

# Food Processing Industries : An Engine for Growth in Uttar Pradesh

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## Abstract

India is an agrarian economy where more than 70% of the population largely depends on agricultural and allied activities for its livelihood. Despite this, Indian farmers are in very poor socioeconomic condition. They are in low income equilibrium trap. U.P. has a comparative advantage in natural cultivation. U.P. has a strong potential for growing into a strong base of the food processing industry. This review paper focused on categorizing various activities related to food processing in U.P. with the aim of developing the present conditions of farmers and enhancing their economic contribution in national gross domestic product. We concluded that for breaking the low-income equilibrium trap, there is an urgent need of developing entrepreneurial skills amongst farmers and promoting micro agri-entrepreneurship in Uttar Pradesh.

**Key words :** food processing units, unorganised sector, female workers, gross value added

**JEL Classification :** O13, Q12, Q13

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Agriculture has been the mainstay of Uttar Pradesh. The density of population in U.P. has been very high; precisely with 16.2% of India's population because of the fact that food availability per unit of land was high in U.P. showing that U.P. has a comparative advantage in natural cultivation. The state is blessed with large tracts of fertile land and suitable climate which support a variety of crops. Even today U.P. produces the largest amount of agricultural products. It is the largest producer of wheat, pulses, sugarcane, tobacco, potato, and milk; the second largest producer of rice, fruit and vegetables, and the third largest producer of coarse grains in India.

## Review of Literature

Uttar Pradesh produces 20% of total food grains of India, 36% of sugarcane, 34% of potato, and 17% of milk in India (Ernst & Young, 2013). Further detailing shows that U.P. has comparative advantage in producing wheat, vegetables, fruits, and meat. U.P. produces 34% production of total wheat, 30% of total vegetables, and 19% of total production of fruits in India (Economics and Statistics Division, 2011). U.P. contributes 60% of meat exports from India. In the livestock sector, the state contributes about one-sixth of the total production in the country. It is the largest exporter of processed frozen meat and the third largest producer of inland fishes in India. U.P. also has a strong base of poultry production. Major fruits grown in U.P. are mango, guava, banana, aonla, and litchi. Major vegetables cultivated in the state are peas, potato, cabbage, tomato, okra, and other leafy vegetables. Major spices

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grown in the state include chillies, garlic, ginger, and turmeric. Being one of the largest producers of sugarcane, the state is 'India's sugar bowl'.

Thus, U.P. has a strong potential for growing into a strong base of food processing industry. As already stated, it has been the main food producing area for many thousand years. The civilization of this area has grown around its food producing and food processing activities. Even the food processing activity has been quite old. Factors such as increasing number of middle class people due to rapid urbanization, rising per capita income, strengthening participation of women in urban jobs and impact of globalization have been largely responsible for the diet diversification in India (Pingali, Prabhu, & Khwaja, 2004).

The traditional food processing industry has been mostly village level industry. A great number of Small Scale Industries SSI are traditional, existing in rural areas, and largely are dependent on local raw material, skill and labour intensive technology (Kumar, 2010). It was only in few areas in which commercial production took place in the food processing activities. The factory system in the food processing industry sector started in U.P. in the year 1905 when the first sugar mill was established in the state.

U.P. had been the pioneer in establishing food processing industries but somehow, somewhere this sector got neglected in the modern age of competitive market economy. Although a large number of sugar mills continue to exist in Uttar Pradesh, the emergence of other activities in the food processing sector had been rather slow. Similarly, the traditional food processing industries have not shown any great innovation and expansion during the last thirty years and so. Large numbers of these units operate in the rural areas and they don't use technology much. These small scale industries (SSI) suffer from myriad of problems that include information gap, lack of adequate skill etc. The inadequacy of rural infrastructure like power, rural roads, cold storage units, pre-cooling units, quality testing laboratories, refrigerated vans, etc. must be addressed immediately by raising public investments (Dev & Rao, 2005).

Entrepreneurship has been recognized as an important element in the dynamics of modern economies. This impressive and rapid growth of entrepreneurship is attributed to the power of education in promoting social, economic, political, and spiritual well-being of an individual and social development (Shani, 2011). Agriculture has given birth to food processing units and led to employment generation and especially, development of entrepreneurial skills of farmers who are not just producers but can be entrepreneurs in the coming years. They are the biggest entrepreneurs in the country (Tripathi & Agarwal, 2014).

The Government of India is also promoting food processing industries through development of food parks in different parts of the country. The idea behind setting up food parks is to enable small and medium entrepreneurs to find access to capital intensive facilities, such as cold storage, warehouse, quality control labs, effluent treatment plants etc. (Sidhu, 2005). Accordingly, fiscal incentives like tax concessions, reliefs and rebates, and financial incentives like capital subsidy and concessional rates of interest have been allowed to new and small units and to units located in backward areas (Mehta, 2012). Through these policies the small entrepreneurs may be encouraged to take up food processing industry as their employment opportunity.

The multiplier effect of investment in food processing industry on employment generation is also higher than any other sector. Therefore, for the overall progress of economy it is important that the farmers and backward communities working in rural food-processing units are treated at the top of the growth process (Rais, Acharya, Sharma, 2013).

## **Methodology**

The analysis is based on secondary data, the major sources of data for registered enterprises were National Accounts Statistics, Ministry of Statistics and Programme Implementation (2009-10), and Ministry of Statistics and Programme Implementation (2013-14) covering all factories registered under Sections 2m (i) and 2 (ii) of the Factories Act, 1948, that is, those factories employing 10 or more workers using power and those employing 20 or

more workers without using power. The survey was done by Central Statistical Organisation CSO. The data for unregistered enterprises has been collected from National Sample Survey Office Ministry of Statistics and Programme Implementation (2013). Information on unregistered food processing industries is released by NSS Office every 5 years.

## Analysis, Results, and Discussion

Agro-processing is now regarded as the sunrise sector of Indian economy in view of its large potential for growth and likely socioeconomic impact specifically on employment and income generation (Katchru, 2008). The processing sector comprises of a vast number of sub-sectors, processing of food products being one. The Table 1 shows the status of top leading industries in India along with processing of food products.

