Growth and Structure of Food Processing Industries in India

Abstract

Food processing sector is an appropriate sector for creating jobs and reducing the burden on agricultural sector. This paper examines the growth and structure of the food processing industry in India in which various aspects of sub groups of the food processing industry has been taken by using the data of Annual Survey of Industries from 2008-09 to 2015-16. Annual Growth Rate of this sector in terms of GVA during 2015-16 was 6.71 percent. Its contribution to GVA in manufacturing sector and agriculture is found to 8.37 percent and 9.51 per cent respectively. Urbanisation, increase in income, changing lifestyle, abundant supply of raw materials and foreign influence has induced demand for processed foods and growth of food processing industries in India.

Keywords: Agriculture, Manufacturing, Food Processing, Urbanisation, Growth and Structure

Introduction

Over the years, the agriculture sector is transformed through the creation of forward and backward linkages by agro-based industries. It has proved an important option to overcome the increasing challenges of employment creation for the increasing labour force and sustaining the livelihood of households in rural areas. Agro processing being a crucial linkage between the large unorganized agriculture sector and organised industrial sector can be seen as a way to integrate farming with processing activities to enhance farm incomes and to create more employment (Ghosh.et.al, 2013). Among various agro based industries, food processing sector is the most appropriate sector for creating jobs for the rural poor by reducing the burden on agricultural sector for creation of their livelihood (Rais.et.al, 2013). Generally, it has been seen as a potential source for driving rural economy as it brings synergy between industry and agriculture (Kumar and Kumar, 2010). Apart from this, manufacturing sector is crucial for employment generation and development of an economy. The ability of the manufacturing sector to absorb excess labour from the agriculture sector and shift the same to services renders is the driving force in the development process of the economy. Textiles and garments, leather and leather products and food processing are among the major employers in the manufacturing sector (India Brand Equity Foundation).

Food processing industry is considered as one of the largest industry in terms of production, consumption, export and growth in the country. The term 'food processing' is mainly defined as a process of value addition to the agricultural or horticultural produce by various methods like grading, sorting and packaging. It is a technique of manufacturing and preserving food substances in an effective manner with a view to enhance their shelf life; improve quality as well as make them functionally more useful (MOFPI). During 2015-16, food processing industries sector has been growing at an annual growth rate of around 7.00 per cent as compared to around 5 per cent in agriculture and 8.06 per cent in manufacturing (MOFPI, 2016-17). It has been growing faster than agriculture as well as manufacturing sectors and it makes a bridge between farmers and entrepreneurs and converts the farmer into an entrepreneur (Singla, 2016).

As per Annual Survey of Industries 2012-13, the total number of factories in the registered food processing sector in the country is 37,445. The highest number of registered factories is in 'Andhra Pradesh' that accounts for about 15.33 percent of the total factories in FPI sector industries followed by Tamil Nadu (13.90 percent), Telangana (10.28 percent), Maharashtra (8.12 percent) and Punjab (7.5 percent) (Annual Report 2016-17, MOFPI). Food processing industry (FPI) in India is a sunrise industry that has gained prominence in the recent years. Easy

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availability of raw materials, changing lifestyles and favourable fiscal policies has given a considerable push to the industry's growth. India is one of the leading exporters of the processed food products. India is the second largest producer of food, just behind China and Indian Food processing industry in India is primarily export oriented. Though the industry is large in terms of size in India, it is still at a budding stage in terms of development and accounts for only 1.7 per cent of world trade in this particular sector.

Objectives of the study

- 1. To examine the Food Processing Industry in India
- To examine growth and structure of various sub sectors of Food Processing Industry.

Methodology

The paper is based on secondary data available on food processing industry in India. The main sources of secondary information are various volumes of Annual Survey of Industries, annual reports and data bank of Ministry of food processing industry (MOFPI) and others.

Overview of the Food Processing Industry in India

The food processing sector which was at infant stage during pre-independence period has become modern and sunrise industries after the post independence period; especially after the period of 1980s followed by Green Revolution and the trends in agriculture production showing side by side development of processing activities Kachru, (2010). Rice processing was followed closely by wheat milling, paper and pulp industry, milk processing sector, jute industry, sugarcane processing and oils extraction through solvent plants. The low levels of processing are driven primarily by the food habits of the population. Fresh fruits and vegetables are preferred compared to processed fruits and vegetables (Rais, 2013).

