keeps the farmers oblivious of the quality and quantity of the processors and hence the farmer's emphasis remains concentrated on quantity of production. It is expected that the promotion of vertical and horizontal integration among marketing co-operatives, farmer's organizations, SHGs and food chain stores would be vital to improve value addition chain.
In the process of reaping advantages of establishing agro-based industries for achieving increasingly creation of employment and livelihood opportunities it would be necessary to adopt a comprehensive long term approach towards the development of various food processing activities. Such planning exercise should be aimed firstly to examine the overall situation and pattern of existing industrial enterprises and then attempt should made to identify most niche based product groups of enterprises which possess certain location specific advantages in its sustainable development. This would not only provide a strong base and alternative option for creation of additional employment opportunities and avenues of income for rural households owning very small size of cultivated land and landless labourers within the rural areas itself but it would help in reduction in the rate of rural-urban migration of population.

India is the second largest producer of food in the world. Whether it is canned food, processed food, food grains, dairy products, frozen food, fish, meat, poultry, the Indian agro industry has a huge potential, the significance and growth of which will never cease. It ranked second position in the production of fruits and vegetables in the world. In 2013-14, India's export of fresh fruits and vegetables was estimated at US $ 0.87 billion and processed fruits and vegetables it stood at US $ 0.73 billion. Also India has been recognized as the land of spices contributing to about 32 percent of the world production. Likewise India is number one milk producing country in the world with an estimated production of 109 million tones in comparison to world production of 725 million tones during 2012-13.About 35 percent milk produced in India is processed. In 2013-14, export of dairy products was estimated at US $ 0.21 billion. In terms of the grain processing, in the country accounted for 9.98 percent of the world oilseed production during the year 2014-15. On the export front, export of oil meals, oilseeds, minor oils and castor oil during the financial year 2014-15 was reported at 77.6 lakh tones.

SIGNIFICANCE FOR DEVELOPMENT OF AGRO-PROCESSING INDUSTRY

The agro-processing industry in India plays a vital role in the national economic development and has potential to meet the local needs and export requirements. The supporting infrastructure for this industry in terms of electricity supply, through the government funded rural electrification programme, and road and telecommunication network, is well established. There are also well established skills training programmes in manufacturing (tool making, welding), for rural artisans and users. However, the sector currently faces many challenges emanating from the poor performance of the national economy, uncertainties that exist over access to both local and foreign finances, limited research, limited technical advice, limited marketing information and lack of reliable markets.

BACKGROUND CHARACTERISTICS OF AGRO-INDUSTRIES

In continuation and the support of the analysis on expansion pattern and different indicators of the performance shown in regard to different product group of Agro based industries in the last chapter the study further attempts to present the background characteristics in matters of expansion pattern and its origin, ownership, factor motivated in establishment and pattern and background of entrepreneurs of different product groups of registered and un-registered agro-industries. This part of analysis is based on primary data obtained among a sample of 507 agro-processing industries, comprising 250 registered and 257 un-registered different product

groups of agro-processing industries covered from a sample of 18 districts spread over in nine agro-climatic zones of Uttar Pradesh.

The existing agro-industries in the state may be broadly categorized according to their type and size structure. The fist category of them is as village industries which owned and run at household level mainly in rural areas. They form very little capital investment and a high level of manual labour, mainly family labour and are operating without registration with any authority. The second category of agro-processing units are operating as small scale industries with medium level of capital investment and semi automation and are registered with Small Scale Industries Act. The third category of units comprises large industry involving large investment and a high level of automation and is registered under the factory Act.

CONTRIBUTION IN INCOME AND EMPLOYMENT OF FARMERS

Identification of location for establishment of industry is determined by several factors. Among them, accessibility situation of different required raw material contribute a remarkable role in attracting entrepreneurs to make their decision for establishing particular raw material based industry in that location. On the other hand, establishment of units in adjoining raw material producing areas is expected to contribute positively in enhancing employment opportunities and additional income for surrounding households by way of supply of require raw materials to the industries on a regular basis. In addition, the farmers are expected to undertake diversification in their farming system though maximizing available land in cultivation of such commercial crops which are required by industries for its processing. Thus the general perceptions are that this whole process ultimately increases the possibility of generation of additional income and employment opportunities of farm households located in surrounding of the location of particular industry. Keeping into consideration to theses perceptions the study further attempted to examine the extent to which the local farm households have been deriving the benefit of employment and income by way of establishment of agro- industries in surrounding areas of their villages. This exercise is based on a sample of 1080 farm households consisting 720 diversified and 360 non-diversified farm households selected from each of the 18 sample districts selected for the study.

STRUCTURE AND GROWTH OF AGRO-INDUSTRIES:

A bulk of agro-processing industries them were concentrated in un-organized sector with using low productive technology and know-how in their production processes. Number of registered and un-registered agro industries in the state constituted to 2352 and 45232 respectively during 2013-14. Share of agro-based industries in all categories of industries in the state was 32 per cent. Among them, the industries in the product group of grain milling and animal feeds, sugar and other food groups were the dominant product group of agro-based industries accounting for over 21 per cent share in total existing industrial sector in the state. In terms of the capital investment, the share of agro-industrial sector in total industrial sector was 32 percent through which varied from 77 percent for sugar products to 5 percent for dairy products in the state. In output and gross value added its share accounted 23 percent and 12 percent respectively. In both the respects the contribution of manufacture of sugar and other food products is noted very remarkable. On the other, the share of this sector in employment accounted nearly 27 per cent. Again the industrial activities in the product line of sugar and other food products have been contributing a dominating role in providing employment.