**Table 1. Top Industries in India**

| Rank | Total no. of Factories                          | No. of Factories in Operation        | Fixed Capital                                | Employment                                     | Output                                              | Gross Value Added (GVA)                                 |
|------|-------------------------------------------------|--------------------------------------|----------------------------------------------|------------------------------------------------|-----------------------------------------------------|---------------------------------------------------------|
| 1    | Food products<br>(15.74%)                       | Food products<br>(16.23%)            | Basic metals<br>(22.76%)                     | Food products<br>(11.69%)                      | Coke and refined petroleum product<br>(17.00%)      | Basic metals<br>(13.24%)                                |
| 2    | Other non-metallic mineral products<br>(11.90%) | Other industries<br>(12.66%)         | Other industries<br>(12.66%)                 | Textiles<br>(11.05%)                           | Basic metals<br>(13.09%)                            | Coke & refined petroleum products<br>(10.75%)           |
| 3    | Textiles<br>(8.30%)                             | Fabricated metal products<br>(7.37%) | Textiles<br>(8.40%)                          | Wearing apparel<br>(7.23%)                     | Food products<br>(11.80%)                           | Chemicals & chemical products<br>(8.75%)                |
| 4    | Fabricated metal products<br>(7.41%)            | Textiles<br>(7.21%)                  | Coke & refined petroleum products<br>(8.14%) | Basic metals<br>(7.21%)                        | Chemicals & chemical products<br>(7.84%)            | Basic pharmaceutical products & preparations<br>(6.79%) |
| 5    | Rubber & plastic products<br>(5.85%)            | Rubber & plastic products<br>(5.63%) | Chemicals & chemical products<br>(6.72%)     | Other non-metallic mineral products<br>(7.17%) | Motor vehicles, trailers & semi-trailers<br>(6.05%) | Food products<br>(6.72%)                                |

Source: Ministry of Statistics and Programme Implementation (2013-14)

Processing of food products is the top industry according to the Annual Survey of Industries Report 2013-14 in terms of total number of factories, number of factories in operation, and employment generation capacity. It holds 15.74% share of the total number of factories, all processing industries taken into consideration, and 11.69% share in generation of employment. Although for output, gross value added, and fixed capital generation, the sector has shown poor performance which means that the sector needs attention for revenue generation. Food processing sector is employment intensive in nature and needs proper planning for a turnaround.

**(1) State - Wise Distribution of Registered Food Processing Industries (FPI) Units in India :** The number of factories in registered Food Processing Industries units for 2011-12 is the highest in Andhra Pradesh. Out of a total 36,871 factories, 9,359 are present in Andhra Pradesh. U.P. occupies the fifth position in terms of number of registered food processing industries in India. Five major states in registered food processing units are Andhra Pradesh, Tamil Nadu, Maharashtra, Punjab, and Uttar Pradesh (refer to Table 2).

**Table 2. State-Wise Distribution of Registered FPI Units for the Year 2011-2012**

| S. No. | Name of state             | Factories     |         |           |         |        |         |
|--------|---------------------------|---------------|---------|-----------|---------|--------|---------|
|        |                           | Food products |         | Beverages |         | Total  |         |
|        |                           | Number        | Percent | Number    | Percent | Number | Percent |
| 1      | Andhra Pradesh            | 9018          | 25.86   | 341       | 17.13   | 9359   | 25.39   |
| 2      | Andaman & Nicobar Islands | 4             | 0.01    | 0         | 0.00    | 4      | 0.01    |
| 3      | Assam                     | 1172          | 3.36    | 40        | 2.01    | 1212   | 3.29    |
| 4      | Bihar                     | 682           | 1.96    | 33        | 1.66    | 715    | 1.94    |
| 5      | Chandigarh (U.T.)         | 18            | 0.05    | 5         | 0.25    | 23     | 0.06    |
| 6      | Chhattisgarh              | 1013          | 2.90    | 15        | 0.75    | 1028   | 2.79    |
| 7      | Dadra & Nagar Haveli      | 8             | 0.02    | 0         | 0.00    | 8      | 0.02    |
| 8      | Daman & Diu               | 12            | 0.03    | 23        | 1.16    | 35     | 0.09    |
| 9      | Delhi                     | 139           | 0.40    | 6         | 0.30    | 145    | 0.39    |
| 10     | Goa                       | 43            | 0.12    | 36        | 1.81    | 79     | 0.21    |
| 11     | Gujarat                   | 1791          | 5.14    | 133       | 6.68    | 1924   | 5.22    |
| 12     | Haryana                   | 577           | 1.65    | 73        | 3.67    | 650    | 1.76    |
| 13     | Himachal Pradesh          | 145           | 0.42    | 26        | 1.31    | 171    | 0.46    |
| 14     | Jammu & Kashmir           | 132           | 0.38    | 18        | 0.90    | 150    | 0.41    |
| 15     | Jharkhand                 | 154           | 0.44    | 15        | 0.75    | 169    | 0.46    |
| 16     | Karnataka                 | 1875          | 5.38    | 104       | 5.22    | 1979   | 5.37    |
| 17     | Kerala                    | 1387          | 3.98    | 50        | 2.51    | 1437   | 3.90    |
| 18     | Madhya Pradesh            | 712           | 2.04    | 42        | 2.11    | 754    | 2.05    |
| 19     | Maharashtra               | 2838          | 8.14    | 275       | 13.81   | 3113   | 8.44    |
| 20     | Manipur                   | 18            | 0.05    | 0         | 0.00    | 18     | 0.05    |
| 21     | Meghalaya                 | 14            | 0.04    | 4         | 0.20    | 18     | 0.05    |
| 22     | Nagaland                  | 12            | 0.03    | 0         | 0.00    | 12     | 0.03    |
| 23     | Odisha                    | 828           | 2.37    | 47        | 2.36    | 875    | 2.37    |
| 24     | Pondicherry               | 56            | 0.16    | 14        | 0.70    | 70     | 0.19    |
| 25     | Punjab                    | 2700          | 7.74    | 84        | 4.22    | 2784   | 7.55    |
| 26     | Rajasthan                 | 683           | 1.96    | 94        | 4.72    | 777    | 2.11    |
| 27     | Sikkim                    | 10            | 0.03    | 8         | 0.40    | 18     | 0.05    |
| 28     | Tamil Nadu                | 4912          | 14.08   | 274       | 13.76   | 5186   | 14.07   |
| 29     | Tripura                   | 49            | 0.14    | 6         | 0.30    | 55     | 0.15    |
| 30     | Uttar Pradesh             | 1988          | 5.70    | 128       | 6.43    | 2116   | 5.74    |
| 31     | Uttarakhand               | 357           | 1.02    | 24        | 1.21    | 381    | 1.03    |
| 32     | West Bengal               | 1527          | 4.38    | 73        | 3.67    | 1600   | 4.34    |
|        | Total                     | 34874         | 100.00  | 1991      | 100.00  | 36871  | 100.00  |

Source: Calculated from Annual Survey of Industries, MOSPI, 2011-12

**(2) Top Five States in Terms of Registered Food Processing Industries Units :** The Table 3 shows the top five states in terms of registered food processing industries in India for the year 2013-14. Here, if we compare the total number of registered food processing industries in India in 2011-12 with that of the year 2013-14. We find that

