**Status of Food Processing Industry in Employment and In Exports: A comparative study of Haryana and India**

**Abstract:**

In order to study the status of food processing industry in employment and in exports the paper raises two questions: what is the status of manufacturing industry in general and food processing industry in particular in terms of its share in employment. What are trends in exports from the food processing industry in last 15 years. The study utilizes ASI three-digit data over last 15 years to study the trends in the number of units and number of workers employed. The share of food processing industry was found to decline from 18.6 per cent to 16.76 per cent in the number of units in the manufacturing industry in India. While in case of Haryana its share has fell from 12.99 per cent to 9.36 per cent over the period 2008-09 to 2022-23. The share of the FPI in the number of workers in the manufacturing industry declined from 20.34% to 12.01 per cent in India while in Haryana, its share declined from 15.59 per cent to 7.99 per cent (2008-09 to 2022-23). The share of FPI in the total exports from India found to increase from 4.51 per cent to 7.87 per cent.

**Introduction:**

Modern urban lifestyle has generated noteworthy demand for the convenience food with advanced processing. In spite of health concerns, the convenience created by the advanced processing for the consumers is the major for its current demand. The food processing industry has a key role in increasing the shelf life and value addition to the agricultural produce and not less in reducing the post-harvest losses. India is emerging as a sourcing centre for the processed foods manufacturing, given its abundant livestock, huge agricultural base and the cost-competitiveness. Consumption in India is driven towards ready to eat and branded packed food along with the increased spending power which is being supported by higher income levels. Indian food processing industry is mainly composed of private organizations holding 80 per cent shares while remaining 20 per cent are shared by co-operatives, handloom and khadi industry and by Public limited Companies. Being one of the most heterogeneous sectors of manufacturing, it covers a range of subsectors including agriculture produce, plantation, horticulture, fisheries and animal husbandry.

Haryana has taken lead in industrial development over its neighboring states and has become most preferred destination for auto major and compound manufacturers. The state’s share in organized manufacturing segment has surpassed its share in population and area. Haryana has witnessed high industrial growth since its formation. Before 1947, only 5 per cent of registered factories in India were located in Punjab. And among the districts of present Haryana, highest units were located in Ambala while other states had a handful of units only. Moreover, the state had only 18 medium and large-scale units and 9 of them were located were in Ambala only while Bhiwani and Faridabad has 3 and 5 units respectively. Haryana has come so far in terms of industrial development which is further being supported by New Industrial Policy, 2015. A number of factors favored the industrial development including agro-climatic conditions, suitable law and order and many more. Including Haryana, Maharashtra, Uttar Pradesh, Tamil Nadu and Gujrat constitute a large chunk of total industrial production. Among all these states, Haryana ranks high on many indicators of registered manufacturing sector of India, with fifth rank in net value added and sixth rank in terms of output. Moreover, the number of operational units increased 9.67 times and number of workers employed increased 12 times from 1966 to 2014. During the period 1980-81 to 1990-91, manufacturing industry of the state was at its boom in terms of output growth. During the period 1980-81 to 2015-16, share of the manufacturing industry in state gross domestic product increased from 13.65 per cent to 19.23 per cent and during the same period, share of the state has improved in the manufacturing output of the country from 2.54 per cent to 4.49 per cent. During 2010-11 to 2014-15, the industry was growing at the rate of 8.02 per cent, higher than the national average.

