

# “IMPACT OF ECONOMIC REFORMS ON FOOD PROCESSING INDUSTRY: A STUDY IN THE CONTEXT OF UTTAR PRADESH”

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## ABSTRACT

*Economic reforms have given a booster dose to every sector in Indian economy. Day by day innovative ideas are being sown in food processing industry to enhance farmers income as well as contribution to India's GDP. Uttar Pradesh is first in the India for food grains, sugarcane, potato, milk production and meat output and second for rice, a variety of vegetables and fruits and third for pulses, oil seeds, maize. Despite farmers are not receiving remunerative rates for their output. Large scale food production, food inflation, food security in UP are other major challenges. These concerns worry policymakers because they impact residents' basic necessities. The value of wastage of raw food materials in the state, on the other hand, is extremely high.*

**Key Words:** *Privatisation, Efficient arrangement, Efficient Technology, Infrastructural as well as Structural Changes.*

## 1.1 INTRODUCTION

Efficient arrangement with favorable policy support and incentives, by taking into account the strengths, weaknesses, opportunities and threats of decisive components like human and land resources, crops, livestock and agro-processing activities would lead to plan the state of Uttar Pradesh as one of the major players in the field of agro-processing as well as agri-business sector of India. The diversified commodity mix in crop sector, livestock compositions, large geographical coverage, variety of soils and diverse agro climatic conditions, abundant availability of labour force, varied availability of agricultural raw materials in state offers excellent prospects for the development of high value agro-based industries and promotion of agri-business.

The processing level in the country is quite low, and the waste of raw food resources is very high, as shown in table, and both of these facts are also true in Uttar Pradesh. Furthermore, Uttar Pradesh is the top state in terms of agriculture and allied sector production in the country, as well as the greatest contributor to agriculture and allied sector GDP. In 2018-19, Uttar Pradesh's agriculture and allied sector contributed 12.8 per cent to the state's GDP (agriculture and allied sector), while Maharashtra, Gujarat, Madhya Pradesh, Andhra Pradesh, and Tamil Nadu contributed 9 per cent, 8.2 per cent, 7.6 per cent, 6.8 per cent, and 5.3 per cent, respectively. Uttar Pradesh is at the forefront in the production of the total food grains (20%), sugar cane (36%), potato (34%), live stock excluding cow (11%) and milk (17%), wheat (33%), lentil (45%), vegetables (30%) in the country. This study focuses on the untapped potential and highlighted the scope for the agro based agro-processing and agri-business in Uttar Pradesh.

Uttar Pradesh, the land where holy Ganga flows is the second-largest economy in India after Maharashtra, with an NSDP of ₹14.46 lakh crore (US\$230 billion) and hence contributes 8.406% of GDP India. The GSDP of the state's registered food processing sector was 7957.45 crore in 2018-19, up 157.76 per cent from the GSDP of

the state's registered food processing industry of 3087.14 crore in 2004-05. Furthermore, in 2014-15, GSDP FPI contributed 15.00 per cent to GSDP manufacturing, 3.07 per cent to GSDP agricultural and allied sectors, 0.81 per cent to Uttar Pradesh's total GSDP, and 8.68 per cent to the country's GDP FPI.

## **1.2 GROWTH RATE/PATH OF GSDP OF FOOD PROCESSING INDUSTRY (GSDP-FPI)**

The development paths of Uttar Pradesh's GSDP of food processing industry (GSDP FPI) and India's GDP of food processing industry are both very irregular, but the state's GSDP FPI growth route is more irregular than India's GDP FPI growth path. The fundamental reason for this is because, with the exception of Uttar Pradesh, the food processing industry has grown in most states. As shown in Table, Uttar Pradesh ranks third in terms of GSDP-FPI, fifth in terms of total registered food processing units, and seventh in terms of total workers employed in this industry. According to India's Ministry of Food Processing Industry, 41 mega food parks are operational, completed, or under construction across the country, yet there isn't a single huge food park in Uttar Pradesh. The growth rate/path of the GSDP FPI in Uttar Pradesh, as well as in the context of India, is depicted between 2008-09 and 2018-19, the average growth rate of Uttar Pradesh's GSDP FPI was 14.31 per cent, which was lower than the country's average growth rate of GDP FPI (15.96 per cent). In 2014-15, the state's GSDP FPI grew at a pace of 77.8%, whereas in 2011-12, it grew at a rate of -43 per cent. The main reason is likely the state's underdeveloped infrastructure for preservation and processing industries, as well as a lack of facilities for a proper supply channel to the market.