**Table 3. Top Five States in Terms of Registered Food Processing Industries Units for the Year 2013-2014**

| Rank | Total no. of factories    | No. of factories in operation | Fixed Capital           | Employment               | Output                   | Gross Value Added (GVA)  |
|------|---------------------------|-------------------------------|-------------------------|--------------------------|--------------------------|--------------------------|
| 1    | Tamil Nadu<br>(16.64%)    | Tamil Nadu<br>(15.40%)        | Gujarat<br>(16.12%)     | Tamil Nadu<br>(15.12%)   | Gujarat<br>(18.77%)      | Maharashtra<br>(21.46%)  |
| 2    | Maharashtra<br>(12.97%)   | Maharashtra<br>(12.58%)       | Maharashtra<br>(13.75%) | Maharashtra<br>(13.93%)  | Maharashtra<br>(16.26%)  | Gujarat<br>(14.60%)      |
| 3    | Gujarat<br>(10.19%)       | Gujarat<br>(9.73%)            | Tamil Nadu<br>(11.41%)  | Gujarat<br>(10.14%)      | Tamil Nadu<br>(10.33%)   | Tamil Nadu<br>(10.02%)   |
| 4    | Andhra Pradesh<br>(7.00%) | Andhra Pradesh<br>(6.97%)     | Odisha<br>(8.88%)       | Karnataka<br>(6.85%)     | Karnataka<br>(6.78%)     | Karnataka<br>(6.35%)     |
| 5    | Uttar Pradesh<br>(6.44%)  | Uttar Pradesh<br>(6.67%)      | Karnataka<br>(7.05%)    | Uttar Pradesh<br>(6.74%) | Uttar Pradesh<br>(6.27%) | Uttar Pradesh<br>(5.71%) |

Source: Annual Survey of Industries Report Volume 1, 2013-14

**Table 4. Comparative Statistics of U.P. and India Based on Registered Factories in the Processing Sector under the Factory Act**

| S. No. | Items                        | U.P.     | India     | Percentage Share of U.P.<br>in India (2009-10) | Percentage Share of U.P.<br>in India (2013-2014) |
|--------|------------------------------|----------|-----------|------------------------------------------------|--------------------------------------------------|
| 1      | Number                       | 9974     | 149130    | 6.68                                           | 6.44                                             |
| 2      | Total persons engaged        | 736805   | 11408713  | 6.45                                           | 6.73                                             |
| 4      | Invested capital (Rs. Lakh)  | 10293699 | 179202198 | 5.74                                           | 5.00                                             |
| 5      | Total output (Rs. Lakh)      | 21917012 | 356644323 | 6.14                                           | 6.27                                             |
| 6      | Gross Value Added (Rs. Lakh) | 3641740  | 66073330  | 5.51                                           | 5.71                                             |

Source: Calculated by authors from Ministry of Statistics and Programme Implementation Reports (2009-10, 2013-14)

U.P. still has the fifth rank with 6.44% share. In terms of Gross Value Added (GVA), number of factories in operation, generation of employment and output, U.P. occupies the fifth rank whereas, for fixed capital it is not at the top rank.

If we compare the registered factories in total processing sector between India and U.P. (Table 4) for the year 2009-10 and 2013-14, we find that the percentage share of U.P. in number of factories and invested capital has declined while total number of persons engaged, total output, and Gross Value Added has shown improvement. It

**Table 5. Industrial Production Index of Food Processing Related Industries in Uttar Pradesh**

| S. No. | Name of Industry        | weight    | indices (1999-2000=100) |           |  |
|--------|-------------------------|-----------|-------------------------|-----------|--|
|        |                         | 1999-2000 | 2009-2010               | 2010-2011 |  |
| A      | Processing of food      | 98.84     | 148.68                  | 161.59    |  |
| 1      | Milk product            | 7.57      | 78.91                   | 72.45     |  |
| 2      | Flour (Atta)            | 2.17      | 10.65                   | 11.85     |  |
| 3      | Khandsari               | 3.95      | 57.13                   | 51.99     |  |
| 4      | Edible oil              | 3.66      | 110.86                  | 138.12    |  |
| 5      | Tea                     | 0.5       | 100                     | 100       |  |
| 6      | Country liquor          | 7.67      | 627.76                  | 662.79    |  |
| B      | Processing of beverages | 30.11     | 481.92                  | 471.83    |  |

Source: Economics and Statistics Division, 2011

can be seen from Table 5 that industrial production index took a big leap during 1999-00 to 2010-11 in the areas of milk production (from 7.57 to 72.45), Khandsari (from 3.95 to 51.99), edible oil (from 3.66 to 138.12), country liquor (7.67 to 662.79) and beverages, tobacco and tobacco products (from 30.11 to 471.83).

We had earlier seen in Table 2 that U.P. ranked fifth in terms of number of factories in the food processing sector. This has been the case, despite the fact that U.P. had been at the top in production of various food products. In the following paragraphs we discuss the industrial production in U.P. and also its comparison with statistics of the country.

Comparison of statistics of U.P. and India in industrial production (Table 6) shows that U.P. has added advantage in agricultural production of many items, for example, in wheat production the state has 31.53% share. In total food grains production the state shares 18.90% of total production in India, whereas, in sugarcane and potato production the state has 38.61% and 31.82% share of total production in the country. Agro-processing is still in infancy stage in U.P. and according to the industry estimates only about two to three percent of the total produce is processed.

**Table 6. Comparative Statistics of U.P. and India Based on Production of Main Crops & Milk**

| S. No.                                 | Items             | Year      | U.P.  | India  | Percentage Share of U.P. in India (2009-2010) | Percentage Share of U.P. in India (2013-2014) |
|----------------------------------------|-------------------|-----------|-------|--------|-----------------------------------------------|-----------------------------------------------|
| 1 Production of main crops (Lakh M.T.) |                   |           |       |        |                                               |                                               |
| a.                                     | Wheat             | 2009-2010 | 278   | 808    | 34.4                                          | 31.53                                         |
| b.                                     | Rice              | 2009-2010 | 118   | 891    | 13.2                                          | 13.73                                         |
| c.                                     | Total Pulses      | 2009-2010 | 19    | 147    | 13.0                                          | 13.17                                         |
| d.                                     | Total food grains | 2009-2010 | 447   | 2181   | 20.5                                          | 18.90                                         |
| e.                                     | Total oilseeds    | 2009-2010 | 8     | 249    | 3.2                                           | 2.84                                          |
| f.                                     | Sugarcane         | 2009-2010 | 1190  | 2923   | 40.7                                          | 38.61                                         |
| g.                                     | Potato            | 2009-2010 | 129   | 285    | 37.2                                          | 31.82                                         |
| 2                                      | Milk (000 tonnes) | 2010-2011 | 21031 | 121848 | 17.26                                         | 17.57                                         |

Source: Directorate of Economics and Statistics, Ministry of Agriculture (2011, 2014).