Per unit invested capital and output in agro-processing industries is estimated at Rs.965 lakh and Rs 13222 lakh respectively as against Rs 876 lakh and Rs 1823 lakh at Rs.1523 lakh in non-agro- processing industries respectively. But the size of net income in Agro- industries has been at lower level than non-agro industries. Among different agro-units, the size of capital per unit was highest at Rs 1822 lakh for distilling, rectifying and blending of spirit units followed by Rs 1822 lakh suger and other food products and lowest at Rs.222 lakh for grain milling products, starches & animal feeds manufacturing units. Similarly the size of output per unit varied

from Rs 417 lakh for grain milling products, starches and animal feeds to Rs 4543 lakh for dairy Products. Value added per unit varied from a negative of Rs 821 lakh for dairy products to Rs 1211 lakh for distilling, rectifying and blinding of spirits. Size of employment per unit accounted highest from 191 workers in sugar and sugar based products to lowest at 23 workers in grain mill products and animal feeds.

CONTRIBUTION OF EXPANSION OF AGRO-INDUSTRIES IN GENERATION OF INCOME AND EMPLOYMENT OF FARMERS

Establishment of units in adjoining raw material producing areas is expected to contribute positively in enhancing employment opportunities and additional income for surrounding farm households by way of supply of require raw materials to the industries on a regular basis. In addition, the farmers are expected to undertake diversification in their farming system though maximizing available land in cultivation of such commercial crops which are required by industries for its processing. While considering these perceptions the study further attempted to examine concerned hypothesis through taking a sample of 1080 farm households consisting 720 diversified and 360 non-diversified farm households from the nearby areas of different agro-units in 18 sample districts. Sample farm households were mainly headed by the male members but this proportion of households varied across the size of farms. Average size of family of different categories of farm households was of 6.14 members and average age of the owners of farms was 45.20 years. A fairly high proportion of 87 percent no diversified farm households as against only 2 percent diversified farm households were in the lowest farm group of below 2.5 acres. This shows the fact that availability of very small size of cultivated land with farm households has been restricting them for undertaking diversification in their farming system. The farmers having larger size of farm holdings have the advantages of using their available land under different cropping options. Hence a majority of them were initiating the practices of diverse farming systems on their arable land.

FOOD PROCESSING INDUSTRY

Food processing industry has always been an important part of our industrial set up. Two most important reason that led it to be identified as the thrust area is its labour intensities and its strong backward linkages with agriculture and equally important forwards linkages with modem markets.

Food processing industry comprises of three groups:

- Primary Food Processing
- Unorganized cottage scale industries
- Organized processed food industries

The first group was made up predominantly of industries like rice, pulses, floor chakkies, dal mills and oil mills, beside scores of simple small scale dehydration and processing industries in rural and semiurban areas. The small bakeries, pasta food units, traditional food units, poha making units, fruits, vegetable and spice processing units dominate the unorganized sector. The organized food processing industry produces variety of products and contributes significantly in the industrial output. Organized food processing always formed an important component of our industrial structure. Table 1.1 brings out the importance of food processing industry with respect to all industries. Analyzing the table, we find that after 2012 the share of factories in food processing industry has come down mainly due to faster growth in the factories in other sectors than in the F.P.I. However, in the case of proportion of fixed capital in F.P.I., there was constant increase except in the periods 2012-2013 and 2013-2014 as some decline is noticed. The average fixed capital per factory in F.P.I. in 2013 was Rs. 10.08 lakhs which increased to Rs. 10.98 lakhs during 2012-13. This increase in the proportion of value of output is significant as there has been decrease in the proportion of number of factories and increase in the proportion of fixed capital.

This implies there is greater efficiency with which few larger factories are operating in the food-processing sector as compared to all other factories. Though there has been overall increase in the number of workers but the growth in employment always lagged behind the growth in fixed capital. With the exception of the year 2011-12 which showed decrease in number of the factories and number of workers and also low growth in fixed capital, rest of the period recorded very high growth in the fixed capital.

Table: 1.1
Food Processing Industry Proportion of all Industries

Years	No. of Factories	Fixed Capital	No. of Workers	No. of Employees	Net Value Added	Value of Output
2008-2009	17.35	1.98	13.87	13.76	6.36	10.08
2009-2010	17.31	5.03	11.02	13.97	6.87	10.23
2010-2011	18.24	5.37	11.35	11.21	6.87	9.87
2011-2012	19.26	5.87	11.89	11.22	7.04	9.38
2012-2013	17.32	1.93	13.87	13.11	6.23	10.22
2013-2014	17.98	1.84	13.67	13.24	6.76	10.98

Source: Calculated from data prov1ded by Annual Survey of Industries.