As a part of the Committed / Spill over liabilities of 11th Plan period during the 12th Plan period also, Ministry of Food Processing Industries has been releasing grant-in-aid to eligible entrepreneurs under the Scheme for Technology Upgradation/ Establishment/ Modernization of Food Processing Industries.

As per an assessment of the extent of food processing in various food sub-sectors done in 2014 by the Institute of Economic Growth on behalf of Ministry of Agriculture, the average extent of processing of agro-products in 2010-11 was 6.76%. It implies that huge scope available for setting up food processing industries by the interested and eligible entrepreneurs of food processing sector in the country. The Schemes implemented by the Ministry Food Processing Industries have also contributed to the setting up of food processing units in the country.

The Mission for Integrated Development of Horticulture (MIDH) is being implemented in the States and Union Territories. Under this, the fruits and vegetables are being promoted as an area expansion and under protected cultivation also as a cluster approach to fulfil the requirement of raw material for processing units and also to fulfil the market demand. The cultivation of fruits and vegetables are promoted on the basis of agro-climatic conditions and market demand also.

## **1.3 OBJECTIVES**

1. The Economic Reforms have been favorable for Food processing industry of Uttar Pradesh.
2. The cost benefit analyses has accelerated the pace of food processing industry in Uttar Pradesh.

## **1.4 RESEARCH METHODOLOGY**

This paper focuses on the current study's data and methodology. The study's title is "*Impact of Economic Reforms on Food Processing Industry in India : A Study in the Context of Uttar Pradesh* " The technique is developed based on the study's title, aims, and hypothesis, as well as the availability of data.

From 2004-05 to 2018-19, the study employed two types of data: time series data and panel data from the Annual Survey of Industries (ASI) issued by the Central Statistical Organization (CSO), Ministry of Statistics and Programme Implements (MOSPI), India.

The ASI offers two different data formats: time series unit level data and punitive data, both of which are unit level. ASI provides block-wise data at the unit level.

The factory codes are highly useful for constructing the ownership of factory by organization. Each block contains numerous units with factory codes. The ASI framework is divided into two parts: a census sector and a sample

sector. All factories employing 50 or more workers and using electricity, as well as factories employing 100 or more workers and not using electricity, are included in the census sector.

The current study employed panel data to look at the long-term link between employment and output in Uttar Pradesh's food processing industry. The panel Johansen- Fisher Co-integration test is used for this purpose. The variables must be stationary in order to use the cointegration test as a pre-request condition. To put it another way, variables must be in the same sequence, i.e. (0). Many panel unit root tests have recently been established by different researchers such as Maddala and Wu (1999), Hadri (2000), Levin et al. (2002), Im, Pesaran, and Shin (2003). To check for the presence of the unit root in panel series data, we employed the LLC and PP- Fisher Chi2 panel unit root tests.

**1.5 NUMBER OF REGISTERED FOOD PROCESSING INDUSTRY UNITS IN UTTAR PRADESH**

**TABLE-1.1**

Number of Registered Food Processing Industry (Number & In Operation) in Uttar Pradesh

Years	Registered Food Processing Factories		Factories in Operation (no.)
	Units	Percentage of Total Registered All Industries	
2004-05	1717	17.91	NA
2005-06	1763	16.67	NA
2006-07	1624	15.71	NA
2007-08	1700	15.89	NA
2008-09	1708	14.91	1621
2009-10	2091	14.98	1501
2010-11	2095	15.18	1693
2011-12	2075	14.89	1708
2012-13	2127	14.63	1755
2013-14	2090	14.36	1785
2014-15	2118	14.16	1744
2015-16	2127	13.38	1751
2016-17	2091	13.61	1742
2017-18	2117	13.29	1782

Source: Annual surveys of Industries, India (2004-05 to 2018-19)

During 2018-19, there were 2117 registered food processing industries, up from 1707 in 2004-05. Between 2004-05 and 2017-18, the total number of registered food processing units accounted for about 14% of the state's total industrial units. In 2018-19, 1782 of the total 2117 food processing industries were operational. The table

shows the number of registered food processing units and the number of units in operation in Uttar Pradesh.