**(3) Comparison of Various Sub - Sectors in the Food Processing Industries in India :** Here we compare the data from 2009-2010 to 2013-2014 so that the percentage increase in the number of food processing units during the period be calculated. Category wise estimated number of registered Food Processing Industries units for the period 2009-2010 to 2013-2014 is shown in Table 7. It can be seen from the table that largest number of registered factories were reported in the category of grain mill products (18,272), followed by food products N.E.C. (5,546), whereas, in the category of beverages, production of mineral water and other bottled water and soft drinks accounted for the highest number of registered factories.

The comparison of the activity wise growth in number of Food Processing Industries units (registered) in India shows that the percentage increase is maximum in prepared meals and dishes sector (114.3%) and lowest in process of wine ( 2.89%) from the year 2009-2010 to 2013-2014. The data also shows that the meat sector has the lesser number of registered units in the Food Processing Industries basically has very high growth prospects.

**(4) Registered Food Processing Industry in Uttar Pradesh :** The Annual Survey of industries is the principle source of registered processing statistics in India. It covers all factories registered under section 2m (i) and 2m (ii) of Factories Act, 1948. It provides statistical information to assess and evaluate, objectively and realistically, the changes in growth, composition and structure of organized processing sector comprising activities related to processing processes. The Table 8 gives the statistics of activity-wise categories within the food processing

**Table 7. Comparison of Number of Registered Food Processing Industries Units (from 2009-10 to 2013-14)**

| S. No. | NIC-2008 | Description                                                     | 2009-2010 | 2010-2011 | 2011-2012 | 2013-2014 | Percentage increase during 2009-2010 to 2013-2014 |
|--------|----------|-----------------------------------------------------------------|-----------|-----------|-----------|-----------|---------------------------------------------------|
| 1      | 1010     | Meat                                                            | 85        | 115       | 146       | 148       | 74.11                                             |
| 2      | 1020     | Fish, crustaceans and molluscs and                              | 359       | 436       | 390       | 466       | 29.80                                             |
| 3      | 1030     | Fruits and vegetables                                           | 832       | 1052      | 1078      | 1101      | 32.33                                             |
| 4      | 1040     | Vegetable & animal oils and fats                                | 2421      | 3307      | 3394      | 3300      | 36.30                                             |
| 5      | 1050     | Dairy products                                                  | 1112      | 1493      | 1653      | 1753      | 57.64                                             |
| 6      | 1061     | Grain mill products                                             | 13397     | 17792     | 18244     | 18272     | 3638                                              |
| 7      | 1062     | Starches & starch products                                      | 670       | 757       | 766       | 744       | 11.04                                             |
| 8      | 1071     | Bakery products                                                 | 1056      | 1450      | 1399      | 1498      | 41.85                                             |
| 9      | 1072     | Sugar                                                           | 744       | 895       | 906       | 791       | 6.31                                              |
| 10     | 1073     | Cocoa, chocolate and sugar confectionery                        | 466       | 509       | 560       | 505       | 8.36                                              |
| 11     | 1074     | Macaroni, Noodles, Couscous & similar farinaceous projects      | 51        | 83        | 75        | 105       | 105.8                                             |
| 12     | 1075     | Prepared meals & dishes                                         | 139       | 343       | 415       | 298       | 114.3                                             |
| 13     | 1079     | Food products N.E.C.                                            | 4225      | 5114      | 5101      | 5546      | 31.26                                             |
| 14     | 1080     | Prepared animal feeds                                           | 606       | 677       | 755       | 820       | 35.01                                             |
| 15     | 1101     | Distilling, rectifying & blending of Spirits                    | 296       | 325       | 378       | 369       | 24.66                                             |
| 16     | 1102     | Processing of wines                                             | 69        | 74        | 77        | 71        | 2.89                                              |
| 17     | 1103     | Processing of malt liquors and malt                             | 117       | 154       | 141       | 143       | 22.22                                             |
| 18     | 1104     | Production of mineral water & other bottled waters, Soft drinks | 834       | 1264      | 1401      | 1520      | 82.25                                             |
|        |          | Total                                                           | 27479     | 35840     | 36881     | 37450     | 36.28                                             |

Source: Calculated by the authors from various issues of Annual Survey of Industries (2009-2014)

**Table 8. Activity-Wise Categories Within the Food Processing Industry in Uttar Pradesh**

| S. No. | Activities                                       | Number of Factories | Gross value added (GVA) per enterprise (₹ Lakh) | Invested capital per factory (₹ Lakh) | Profit per factory (₹ Lakh) | Income per factory (₹ Lakh) | No. of persons engaged per factory | Labour Productivity (₹ Lakh) |
|--------|--------------------------------------------------|---------------------|-------------------------------------------------|---------------------------------------|-----------------------------|-----------------------------|------------------------------------|------------------------------|
| 101    | Processing of meat                               | 29                  | 917.03                                          | 1966.20                               | 481.90                      | 665.70                      | 226.37                             | 46.15                        |
| 102    | Processing of fish                               | Nil                 | Nil                                             | Nil                                   | Nil                         | Nil                         | Nil                                | Nil                          |
| 103    | Processing of fruit & vegetable                  | 13                  | 312.38                                          | 418.10                                | 178.00                      | 253.60                      | 84.46                              | 14.55                        |
| 104    | Processing of vegetable and animal oils and fats | 87                  | 256.49                                          | 1290.00                               | 103.00                      | 159.50                      | 67.19                              | 97.71                        |
| 105    | Processing of dairy products                     | 73                  | 750.56                                          | 2190.00                               | 368.00                      | 576.50                      | 120.09                             | 60.54                        |
| 106    | Processing of grain mill products                | 727                 | 76.67                                           | 471.00                                | 31.30                       | 45.20                       | 30.30                              | 39.12                        |
| 107    | Processing of other food products                | 520                 | 353.02                                          | 4653.00                               | NEG                         | NEG                         | 193.35                             | 21.17                        |
| 108    | Processing of prepared animal feeds              | 36                  | 77.25                                           | 112.00                                | 27.20                       | 66.00                       | 43.30                              | 20.14                        |
| 110    | Processing of beverages                          | 88                  | 1230.43                                         | 3296.00                               | 711.20                      | 923.50                      | 155.52                             | 26.28                        |