Food processing industry in the unorganized sector: It constitutes significant part of the total food processing. According to approach paper of Eighth Five Year Plan of Ministry of Food Processing Industry, unorganized sector constituted about 42 percent of total enterprises in the food processing sector. A comparison of unorganized and organized food processing sector in Table 1. 2 shows the dominance of unorganized sector in terms of both the number of enterprises and number of employees. However, the number of employees per enterprise in the unorganized sector is much less as compared to organized sector.
Small number of employees per enterprise invokes some skepticism as whether unorganized one in the employment generation but this skepticism is removed to some extent by the fact that an over whelming large proportion of unorganized manufacturing is concentrated in terms of own account manufacturing which are more efficient in generating self-employment than creating large employment.
Another important fact, which comes out from tables 1. 1 and 1.2 is that there has been constant decrease both in number of enterprises and number of employees over the period. This decrease in unorganized food processing is occurring at the time when organized food processing is growing. This indicates that organized food processing sector may be driving out the unorganized food processing sector.

Table: 1.2
Unorganized & Organized Food Processing Sector as % of Total Food Processing Sector

Year	Unorganized Sector		Organized Sector	
	No. of Enterprise	No. of Employed	No. of Enterprise	No. of Employed
2011-2012	99.47	86.86	0.53	13.14
2012-2013	99.25	81.10	0.75	15.90
2013-2014	98.13	81.40	1.87	18.60

Source: NSS Report

The purpose of the study is to analyze the change in food processing industry in Uttar Pradesh over time. The analysis is on the basis of the data provided by Annual Survey of Industries for two time periods i.e. 2011-12

and 2013-14. Analyzing the percentage of the number of factories, fixed capital, number of workers and the value of output of the food-processing industries to total industries in the state.

Table: 1.3
Employees per Enterprise in Unorganized Food Processing Sector Uttar Pradesh

Years	Rural	Urban	Total
2011-2012	2.0	0.48	0.49
2012-2013	0.46	0.38	0.44
2013-2014	0.47	0.37	0.42

Source: Calculated from various Issues of Annual Survey of industries

Table: 1.4
Proportion of Food Processing Industry in Uttar Pradesh as percentage of All India

	No. of Factories		Fixed Capital		No. of Workers		Value of Output	
	2012-2013	2013-2014	2012-2013	2013-2014	2012-2013	2013-2014	2012-2013	2013-2014
Uttar Pradesh	32.212	32.52	9.82	12.22	32.13	32.22	22.24	18.32
India	25.96	21.22	3.25	6.24	17.85	17.11	15.21	13.21

Source: Calculated from various 1ssues of Annual Survey of Industries

In terms of distribution of food processing industry, Uttar Pradesh occupied first position in terms of number of workers employed during 2012-13 and second position in 2013-14 at all-India level. Decrease in the percentage share of workers in F.P.I of Uttar Pradesh can be attributed to the decrease in the overall importance of F.P.I in the state.

Table: 1.5
Proportion of Food Processing Industry in Uttar Pradesh as percentage of All India

	No. of Factories		Fixed Capital		No. of Workers		Value of Output	
	2012-2013	2013-2014	2012-2013	2013-2014	2012-2013	2013-2014	2012-2013	2013-2014
Uttar Pradesh	14.22	12.32	22.14	17.24	22.32	15.21	12.25	14.22
India	100	100	100	100	100	100	100	100

Source: Calculated from various 1ssues of Annual Survey of Industries
In the post-reform period there is tremendous increase in capital intensity. This increase in capital intensity is accompanied by decrease in the number of workers.

Table: 1.6
Productivity in Food Processing Industry

	Capital Productivity		Labour Productivity	
	2012-2013	2013-2014	2012-2013	2013-2014
Uttar Pradesh	8.25	8.32	3.21	2.21
India	7.52	8.22	2.99	1.98

Source: Calculated from various issues of Annual Survey of Industries

Increase in labour productivity is due to decrease in number of workers. Composition of Food Processing Industry has undergone significant change in the post reform period .Most of the factories in the 2013-14 were accounted by grain milling about 40 percent of total number of factories in Food Processing Industry. Sugar and related products accounted for about 39 percent of total factories. However in terms of fixed capital and value of output, Sugar and allied products accounted for 65 percent and 54 percent of the total in Food Processing Industry respectively. These points out the fact, that large factory production dominated in manufacturing and refining of sugar. Vegetable oils and fats and grain milling accounted for 13 percent and 10 percent of fixed capital of Food Processing Industry. In terms of Value of output Sugar and allied product's share is 54 percent and Vegetable oil and fats account for 25 percent of total value of output of Food Processing Industry.

CONCLUSION

Agriculture in Uttar Pradesh forms the backbone of economy. The Sugar and Oil industry in Uttar Pradesh hold important place in the agro-industrial sector. These two agro-processing activities are area specific in the State. Sugar industry is setup right in the vicinity of sugar cane fields, where as oil ghanis and spillers are set up near the mustard growing region but the large oil mills are set up near urban areas (market). The study area is chosen keeping in mind the setting up of these agro-processing units.

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