**TABLE -1.2**

Percentage Share of Different Variable Uttar Pradesh Food Processing Industry in All Industry

<b>Years</b>	<b>Fixed Capital</b>	<b>Invested Capital</b>	<b>No. of Employees</b>	<b>Fuel Expenditure</b>	<b>Total Emolument (Salary &amp; wages etc.)</b>
2004 -05	15.17	27.16	24.93	12.94	19.58
2005 -06	15.57	27.98	23.82	12.38	18.37
2006 -07	16.03	28.55	22.81	11.93	17.52
2007 -08	16.52	28.96	21.9	11.55	16.89
2008 -09	16.84	29.23	21.05	11.23	16.41
2009 -10	18.27	28.67	20.41	11.89	16.26
2010 -11	18.41	28.22	19.82	12.4	16.15
2011 -12	19.52	27.89	19.28	12.79	16.07
2012 -13	20.48	27.62	18.79	13.11	16.00
2013 -14	22.76	27.96	18.31	14.21	14.93
2014 -15	23.45	28.25	17.89	15.2	14.22
2015 -16	24.06	28.51	17.51	16.09	13.72
2016 -17	23.29	28.75	17.17	16.9	13.36
2017 -18	23.70	27.83	26.00	16.58	14.67

Source: Annual surveys of Industries, Uttar Pradesh (2004-05 to 2017-18)

From the above table Percentage Share of Uttar Pradesh Food Processing Industry in All Industry has been measured from 2004-05 to 2017-2018. Where Fixed Capital, Invested Capital, No. of Employees, Fuel Expenditure and Total Emolument has been analysed. In each variable the value of items has been fluctuated in the assumed years.

During 2004-05 Fixed Capital was 15.17 percent, 27.16 was Invested Capital, No. of Employees was 24.93 percent Fuel Expenditure value was 12.94percent while registered Total Emolument (Salary & wages etc.) was 19.58 percent. In the year 2005-06 Fixed Capital was 15.57 percent, 27.98 was Invested Capital, No. of Employees was 23.82 percent, Fuel Expenditure value was 12.38 percent while Total Emolument (Salary & wages etc.) was 18.37percent.

During 2006-07 Fixed Capital was 16.03 percent, 28.55 was Invested Capital, No. of Employees was 22.81 percent Fuel Expenditure value was 11.93 percent while, Total Emolument (Salary & wages etc.) was 17.52 percent. Again during 2007-08 Fixed Capital was 16.52 percent, 28.96 was Invested Capital, No. of Employees was 21.90 percent Fuel Expenditure value was 11.55 percent while Total Emolument (Salary & wages etc.) was 16.89 percent.

This was again found during 2008-09 Fixed Capital was 16.84 percent, 29.23 was Invested Capital, No. of Employees was 21.05 percent Fuel Expenditure value was 11.23 percent while Total Emolument (Salary & wages etc.) was 16.41percent. In the year 2009-10 Fixed Capital was 18.27 percent, 28.67 was Invested Capital, No. of Employees was 20.41 percent Fuel Expenditure value was 11.89 percent while Total Emolument (Salary & wages etc.) was 16.26 percent.

During 2010-11 Fixed Capital was 18.41 percent, 28.22 was Invested Capital, No. of Employees was

19.82 percent Fuel Expenditure value was 12.40 percent while Total Emolument (Salary & wages etc.) was 16.15 percent. In the analysis during 2011-12 Fixed Capital was 19.52 percent, 27.89 was Invested Capital, No. of Employees was 19.28 percent Fuel Expenditure value was 12.79 percent while Total Emolument (Salary & wages etc.) was 16.07 percent.

This was an assessment during 2012-13 Fixed Capital was 20.48 percent, 27.62 was Invested Capital, No. of Employees was 18.79 percent Fuel Expenditure value was 13.11 percent while Total Emolument (Salary & wages etc.) was 16.00 percent. During 2013-14 Fixed Capital was 22.76 percent, 27.96 was Invested Capital, No. of Employees was 18.31 percent Fuel Expenditure value was 14.21 percent while Total Emolument (Salary & wages etc.) was 14.93 percent.

Again it was studied during 2014-15 Fixed Capital was 23.45 percent, 28.25 was Invested Capital, No. of Employees was 17.89 percent Fuel Expenditure value was 15.20 percent while Total Emolument (Salary & wages etc.) was 14.22 percent. During 2015-16 Fixed Capital was 24.06 percent, 28.51 was Invested Capital, No. of Employees was 17.51 percent Fuel Expenditure value was 16.09 percent while Total Emolument (Salary & wages etc.) was 13.72 percent.

In the present study during 2016-17 Fixed Capital was 23.29 percent, 28.75 was Invested Capital, No. of Employees was 17.17 percent Fuel Expenditure value was 16.90 percent while Total Emolument (Salary & wages etc.) was 13.36 percent. In the last year 2017-18 Fixed Capital was 23.70 percent, 27.83 was Invested Capital, No. of Employees was 26.00 percent Fuel Expenditure value was 16.58 percent while Total Emolument (Salary & wages etc.) was 14.67 percent.