Source: Calculated by authors from Ministry of Statistics and Programme Implementation, 2009-2010

**Table 9. Activity-Wise Categories Within the Food Processing Industry (All India)**

| S. No. | Activities                                       | Number of factories (no.) | Gross value added (GVA) per enterprise (₹ Lakh) | Invested capital per factory (₹ Lakh) | Profit per factory (₹ Lakh) | Income per factory (₹ Lakh) | No. of persons engaged per factory | Labour Productivity (₹ Lakh) |
|--------|--------------------------------------------------|---------------------------|-------------------------------------------------|---------------------------------------|-----------------------------|-----------------------------|------------------------------------|------------------------------|
| 101    | Processing of meat                               | 85                        | 1101.85                                         | 1773.90                               | 926.82                      | 738.01                      | 177.08                             | 45.01                        |
| 102    | Processing of fish                               | 359                       | 252.30                                          | 874.70                                | 154.58                      | 76.96                       | 104.83                             | 23.63                        |
| 103    | Processing of fruit & vegetable                  | 832                       | 134.34                                          | 606.70                                | 63.41                       | 12.25                       | 65.78                              | 12.08                        |
| 104    | Processing of vegetable and animal oils and fats | 2421                      | 229.50                                          | 1064.10                               | 139.58                      | 100.60                      | 44.01                              | 94.72                        |
| 105    | Processing of dairy products                     | 1112                      | 447.93                                          | 1297.84                               | 344.90                      | 162.48                      | 98.93                              | 47.12                        |
| 106    | Processing of grain mill products                | 14067                     | 62.00                                           | 254.53                                | 35.09                       | 21.10                       | 24.77                              | 29.84                        |
| 107    | Processing of other food products                | 6681                      | 295.16                                          | 1268.51                               | 177.54                      | 69.30                       | 115.34                             | 15.70                        |
| 108    | Processing of prepared animal feeds              | 606                       | 213.28                                          | 479.156                               | 178.32                      | 121.79                      | 50.97                              | 42.12                        |
| 110    | Processing of beverages                          | 1316                      | 655.09                                          | 1557.81                               | 474.64                      | 335.99                      | 100.27                             | 25.45                        |

Source: Calculated by authors from Ministry of Statistics and Programme Implementation (2009-2010).

industry in U.P. on the basis of data from Annual Survey of Industries, 2010-11. The total number of food processing factories in U.P. is 1573 and the total number of persons engaged in various activity categories is 1,60,095 persons. If compared with the all India data, the number of factories in food processing is 27,479 (Table 9). U.P. owns only 5.72% of the food processing industries in India.

**(5) Processing of Grain Mill Products and Other Food Products :** The structure of the food processing industries in U.P. shows that out of a total of 1573 industries in the food processing industry sector, processing of grain mill products, and processing of other food products accounted for 46.22% and 33.06% of total factories in the Food Processing Industries sector. But it is precisely in these two activities in which economic indicators show poor performance as compared to other activities (Table 8). It can be seen from the table that with regards to indicators such as net value added per factory, labour productivity per factory, profit per factory and income per factory, the performance of factories engaged in these two activities had been very poor. However, in terms of number of persons engaged per factory, it was found to be 30.30 in case of grain mill products and 193.35 in case of other food products. Other food products industry segments had greater capacity to absorb labourers or are more labour intensive. Interestingly around 2/3<sup>rd</sup> of workers employed were directly employed by employers in case of other food products, while only around 50% workers were directly employed by grain mill products industry.

This is despite the fact that gross state domestic product (GSDP) from agriculture and allied sector had been highest in U.P. as compared to other states (Directorate of Economics and Statistics, 2015). One plausible reason for such a situation is that the factories in these activities had been quite old in U.P. Because of the wear and tear and in some cases even obsolescence of machines and equipments, the performance had been going down. It may be noted that many sugar mills and other factories were states/public sector enterprises. Hence, the revival of factories would require (a) new investments, (b) introduction of new and latest technology, and (c) upgradation of skill of workers. This could require coordination at various levels between entrepreneurs and state and financial institutions.

**(6) Processing of Vegetable and Animal Oils :** The other important activity was found to be process of vegetable and animal oils and fats. Factories for process of this product also had been in existence for long. We have earlier

seen in Table 7 that even at all India level the number of factories under these activities increased during 2010-2011, but declined in the year 2013-2014. This sector also faces competition from imported oils. However, it has good potential for improvement in U.P. Commercial farming of oil seeds in U.P. has been lower than some of the other oil seeds producing states. Its economic viability in U.P. is revealed from the fact that profit per factory and income per factory in this activity shows that there is potential for good returns in this activity. This is also evident from the data on value of product and by-product as well as net value added per factory. The three activities in which economic performance was found to be good included processing of beverages, processing of dairy products, and processing & preservation of meat.

**(7) Processing of Beverages :** We have seen in Table 2 that even though the number of factories processing beverages was higher in Andhra Pradesh, Maharashtra, and Tamil Nadu, the economic performance of beverages factories was better in Uttar Pradesh. Indicators such as invested capital per factory, value of product and by-product, income per factory as well as profit per factory was found to be higher for factories in U.P.

**(8) Processing of Dairy Products :** U.P. has good base of milk production. U.P. is the highest milk producing state of India. Even the number of livestock in U.P. was found to be highest. However, here there were only 73 factories which processed dairy products, while the number of such factories was higher in some other states such as Maharashtra (208), Andhra Pradesh (210), Tamil Nadu (167), and Gujarat (79). However, income per factory and profit per factory was higher in U.P. than the above mentioned states except Gujarat. This shows that economic performance of factories producing dairy products in U.P. was better than many dairy product processing states. The performance in terms of net value added per factory and labour productivity was also good in this activity.

**(9) Processing of Meat :** The processing and preservation of meat was reported in five major states only out of which U.P. ranked first in terms of number of factories. This reflects the higher production of meat in Uttar Pradesh. U.P. is the highest meat producing state followed by Andhra Pradesh, West Bengal, Maharashtra, and Kerala.

Nevertheless, the economic performance of processing of meat in U.P. was quite satisfactory as net value added per factory in this activity was higher than that in other activities except beverages. Similarly, labour productivity, profit per factory, and income per factory in processing of meat indicated that this activity has good potential. The combined effect of this was reflected in the value of output from livestock. U.P. ranks fourth when compared to other states in this respect.