Contribution of food processing industry to India's GDP in terms of GVA has been shown in Table 1 which reveals that food processing industry is growing faster than the agriculture sector and its share has been increased over time in terms of GVA from 1.33 lakh crore to 1.53 lakh crore during 2012-13 to 2015-16. Annual Growth Rate of this sector in terms of GVA during 2015-16 was 6.71 per cent which is higher than that of agriculture sector. This Sector has emerged as an important segment of the Indian economy as it constitutes 8.37 percent of GVA in Manufacturing and 9.51 per cent to the GVA of agriculture sector. The share of this sector in terms of GVA has been increased in agriculture.

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Table 1.	.Gross	Value	Added (GVA) By Food	Processing Ind	dustries (FPI)	at Constant 2	2011-12 Prices

				(Rs. In L	akh Crore
SI.No.	Economic Activity	2012-13	2013-14	2014-15	2015-16
1	GVA-All India	85.47	90.84	97.27	104.27
2	GVA Manufacturing	14.95	15.8	16.67	18.22
3	GVA-Agriculture, Forestry and Fishing	15.24	15.88	15.84	16.04
4	GVA-FPI*	1.33	1.35	1.43	1.53
	(%) Grov	vth			
	Economic Activity	2012-13	2013-14	2014-15	2015-16
5	GVA-All India	5.43	6.29	7.08	7.19
6	GVA Manufacturing	6.05	5.65	5.53	9.29
7	GVA-Agriculture, Forestry and Fishing	1.5	4.19	-0.25	1.25
8	GVA-FPI	-9.69	1.91	5.78	6.71
	(%) Share in T	otal GVA			
	Economic Activity	2012-13	2013-14	2014-15	2015-16
9	GVA -FPI	1.55	1.49	1.47	1.46
10	GVA Manufacturing	17.5	17.39	17.14	17.47
11	GVA-Agriculture, Forestry and Fishing	17.84	17.48	16.29	15.38
	(%) Share of	of FPI			
12	GVA Manufacturing	8.87	8.56	8.58	8.37
13	GVA- Agriculture, Forestry and Fishing	8.7	8.51	9.03	9.51

Source: Annual Report 2016-17, Ministry of Food Processing Industries (MOFPI)

Performance of Food Processing Industry

Performance of food processing industries in terms of various variables has been showed in the table 2. During 2008-09 to 2015-16, the input and output of organised industrial sector as a whole increased by 9.7 per cent per annum while that of the organised food processing industry by 11 per cent per annum. Net value added, income and profits in the organised food processing sector are increased with a CAGR of 9.72 percent, 10.44 percent and 8.15 percent respectively which is more than that of the organised industrial sector as a whole. The organised food processing industry accounts for 12.4 per cent of total output of organised industrial sector in 2008-09 which increased to 13.7 percent in 2015-16. The share of organised food processing sector in terms of number of factories and number of person engaged in organised industrial sector as a whole has been decline marginally. It can be inferred that the growth of the food processing industry is better than that of the whole industry in terms of input, output, net value added, income and profit except for number of units and number of person engaged. P: ISSN NO.: 2321-290X

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Table 2.Status of Food Processing Industry
(Values in De Lekh unless athemuise mentioned)

	ues in RS	. Lakn unless	otherwise mer	nionea)		
Particulars	All food and beverages			All Industries		
	2008-09	2015-16	CAGR	2008-09	2015-16	CAGR
Number of Factories (no.)	27216 (17.52)	39318 (16.9)	4.71	155321	233116	5.21
Fixed Capital	8115641 (7.7)	20634745 (7.34)	12.37	105596614	280964722	13.01
Employment	1563516 (13.8)	1765139 (12.34)	1.53	11327485	14299710	2.96
Total Inputs	35785392 (13.45)	83449941 (15.0)	11.16	266148638	558907407	9.72
Total Output	40536725 (12.4)	93837772 (13.7)	11.06	327279786	686235375	9.70
Net Value Added	4082493 (7.7)	8574071 (8.0)	9.72	52776558	107248509	9.27
Income	3029904 (6.74)	6703711 (7.43)	10.44	44932732	90165276	9.10
Profit	1728568 (5.82)	3235417 (6.30)	8.15	29699112	51319338	7.08