**Literature:**

Gill and Ghuman (1982) in their study analysed the trends in agricultural exports from India. The share of Indian agricultural exports was found to fell from 47.55 per cent to 33 per cent in total production over the time period from 1970-71 to 1979-80.Athukorala & Sen (1998) in their study analysed the importance of FPI in total exports of 37 developing industries. The study found the share of FPI in exports increased from 30 percent to 41 percent over the time period from 1970-94, moreover, the countries from high- and middle-income groups performed better than the lower income groups.Gandhi (2001) in a study analysed the organisational models experimented in India to organise the agro-industrial sector and the Amul cooperative model was found to the most promising model ensuring benefit to small farmers. Parthasarathy (2008) in his study did a detailed analyses of Indian agricultural export at sub-sectoral level over a period of three years. The share of exports increased from 9 per cent to 15 per cent and from 15 per cent to 22 per cent in terms of quantity and value respectively. In another article, Shelly and Kaur (2015) studied the development experience of India in relation to food industry and its share in GDP of the economy. The percentage share of unregistered FPI in GDP has declined between 2005-06 and 2011-12 meanwhile the percentage share of registered FPI has increased for the same period. The per cent share of exports from the FPI sector increased over the time period from 2006-07 to 2012-13.Kumar (2016)in an article attempted to analyse the growth of agro-processing industry in Haryana in terms of employment generation, output and factor affecting growth from 1980-81 to 2010-11. Cereals and pulses milling units were growing with 5.34% per year and the highest share in employment was contributed by the Jaggery & Khandseri industry. Hussain & Ranjan (2016) in their study analysed the performance of manufacturing sector of India, specifically the FPI. The exports from the agriculture and processed food products increased significantly over the time period from 2009 to 2015.Shukla (2020) in a study tried to evaluate the evolution, trade pattern and status of processed food manufacturing, beverages and tobacco products over different parts of the world. The share of processed food in the world exports remained stable over the years. The study revealed highest comparative advantage of India in grain mill products, whereas the share of vegetable, animal oils and fats had come down over the reference period. Kukreja (2021)in his study tried to measure the employment growth of Indian States in case of organized Fruit & Beverage sector for 17 major states over the years from 1999-20 to 2015-16. A considerable share of employment was generated by the prepared animals feed units, meat and fish processing units and the units in fruit and vegetable processing. Employment was higher in Andhra Pradesh, Maharashtra and Tamil Nadu and lower in Bihar, Jharkhand and Odissa in the organized food processing sector. The employment growth was positive for all the states except Andhra Pradesh and even more than 4 per cent in agriculture-based states, namely, Jharkhand, Bihar, Uttarakhand, Rajasthan and Madhya Pradesh. The states with rigid labour regulations revealed high growth in employment compared to states adopting flexible labour regulations.

**Data base and methodology:**

The study is based on secondary sources of data, utilised from the reports of NSSO and annual survey of industries, government of India. The study utilised time series data on number of manufacturing units, number of workers employed from annual survey of industries. The value and share of exports from the food processing industry has been calculated from the portal of APEDA.

The share of the food processing industry in employment has been calculated as percentage share of the number of workers and number of establishments in the manufacturing industry of Haryana. And the share of the food processing industry of India has been calculated in terms of number of establishments and number of workers in the manufacturing industry of India. The share of exports from the FPI has been calculated as percent share of total exports from the state. And the share of exports from the food processing industry of India in total exports has been analysed.

**Result**

**Table: 1**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **NSSO Rounds** | **Unorganized sector** | **Growth**  **rate** | **Organized sector** | **Growth**  **rate** | **Total number of Workers** | **Growth-rate** |
| 2000-01 | 37080791 | \_ | 6135238 | \_ | 43216029 | \_ |
| 2005-06 | 36442799 | **-1.72** | 7136097 | **16.31** | 43578896 | **0.83** |
| 2010-11 | 34888434 | **-4.26** | 9901970 | **38.75** | 44790404 | **2.78** |
| 2015-16 | 36041319 | **3.30** | 11136133\* | **12.46** | 47177452 | **5.32** |

**Status of Number of Workers in India (Manufacturing)**

Table – 1 shows the total number of workers in the manufacturing industry in organized and unorganized sectors over different years. The unorganised segment dominates the manufacturing sector in terms of number of workers employed when compared to the organised segment. But the difference between the two decreased over the years. The number of workers in the unorganised segment is 6.04 times of the number of workers in the organised segment in the year 2000-01 which dropped to 5.10 times in the year 2005-06 and again dropped to 3.52 times in the year 2010-11 and further to 3.23 times in the year 2015-16. The growth performance has been higher in the organised segment when compared to the unorganised segment and the number of workers in the manufacturing industry.

**Table- 2**

**Status of Number of workers in Haryana (Manufacturing)**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **NSSO Rounds** | **Unorganized sector** | **Growth rate** | **Organized sector** | **Growth rate** | **Total Workers** | **Growth rate** |
| 2000-01 | 420350 | \_ | 300882 | \_ | 721232 | \_ |
| 2005-06 | 544024 | **29.42** | 305740 | **1.61** | 849764 | **17.82** |
| 2010-11 | 467773 | **-14.01** | 427346 | **39.77** | 895119 | **5.33** |
| 2015-16 | 418405 | **10.55** | 559426\* | **30.90** | 977831 | **9.24** |

(\*) average of 2014-15 and 2016-17

Table - 2 shows the number of workers in total manufacturing in Haryana in the unorganized and organized sectors over different years. In the year 2000-01, the number of workers in the unorganised sector is 1.39 times the workers in the organised segment which increased to a level of 1.77 times in next five years and in the next five years it became 1.09 times. While in the year 2015-16 the number of workers in the organised segment surpassed the number of workers in the unorganised segment. Also, the growth performance in the number of workers have been more promising in the organised segment when compared to the unorganised segment.