**(10) Processing of Fruit and Vegetables :** In the area of processing of fruits and vegetables, the contribution of factories has not been very strong. It could be because a large part of population still favours fresh fruits and fresh vegetables in this part of the country. The number of factories engaged in processing and preservation of fruits and vegetables was quite small in U.P. as compared to other states. Both in terms of production as well as value of fruits and vegetables, U.P. ranks lower than some other major states such as Maharashtra and Tamil Nadu.

However, during the period of 2013-14, the economic performance of this activity was better than all major states. Income per factory and profit per factory was higher than all major states except Assam and Rajasthan. This shows the great potential of development of this activity in Uttar Pradesh. Even labour productivity was found to be moderate, which could be increased by technological innovation and skill up-gradation.

**(11) Processing of Prepared Animal Feeds :** Traditionally, animal feed consisted of by-products of wheat, rice, mustard, and other oil cakes. In addition to these ingredients, the factory system uses some other ingredients also such as dried pulp of vegetables, meat, bone meal etc. All residual food products as well as all by-products are used

**Table 10. Performance of Sub-Sectors of Food Processing Industries in U.P. (2013-2014)**

| S. No. | Activities                                       | Number of factories | Gross value added (GVA) per enterprise (₹ Lakh) | Invested capital per factory (₹ Lakh) | Profit per factory (₹ Lakh) | Income per factory (₹ Lakh) | Number of persons engaged per factory | Labour productivity (₹ Lakh) |
|--------|--------------------------------------------------|---------------------|-------------------------------------------------|---------------------------------------|-----------------------------|-----------------------------|---------------------------------------|------------------------------|
| 101    | Processing of meat                               | 60                  | 2251.4                                          | 3185                                  | 1481.7                      | 1954.13                     | 230.91                                | 128.88                       |
| 102    | Processing of fish                               | Nil                 | Nil                                             | Nil                                   | Nil                         | Nil                         | Nil                                   | Nil                          |
| 103    | Processing of fruit & vegetable                  | 34                  | 73.9                                            | 244.7                                 | 14.35                       | 5.35                        | 30.76                                 | 17.74                        |
| 104    | Processing of vegetable and animal oils and fats | 113                 | 380.5                                           | 1793.6                                | 164.6                       | 245.7                       | 57.96                                 | 189.21                       |
| 105    | Processing of dairy products                     | 110                 | 1037                                            | 2624.2                                | NEG                         | 748.4                       | 124.00                                | 96.28                        |
| 106    | Processing of grain mill products                | 928                 | 123.8                                           | 54.39                                 | 48.43                       | 76.98                       | 23.25                                 | 55.22                        |
| 107    | Processing of other food products                | 610                 | 137.8                                           | 5094.3                                | NEG                         | NEG                         | 140.22                                | 35.10                        |
| 108    | Processing of prepared animal feeds              | 59                  | 360.8                                           | 517.0                                 | 196.5                       | 300.00                      | 57.45                                 | 63.02                        |
| 110    | Processing of beverages                          | 123                 | 2305.8                                          | 6090.3                                | 1081.09                     | 1518.99                     | 168.50                                | 50.40                        |

Source: Calculated by authors from Ministry of Statistics and Programme Implementation (2013-2014)

in processing animal feeds.

Thus, process of prepared animal feed was dependent on three other industries namely, processing of grain mill products, processing of vegetable and animal oils, and processing of meat. It is perhaps because of this reason that performance of factories processing animal feeds closely resembled the performance of factories processing grain mill products. Performance of this activity would improve if the overall food processing industry is strengthened as it includes household food scraps and the by-products of food processing industries such as milling and brewing.

Comparison of the data between the years 2009-2010 and 2013-2014 (Table 8 and Table 10, respectively) of registered food processing enterprises in U.P. shows that the number of factories in all the sub-sectors has shown incremental growth, highest number still being occupied by the processing of grain mill products and the lowest by processing of fruits and vegetable sub-sector. Gross value added per factory continues to be maximum in case of processing of beverages. However, invested capital per enterprise was maximum in the processing of other food products in 2009-2010 but, increased for processing of beverages in 2013-2014. Profit and income per factory was highest in processing of beverages in 2009-2010 but in 2013-2014 processing of meat jumped up the ladder.

Processing of dairy products ran in loss in the year 2013-2014 and its reasons need to be explored. Performance of other food products is surprising as the income and profit both continue to be negative even after four years. Number of persons engaged per factory continues to be highest in case of processing of meat which means that the sub-sector has maximum employment generation capacity. Labour productivity is in fact highest in processing of vegetable & animal oil and fats.

**(12) Status of Unregistered Enterprises in Uttar Pradesh :** The analysis of unregistered enterprises is based upon the data from National Sample Survey 67<sup>th</sup> Round Report No. 549, July 2010-June 11. The report has defined various terms used herein in the following way:

**(i) Enterprise:** An enterprise is an undertaking which is engaged in the production and/or distribution of some goods and/or services meant mainly for the purpose of sale, whether fully or partly. It may be owned and operated by a single household or by several households jointly, or by an institutional body.

**(ii) Unincorporated Non - Agricultural Enterprises :** Non-agricultural enterprises which are not incorporated (i.e. registered under Companies Act, 1956) and these excluded enterprises registered under Sections 2m (i) and 2m (ii) of the Factories Act, 1948, government/public sector enterprises, and cooperatives.

**(iii) Processing Enterprises :** A processing enterprise is a unit engaged in the physical or chemical transformation of materials, substances or components into new products.

**(iv) Own - Account Enterprise :** An enterprise, which is run without any hired worker employed on a fairly regular basis is termed as an own account enterprise.

**(v) Establishment :** An enterprise which is employing at least one hired worker on a fairly regular basis is termed as establishment. Paid or unpaid apprentices paid household member/ servant/ resident worker are considered as hired workers.

**(vi) Gross Value Added:** Gross value added is taken as additional value created by the process of production of an enterprise. It is calculated by deducting 'total operating expenses' and 'distributive expenses' from the value of 'total receipts' during the reference period.

**(13) Number of Enterprises in the Food Processing Industry in Uttar Pradesh :** We have earlier seen that there were 1573 factories (Table 8) in food processing industries sector engaging 1,60,095 workers in year 2009-10. As compared to these, unincorporated non-agricultural enterprises in Food Processing Industries sector comprised 3,49,951 enterprises and engaged 52,25,930 workers (30,56,567 rural & 21,69,363 urban workers) in Uttar Pradesh.