Source: Gol (various issues), Annual Survey of Industries, MOSPI, Government of India Growth and Structure of Food Processing Industries in India

A well-developed food processing sector with higher level of processing helps in the reduction of wastage, improves value addition, promotes crop diversification, ensures better return to the farmers, promotes employment as well as increases export earnings. This sector is also capable of addressing critical issues of food security, food inflation and providing wholesome, nutritious food to the masses. Earlier, the activities of food processing sector in India were mainly limited to the food preservation, packaging and transportation and with the emergence of new markets and technologies, the sector has extended its scope by producing many new items like ready to eat food, beverages, processed and frozen fruit and vegetable products, marine and meat products, etc. Presently, Indian food processing sector comprises six major segments that are fruits and vegetables, milk and milk products, meat and poultry, marine products or fisheries and sea food, grain processing, alcoholic beverages. Under the major segments there are different subsectors and growth and performance of such sub sectors has been studied with the help of certain variables such as number of factories, fixed capital, number of persons engaged, total input, output, net valued added, income and profit over the period of 2008-09 to 2015-16

The number of factories has been increased in all subsectors of food processing industries during the period from 2008-09 to 2015-16 has been showed in table 3 which revealed that the number of factories in food processing sector as a whole has been increased from 27216 to 39318 at CAGR of 4.71 percent where as the number of total manufacturing units in India has been increased with a CAGR of 5.21 percent. Grain milling has the major share in terms of number of factories which is 19141 followed by other food products, oil and fats and dairy. The compound annual growth rate of number of factories in prepared meals and dishes has been found the highest. The other subsectors such as dairy, meat, fruit and vegetable, bakery, animal feed and beverages has registered significant growth rates in terms of number of factories during the time period. Although grain milling, oil and fat etc have large number of units but they are considered traditional sectors of food processing and registered slow growth rates as compared to new emerging sectors such as dairy, meat, fruit and vegetable, prepared meals and dishes etc.

Table 3. Growth of Number of Factories in different sub sectors of food processing industries in India

		(Value in Number)				
Sub sectors	2008-09	2015-16	CAGR (%)			
Meat	90	148	6.41			
Fishery and other	352	534	5.35			
Fruit and vegetables	709	1192	6.71			
Oils and fats	2429	3147	3.29			
Dairy	1100	1943	7.37			
Grain milling	13464	19141	4.50			
Starches	589	670	1.62			
Bakery	993	1626	6.36			
Sugar	733	780	0.78			
Confectionery	456	564	2.69			
Macaroni, noodles etc.	61	89	4.84			
Prepared meals and dishes	45	364	29.86			

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Other food	4290	5983	4.25
Animal feeds	547	918	6.69
Beverages	1362	2220	6.30
All food and beverages	27216	39318	4.71
All India Manufacturing	155321	233116	5.21

Source: Gol (various issues), Annual Survey of Industries, MOSPI, Government of India

The growth of fixed capital from 2008-09 to 2015-16 in different sub sectors has been showed in table 4 which revealed that sugar has the major share in terms of fixed capital followed by beverages, grain milling, oil and fat, other food products in 2008-09 whereas in dairy comes out to a major segment of food processing sector in 2015-16 with significant

increase in fixed capital after sugar and beverages. The compound annual growth rate of fixed capital in animal feed is found to be highest followed by prepared meals and dishes, starches and fishery. Oil and fat and bakery grew at slower growth in terms of fixed capital. The CAGR for of fixed capital in the industry as a whole has been found 12.37 percent.