**Table- 3**

**Status of Number of Establishments in India (Manufacturing)**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **NSSO rounds** | **Unorganized Sector** | **Growth rate** | **Organized Sector** | **Growth rate** | **Total** | **Growth rate** |
| 2000-01 | 17024104 | - | 131268 | - | 17155372 | - |
| 2005-06 | 17070820 | **0.27%** | 140160 | **6.77** | 17210980 | **0.32** |
| 2010-11 | 17210269 | **0.81%** | 211660 | **51.01** | 17421929 | **1.22** |
| 2015-16 | 19664875 | **14.26** | 233116\* | **10.13** | 19897991 | **14.21** |

(\*) average of 2014-15 and 2016-17

Table – 3 explains the status of number of establishments in total manufacturing in India over different years. The number of establishments in unorganized sector is very large than in organized sector. The number of establishments in the organized as well as in unorganized sector has increased continuously over the time period under study. The number of units in the organized sector increased from 131268 in the year 2000-01 to 233116 in the year 2015-16, and in the unorganized sector it increased from 17024104 in the year 2000-01 to 19664875 in the year 2015-16.

**Table- 4**

**Status of Number of Establishments in food processing industry in India**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **NSSO rounds** | **Unorganized Sector** | **Growth rate** | **Organized Sector** | **Growth rate** | **Total** | **Growth rate** |
| 2000-01 | \_ | \_ | 23988 | \_ | \_ | \_ |
| 2005-06 | 5520957 | \_ | 25725 | **7.24** | 5546682 | \_ |
| 2010-11 | 4482870 | **-18.80 %** | 35840 | **39.31** | 4581710 | **17.39** |
| 2015-16 | 5735046 | **27.93 %** | 39319\* | **9.70** | 5774362 | **26.03** |

(\*) average of 2014-15 and 2016-17

Table-4 is showing growth in the number of establishments in the FPI in India in organized and unorganized sectors over different years. The number of establishments in organized sector is very less in comparison to the unorganized sector. In the year 2005-06 the ratio between the unorganised and unorganised segments in terms of number of units was 214:1 which increased to 125:1 in the year 2010-11 and further to 145:1 in the year 2015-16. The unorganised segment faced negative growth rate over the period 2005-06 to 2010-11 while the organised segment recorded growth rate of 39.31 per cent. The organised segment of manufacturing industry has seen positive growth over the time period under study.

**Table- 5**

**Status of Number of Establishments in Haryana (Manufacturing)**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **NSSO Rounds** | **Unorganized Sector** | **Growth rate** | **Organized Sector** | **Growth rate** | **Total** | **Growth rate** |
| 2000-01 | 193301 | \_ | 4448 | \_ | 197749 | \_ |
| 2005-06 | 230110 | **19.04** | 4304 | **3.23** | 234414 | **18.54** |
| 2010-11 | 189662 | **-17.57** | 5967 | **38.63** | 195629 | **-16.54** |
| 2015-16 | 182923 | **3.55** | 7953 | **33.28** | 190876 | **-2.42** |

**Source:** NSSO, ASI, GOI

Table-5 shows growth in the number of establishments in the manufacturing industry in Haryana. The number of establishments in the unorganized sector is 43.45 times in the year 2000-01 which increased to 53.46 times in the year 2005-06 which dropped to 31.78 times in year 2010-11 and further to 23.0 times in the year 2015-16. The organised segment of the manufacturing industry has recorded positive growth in the study period and very high growth rate during the decade 2005-06 to 2015-16 while the unorganised segment recorded low growth over the same time period.

**Figure - 1**

**Status of FPI in number of Factories in manufacturing industry**

Figure 1 is showing the share of food processing industry in Haryana in the number of establishments in the manufacturing industry in Haryana and the share of food processing industry in India in the manufacturing industry in India. The FPI in Haryana is showing fluctuations in some of the financial years which has decreased a bit in the last few years of study. Besides, the FPI in India has been sustaining its share in the manufacturing industry of India over the years under study. In the year 2009-10, the f Anex of FPI of Haryana revealed a decline when there was a major drought in the country. The impact of GST implementation can be seen in the following year, in the falling number of units of the FPI of Haryana and of India as well.