**Table 11. Number of Enterprises by Enterprise Types in the Food Processing Sector (U.P. )**

| S. No. | Activity category         | Number of enterprises |        |        |        |        |        |              |        |         |
|--------|---------------------------|-----------------------|--------|--------|--------|--------|--------|--------------|--------|---------|
|        |                           | Rural                 |        |        | Urban  |        |        | rural+ urban |        |         |
|        |                           | OAE                   | Estt.  | All    | OAE    | Estt   | All    | OAE          | Estt   | All     |
| 1      | Food Product              | 216946                | 24745  | 241692 | 80831  | 24536  | 105367 | 297778       | 49281  | 347059  |
| 2      | Beverages                 | 1868                  | 78     | 1946   | 692    | 255    | 946    | 2560         | 33     | 2892    |
| 3      | Food Processing Industry  | 218814                | 24823  | 243638 | 81523  | 24791  | 106313 | 300338       | 49614  | 349951  |
| 4      | All Processing Activities | 1301904               | 244057 | 345962 | 467569 | 227663 | 695233 | 1769473      | 471721 | 2241195 |

Source: Calculated by authors from Ministry of Statistics and Programme Implementation (2013)

**Table 12. Percentage of Female Workers in the Food Processing Industry in U.P.**

| S. No. | Activity category           | Percentage of Female workers |      |      |       |      |      |              |      |      |
|--------|-----------------------------|------------------------------|------|------|-------|------|------|--------------|------|------|
|        |                             | Rural                        |      |      | Urban |      |      | rural+ urban |      |      |
|        |                             | OAE                          | Estt | All  | OAE   | Estt | All  | OAE          | Estt | All  |
| 1      | Food products               | 25.1                         | 24.8 | 25   | 29.4  | 13.2 | 20.7 | 26.4         | 19.4 | 23.4 |
| 2      | Beverages                   | 49.3                         | 24.5 | 45.3 | 32.5  | 12.2 | 21.3 | 47.5         | 19.1 | 40.9 |
| 4      | In Food Processing Industry | 45.2                         | 15   | 36.8 | 38.2  | 5.2  | 25.5 | 42.6         | 10.2 | 32.1 |
| 5      | All processing activities   | 48.7                         | 21.6 | 40.9 | 51.8  | 11.4 | 30.3 | 49.8         | 15.3 | 35   |

Source: Calculated by authors from Ministry of Statistics and Programme Implementation (2013)

**Table 13. Number of Workers by Nature of Employment and Gender (Rural U.P.)**

| S. No. | Gender         | Number of workers |        |         |           |       |        |         |        |         |
|--------|----------------|-------------------|--------|---------|-----------|-------|--------|---------|--------|---------|
|        |                | full time         |        |         | part time |       |        | All     |        |         |
|        |                | OAE               | Estt   | All     | OAE       | Estt  | All    | OAE     | Estt   | All     |
| 1      | Female         | 794446            | 115259 | 909705  | 201515    | 12618 | 214133 | 995961  | 127877 | 1123838 |
| 2      | Male           | 1105422           | 673584 | 1779007 | 102838    | 50884 | 153722 | 1208260 | 724469 | 1932729 |
| 3      | All activities | 1899869           | 788843 | 2688712 | 304352    | 63502 | 367855 | 2204221 | 852346 | 3056567 |

Source: Calculated by authors from Ministry of Statistics and Programme Implementation (2013)

It can be seen from Table 11 that out of a total of 3, 49,951 unregistered enterprises in the food processing industries sector, 85.82% (3,00,338) are OAEs and only 14.18% (49,614) were establishments. The data also shows that the total number of enterprises in rural areas is far greater (numbering 2,43,638) than that in urban areas (numbering 1,06,313). The number of unregistered Food Processing Industries in rural areas was 69.62% of total enterprises. Also, in the rural areas, the proportion of OAEs was 89.81% (2,18,814), while only 10.19% (24,823) were establishments. Thus, we find that rural OAEs constituted majority of such enterprises.

**(14) Gender- Wise Participation Rate :** As regards to gender- wise participation rate of workers, it was found that 32.1% workers are female workers. The female participation rate in rural and urban enterprises is 36.8% and 25.5% respectively. The female participation in OAEs was 42.6%, while in establishment it was only 10.2% (Table 12).

In view of the fact that the number of rural OAEs was quite sizable and that 45.2% workers in rural OAEs were women, any programme for skill upgradation will have to take account of this fact. It was also found that 19.05% female workers in rural enterprises and 22.38% female workers in urban enterprises were part time workers. While the proportion of part time male workers was 7.95% in rural areas and 5.54% in urban areas (see Table 13).

Table 13 shows that the percentage of workers employed in rural unincorporated non-agricultural enterprises were far more than in urban areas. However, they were also involved as part time workers in OAEs as compared to their male counterparts. The female workers would assist their family members as helpers in own account enterprises. The male members actually owned the enterprise and were associated for full time.

The analysis of Table 14 shows that in urban unincorporated non-agricultural enterprises, participation of both male and female was more as full time workers. Both male and female workers were more employed in OAEs as compared to establishment enterprises.

**Table 14. Number of Workers by Nature of Employment and Gender (Urban U.P.)**

| S. No. | Gender         | Number of workers |        |         |           |       |        |         |        |         |
|--------|----------------|-------------------|--------|---------|-----------|-------|--------|---------|--------|---------|
|        |                | Full time         |        |         | Part time |       |        | All     |        |         |
|        |                | OAE               | Estt   | All     | OAE       | Estt  | All    | OAE     | Estt   | All     |
| 1      | Female         | 389759            | 39541  | 429300  | 119567    | 4223  | 123790 | 509326  | 43764  | 553090  |
| 2      | Male           | 764501            | 762250 | 1526751 | 57851     | 31671 | 89522  | 822352  | 793921 | 1616273 |
| 3      | All activities | 1154260           | 801792 | 1956052 | 177418    | 35893 | 213311 | 1331678 | 837685 | 2169363 |

Source: Calculated by authors from Ministry of Statistics and Programme Implementation (2013)

**(15) Gross Value Added:** GVA per worker in process of food products was ₹ 35,602, while GVA per worker in all processing activities was ₹ 28, 992 only. This shows that value added per worker was higher in the unorganized

**Table 15. Annual GVA Added per Worker (in ₹ ) by Enterprise Type (U.P.)**

| S. No. | Activity category         | Annual GVA per worker ( ₹ ) |       |       |       |       |       |              |       |       |
|--------|---------------------------|-----------------------------|-------|-------|-------|-------|-------|--------------|-------|-------|
|        |                           | Rural                       |       |       | Urban |       |       | Rural+ Urban |       |       |
|        |                           | OAE                         | Estt  | All   | OAE   | Estt  | All   | OAE          | Estt  | All   |
| 1      | Food products             | 24030                       | 45349 | 28528 | 35542 | 71800 | 49384 | 27332        | 58086 | 35602 |
| 2      | Beverages                 | 5706                        | 52234 | 11461 | 46158 | 28519 | 37841 | 18413        | 34607 | 22848 |
| 3      | All processing activities | 16227                       | 41457 | 23263 | 23980 | 57862 | 37063 | 19147        | 49589 | 28992 |