Table 4.Growth of Fixed Capital in different sub sectors of food processing industries in India

		()	/alue in Lakh)
Sub sectors	2008-09	2015-16	CAGR (%)
Meat	101975	259009	12.36
Fishery and other	101933	418808	19.32
Fruit and vegetables	275858	687093	12.08
Oils and fats	845007	1411417	6.62
Dairy	547866	2235963	19.22
Grain milling	890289	2153648	11.67
Starches	103214	586808	24.26
Bakery	221147	470860	9.91
Sugar	2743964	5975210	10.22
Confectionery	170417	636690	17.91
Macaroni, noodles etc.	33555	137456	19.28
Prepared meals and dishes	24991	147675	24.86
Other food	662751	2088831	15.43
Animal feeds	89425	600017	26.86
Beverages	1303249	2825258	10.15
All food and beverages	8115641	20634745	12.37
All India Manufacturing	105596614	280964722	13.01

Source: Gol (various issues), Annual Survey of Industries, MOSPI, Government of India

The number of persons engaged in different sub sectors of food processing has been showed in the table 5 which revealed that the Other food products sector involved the highest number of persons engaged followed by grain milling, sugar, beverages and oil and fat in 2008-09 where as the four segments occupied the same order and dairy comes to fifth largest sub sector providing

employment in organised food processing sector in

2015-16. Apart from this, Prepared meals and dishes

grew at highest CAGR with 23.59 percent followed by macaroni, noodles etc, fishery, meat, and animal feed. Other food, grain milling, oil and fat and sugar have registered negative growth during the study period. The number of persons engaged in food processing sector as a whole has been increased from 1563516 to 1765139 at CAGR of 1.53 percent whereas the number of persons engaged in total manufacturing units of India has been increased with a CAGR of 3 percent approximately.

Table 5. Growth of No. of Persons Engaged in different sub sectors of food processing industries in India

		(Value	in Number)
Sub sectors	2008-09	2015-16	CAGR (%)
Meat	14546	28842	8.93
Fishery and other	33061	65825	8.99
Fruit and vegetables	45001	60774	3.83
Oils and fats	106800	95621	-1.37
Dairy	102245	163815	6.07
Grain milling	329589	303437	-1.03
Starches	17190	23802	4.15
Bakery	60671	102276	6.75
Sugar	261931	232507	-1.48
Confectionery	28384	42605	5.21
Macaroni, noodles etc.	3717	7926	9.93
Prepared meals and dishes	5688	30961	23.59
Other food	402402	386531	-0.50
Animal feeds	28395	54898	8.59
Beverages	123898	165321	3.67

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ĺ	All food and beverages		1563516	1765139	1.53	
	All India Manufacturing		11327485	14299710	2.96	
		-				

Source: Gol (various issues), Annual Survey of Industries, MOSPI, Government of India

The amount of total input in all subsectors of food processing has been increased during 2008-09 to 2015-16 which has been showed in the table 6. Oil and fat having highest amount of input among all is followed by grain milling, dairy, sugar and other food in 2008-09 whereas grain milling accounts for the highest amount of input followed by same sectors in 2015-16. The CAGR of prepared meals and dishes has been found highest i.e., 33.58 followed by fishery, animal feed, meat, macaroni, noodles etc. Although oil and fat accounts for major share of amount of input, yet this very sector has grew with only 3.14 percent growth rate which is lowest among all subsectors.

Table 6.Growth of Total Inputs in different sub sectors of food processing industries in India

		(Va	lue in Lakh)
Sub sectors	2008-09	2015-16	CAGR (%)
Meat	576382	2168783	18.02
Fishery and other	654841	2614079	18.89
Fruit and vegetables	505210	1358543	13.16
Oils and fats	11237088	14390488	3.14
Dairy	3851335	12916098	16.33
Grain milling	7980021	19428658	11.76
Starches	257649	929171	17.39
Bakery	968439	1757845	7.74
Sugar	3437149	8766837	12.42
Confectionery	409137	1320574	15.77
Macaroni, noodles etc.	48109	178428	17.80
Prepared meals and dishes	28610	289984	33.58
Other food	2601491	8274574	15.56
Animal feeds	961952	3760968	18.58
Beverages	2267979	5294908	11.18
All food and beverages	35785392	83449941	11.16
All Manufacturing India	266148638	558907407	9.72

Source: Gol (various issues), Annual Survey of Industries, MOSPI, Government of India

Similarly growth of value of output has been showed in the table 7 which revealed that the amount of total output in all subsectors of food processing has been increased during 2008-09 to 2015-16. Oil and fat, grain milling, dairy, sugar, other food and beverages account for major share of value of output whereas confectionary, fruit and vegetables, macaroni and noodles, starch and prepared meals and dishes subsectors have smaller amount of output as compared to the above sectors. It is found that although such sectors accounted for smaller amount of output, yet the growth of them is significant as prepared meals and dishes has registered highest CAGR i.e., 30.23 percent followed by fishery and macaroni noodles etc. Although oil and fat accounts for major share of amount of output, yet this very sector has grew with only 3.21 percent growth rate which is lowest among all subsectors.