**TABLE -1.3**

Compound Annual Growth Rate of Different Variable Uttar Pradesh Food Processing Industry

<b>During Period</b>	<b>Fixed Capital</b>	<b>Invested Capital</b>	<b>No. of Employees</b>	<b>Fuel Expenditure</b>	<b>Total Employment (Salary &amp; wages etc.)</b>	<b>Worker</b>
2004 -05 to 2010 -11	12.12	17.49	.70	9.85	12.61	0.17
2011 -12 to 2017 -18	9.78	7.10	4.43	11.96	13.17	4.81
2004 -05 to 2017 -18	11.58	12.23	2.17	12.71	13.12	1.85

During 2004-05 to 2010-11 CAGR of Uttar Pradesh Food Processing Industry was in case of Fixed Capital was 12.12 percent, 17.49 percent was Invested Capital, No. of Employees was 0.70 percent, having with 9.85 net Fuel Expenditure. In the same period Total Emolument (Salary & wages etc.) was 12.61 percent while Worker was 0.17 percent.

During period 2011 -12 to 2017 -18 CAGR of Uttar Pradesh Food Processing Industry was: in case of Fixed Capital was 9.78 percent, 7.10 percent was Invested Capital, No. of Employees was 4.43 percent, having with 11.96 net Fuel Expenditure. In the same period Total Emolument (Salary & wages etc.) was 13.17 percent while Worker was 4.81 percent.

In the study period 2004 -05 to 2017-18 CAGR of Uttar Pradesh Food Processing Industry was in case of Fixed Capital was 11.58 percent, 12.23 percent was Invested Capital, No. of Employees was 2.17 percent, having with 12.71 net Fuel Expenditure. In the same period Total Emolument (Salary & wages etc.) was 13.12 percent while Worker was 1.85 percent.

**TABLE -1.4**

Compound Annual Growth Rate of Different Variable Uttar Pradesh All Industry

During Period	Consumed Material	Total Output	Gross value added	Net added value	Registered Industry	Total Input
2004 -05 to 2010 -11	19.12	18.23	14.71	15.05	4.12	19.04
2011 -12 to 2017 -18	6.83	9.16	13.01	13.69	2.04	8.35
2004 -05 to 2017 -18	13.85	14.65	14.01	14.64	3.70	14.79

It was also observed period 2004-05 to 2010-11 CAGR of Uttar Pradesh all industry was in case of Consumed material was 19.12 percent, 18.23 per cent was total output, gross added value was 14.71 percent , having with 15.05 net added value. In the same period registered industry was 4.12 percent while total input was 19.04 percent.

In the same period 2011-12 to 2017-18 CAGR of Uttar Pradesh food processing industry was in case of Consumed material was 6.83 percent, 9.16 per cent was total output, gross added value was 13.01 percent, having with 13.69 net added value. In the same period registered industry was 2.04 percent while total input was 8.35 percent.

## 1.6 CONCLUSIONS AND FINDINGS

In case of food processing industry, it has been find out that job orientation, cost minimisation, income generation as well as capital output ratio have played a positive role in industry's growth.

During study it was also observed in case of gross output per person employees was 1730.11 during the year 2004-05. It has been rapidly increased and has been beneficiary for the industry. It was 4122.61 during 2017-18, it has increased by four times of the selected period of the study. Again has been also a positive sign for net value added per person employees (NVA/NE) in the same period. In case of salaries and wages /no worker (NW) employees, as soon as salary increases, it kicks of unskilled manpower; during 2004-05 NW were 84.65 which increased by 308.24 in the year 2016-17 but it again fall by 230.82 in 2017-18.

Again it was also observed during 2004-05 GVA/FC value was 0.37. Again it began to fall from 2005-06 it was 0.39. It has been increased by 2016-17 having with 0.83. But it was slightly high in 2017-18 which was 0.66. It fluctuates due to inflation, role of banking industry as well as political environment. If it increases in leaps and bounce, not be beneficiary sign for the industry. During 2014 -15 to 2017 -18. CAGR of Uttar Pradesh food processing industry was: in case of Consumed material was 13.85 per cent, 14.65 per cent was total output, gross added value was 14.01per cent, having with 14.64 net added value. In the same period registered industry was 3.70 per cent while total input was 14.79 per cent.

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