Source: Calculated by authors from Ministry of Statistics and Programme Implementation (2013)

**Table 16. Annual GVA Added per Enterprise by Enterprise Type (U.P.)**

| S. No. | Activity category         | Annual GVA per enterprise ( ₹ ) |        |       |        |        |        |             |        |       |
|--------|---------------------------|---------------------------------|--------|-------|--------|--------|--------|-------------|--------|-------|
|        |                           | Rural                           |        |       | Urban  |        |        | Rural+Urban |        |       |
|        |                           | OAE                             | Estt   | All   | OAE    | Estt   | All    | OAE         | Estt   | All   |
| 1      | Food products             | 41002                           | 181403 | 55377 | 65463  | 269012 | 112862 | 47642       | 225021 | 72829 |
| 2      | Beverages                 | 10213                           | 315677 | 22472 | 102194 | 152981 | 115864 | 35070       | 191154 | 53031 |
| 3      | All processing activities | 26770                           | 313103 | 49071 | 45276  | 259463 | 90126  | 33163       | 279665 | 64716 |

Source: Calculated by authors from Ministry of Statistics and Programme Implementation (2013)

processing sector of food products. Within the food products industry, GVA per worker was lower in OAEs than in establishment enterprises. Furthermore, GVA per worker was lower in rural areas than that reported for urban areas (refer Table 15).

Similar pattern was found in case of GVA per enterprise. It was higher in food products processing as compared to all processing activities; it was lower in OAEs as compared to establishment enterprises; it was lower in rural areas than for urban areas (refer Table 16).

The analysis of GVA per enterprise shows that the performance of U.P. on this account was found to be poorer as compared to all India level performance. We find that whereas GVA per enterprise in food product processing was ₹ 72,829 in U.P., it was ₹ 1,02,434 for all India.

We also find that annual GVA per enterprise (food products) in urban areas in U.P. and all India was ₹ 1,12,862 and ₹ 1,65,212 respectively while, in rural areas it was ₹ 55,377 and ₹ 71,604 respectively. This shows that even to achieve economic performance as obtained at all India level, serious efforts will have to be made for technological innovation and up-gradation of skill in the unregistered food processing industries. However, U.P. has a comparative advantage in processing of food products when compared with all processing activities.

## Findings

The following are the findings from detailed analysis of the secondary data available from various sources including Annual Survey of Industries and National Sample Survey Report (Ministry of Statistics and Programme Implementation, 2013):

**(1)** The number of factories in registered food processing sector in U.P. were 1573 employing 1,60,095 persons in various activity categories whereas, the number of unregistered unincorporated non-agricultural enterprises were 3,49,951 employing 52,25,930 persons.

- (2) Largest number of registered enterprises were reported in process of grain mill sector (727 factories) followed by process of other food products (520 factories).
- (3) Three activities in which economic performance was found to be good were process of beverages, process of dairy products, processing, and preservation of meat.
- (4) Out of a total of 3,49,951 unregistered enterprises, 3,00,338 were OAEs and only 49,614 were establishment enterprises (Estt.).
- (5) Study shows that the rural OAEs constituted majority of unincorporated non- agricultural enterprises.
- (6) It was also found that 32.1% workers were female and out of them 36.8% were in rural enterprises while only 25.5% were in urban enterprise. Most of the female workers were employed in OAEs.
- (7) The number of rural OAE was quite sizable where almost 45.2% workers were women.
- (8) The females had better opportunity as full time workers in rural enterprises. Therefore, they could be trained likewise.
- (9) The male workers were the owners and the female workers were predominantly helpers.
- (10) Gross Value Added per worker was found to be higher in food products (₹ 35,602) as compared to all processing activities (₹ 28,992).
- (11) GVA per worker was also higher in establishment enterprises than OAEs and it was also lower in rural areas than in urban areas.
- (12) The same pattern was visible in GVA per enterprise.
- (13) GVA per enterprise for food products as well as all processing activities in U.P. was found to be lower than that reported for all India level.

## **Managerial Implications**

Food processing sector is one of the largest sectors in U.P. in terms of production, growth, and consumption. The state government has lots of ambitious plans to invest in this sector. Study shows that investment in food processing sector will definitely add to GSDP by generating productive employment opportunity. Also, the rural women have traditional skills of food processing so, they may be trained to take up these activities as an enterprise of their own and generate employment. The sector mainly requires skilled labour for the unorganized sector. A combined effort by the industry, academia, and the government to address the skill problem of the sector is the dire need of the hour (FICCI, 2015). Therefore, if the state government focuses on vocational education and vocational training of the young population, the state will be able to earn its demographic dividend. Further, there is huge potential and market for processed food in U.P. due to large scale bio-diversity and low level investment with labour intensive work.

## **Conclusion**

The food processing sector has been the major sector in the rural economy which has high growth and employment generation potential. The major contribution of food processing industries in U.P. has been from unregistered enterprises. The food processing sector is dominated by rural OAEs. A great number of these industries are traditional, existing in rural and semi-urban areas and largely dependent on local raw material, skill

and labour intensive technology. They suffer from myriad of problems that include information gap, lack of adequate skills etc.

The focus of government has been on skill development of a large portion of population to make it employable but exactly what needs to be done is to concentrate on the entrepreneurial skill enhancement of the large rural population as the rural OAEs are the major source of employment generation. Here, the female population also needs to be targeted as they constitute a sizable portion of those employed in unincorporated non-agricultural enterprises. All the programs of skill up-gradation will have to take account of this fact.

For rural areas to be vibrant, creation of quality employment in non-farm sector is the dire need. Non-farm sector like food processing has high growth and employment generation potential and it would also provide greater control by the local producers over value addition. As the number of enterprises in unincorporated non-agricultural enterprises is found to be very high in U.P. as compared to registered ones, therefore, all policies of the government should be focused on skill up-gradation, technological up-gradation, and financial support. Along with this, these small entrepreneurs also need market to sell.

## Limitations of the Study and Scope for Further Research

The limitation of the study is that the data on registered and unregistered enterprises for the year 2009-10 could only be compared as it was not available for unregistered enterprises for the year 2013-14. The study basically focuses on data of five years period from 2009-2014.

The major challenge before the food processing industry in U.P. is that the units are primarily rural OAEs and the small entrepreneurs are not trained to run their business. What needs to be further researched is that what would be the best model to make these OAEs productive and luring. Only then the state will be able to utilize its huge farm productivity.

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