**Figure 2:**

**Share of Workers in the FPI in Manufacturing industry**

Figure 2 is showing the status of food processing industry in Haryana in terms of number of workers in the manufacturing industry in Haryana and the status of food processing industry in India in the manufacturing industry in India. In both the places the FPI has been losing its share in the manufacturing industry in number of workers employed directly and indirectly. The pandemic in the year 2019-20 has impacted the industry, revealed in the fall in graph. While the FPI in Haryana has also revealed fluctuations in previous years also including 2009-10, the year of major drought with overall decline in the foodgrain production. In the year 2011-12 again the number of workers declined in the FPI in Haryana, when the agricultural pries were at a higher level, comparatively.

**Figure 3:**

**Exports of major processed food products from Haryana**

Figure 3 is showing the status of exports from Haryana over a period of 15 years, from 2008-09 to 2023-24. As shown by diagram, value of export from cereal preparations has shown significant improvement in last 10 years while exports of dairy products have shown very high fluctuations. Exports of processed vegetables and of jaggery and confectionary remained low but have shown improvement in last two years. The value of exports of milled products remained low over the years under study and did not show much improvement over the study years.

**Figure 4:**

**Exports of Basmati and non-basmati rice from Haryana**

Figure 4 is showing the status of the exports of basmati and non-basmati rice from Haryana. The exports of basmati rice have recorded significant growth over the years under study. While the exports of non-basmati rice and of processed fruit, juices and nuts remained low over the years under study and did not show any improvement over the whole period of study.

**Discussion and Conclusion:**

The number of workers employed in the organized segment of Indian manufacturing has increased in absolute terms while in the unorganized sector it has decreased. Same trend is observed in manufacturing sector of Haryana, where the number of workers in the organized segment has surpassed the unorganized segment in terms of number of workers over the period 2000-01 to 2015-16. The number of establishments in manufacturing in India has shown improvement in both the sectors in absolute terms. Opposite trend has been observed in the manufacturing industry in Haryana when the number of units in the unorganized segment has decreased in absolute terms and the number of units in the organized segment has increased over the period 2000-01 to 2015-16. The share of the FPI in the number of factories has decreased in India (18.6 % to 16.76%) as well as in Haryana (12.99% to 9.36%) over the time period from 2004-05 to 2021-22. Its share in the number of workers in the manufacturing sector has also declined in case of both, in India (20.34 % to 12.01%) and in Haryana (15.59 % to 7.99%). While the food industry has shown improvement as share of total exports of India (4.51 % to 5.87 %). Exports of cereal preparations have shown significant improvement over the study years while dairy products faced challenges in global market. Exports of basmati rice constitutes a major portion of total exports from the FPI while non-basmati rice and processed fruit, juice and nuts did not perform well in the study period and remained low.

**Suggestions and Policy Recommendation**:

In a nutshell, the FPI has been losing its share in the number of manufacturing units as well as in the number of workers employed in the manufacturing industry of India and of Haryana, both. This declining share suggests many possibilities which includes closing down of units and informalization of labour. Indian dairy products are not compatible in global dairy products market in terms of quality and price. Providing subsidy to dairy products will not work as a long-term solution, until the raw milk prices are lowered considerably. After China, India is the largest fruit producer globally. The supply chain of the fruits and vegetables industry is complex and involves a range of preserving techniques to reduce spoilage and to enhance their shelf life. Additionally, the cold-chain facility is fragmented, leading to high wastage and inflated marketing cost. Due to inadequate cold chain facilities, logistics infrastructure and post-harvest losses, the fruit processing industry still is in nascent stage. There lies a substantial opportunity of R&D processes in fruit processing industry. As per Haryana Enterprise policy, 2015, the main requirement of the FPI in the state is investment for developing infrastructure facility for post-harvest management. The government of Haryana should ease the procedure of land acquisition for post-harvest procedure, being complementary to agriculture as the real estate value is higher in the state given its proximity to the national capital. A comprehensive effort is needed in the area of market infrastructure, physical and market infrastructure with rebate in tax to strengthen the processing activities in the state. Also, it is very crucial to consider the needs of micro and small-scale units while making the policy map.

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