Table 7.Growth of Total output in different sub sectors of food processing industries in India

			(Value in La	akh)
Sub sectors	2008-09	2015-16	CAGR (%)	
Meat	661166	2370690	17.31	
Fishery and other	729314	2930223	18.99	
Fruit and vegetables	572283	1816655	15.53	
Oils and fats	11885790	15305463	3.21	
Dairy	4264721	14009686	16.03	
Grain milling	8803380	20676974	11.26	
Starches	298913	1068225	17.26	
Bakery	1195195	2250018	8.23	
Sugar	3863937	9921844	12.51	
Confectionery	561782	1645453	14.38	
Macaroni, noodles etc.	62571	251221	18.98	
Prepared meals and dishes	45269	374500	30.23	
Other food	3240828	9948598	15.05	
Animal feeds	1039257	4170773	18.97	
Beverages	3312317	7097451	9.99	
All food and beverages	40536725	93837772	11.06	
All India Manufacturing	327279786	686235375	9 70	

Source: Gol (various issues), Annual Survey of Industries, MOSPI, Government of India

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The development of Food processing industry is given top priority by the government as it embodies huge potential for employment generation and value addition, the latter implying a large income generation. (kumar, 2010). Growth of Net value added in different sub sectors of food processing industries in India has showed in table 8 which revealed that Net value added in all subsectors of food processing has been increased during 2008-09 to 2015-16.Beverages having highest amount of net value added among all is followed by grain milling, oil and fat, other food, dairy and sugar in 2008-09 whereas other food accounts for the highest amount of input followed by beverages, grain, dairy, sugar and oil and fat in 2015-16. The CAGR of fruit and vegetable has been found highest i.e., 33.69 percent followed by animal feed, macaroni, noodles etc. and prepared meals and dishes. Grain milling and oil and fat registered low growth rates in terms of value addition among all sub sectors.

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Table 8. Growth of het	value added in different sub	sectors of tood processing	a industries in India

		(Value in Lakh)			
Sub sectors	2008-09	2015-16	CAGR (%)		
Meat	75793	174343	10.97		
Fishery and other	63602	274025	20.03		
Fruit and vegetables	44978	382813	30.69		
Oils and fats	580776	793701	3.98		
Dairy	365529	905168	12.00		
Grain milling	736504	1006499	3.98		
Starches	34079	106223	15.27		
Bakery	203119	433782	9.95		
Sugar	248268	842982	16.51		
Confectionery	136813	236308	7.07		
Macaroni, noodles etc.	12065	55486	21.01		
Prepared meals and dishes	13834	60297	20.20		
Other food	576175	1472781	12.45		
Animal feeds	68726	360672	23.03		
Beverages	922231	1468991	5.99		
All food and beverages	4082493	8574071	9.72		
All India Manufacturing	52776558	107248509	9.27		

Source: GoI (various issues), Annual Survey of Industries, MOSPI, Government of India

The growth of income in all subsectors of food processing has been showed in the table 9 which revealed that during 2008-09 to 2015-16.Beverages having highest amount of income among all is followed by other food, oil and fat, grain milling and dairy in 2008-09 whereas sugar has negative value of income for the same year. Other food accounts for the highest amount of income followed by beverages, dairy, oil and fat and grain milling whereas prepared meals, macaroni, starch are subsectors having lower income as compared to other subsectors in 2015-16. On the other hand, fruit and vegetable has been registered highest CAGR i.e., 51.15 percent followed by fishery, animal feed, macaroni, noodles etc. and prepared meals and dishes. Sugar has registered lowest growth rates in terms of income among all sub sectors.

Table 9. Growth of Income in different sub sectors of food processing industries in India

		(Value in Lakh)			
Sub sectors	2008-09	2015-16	CAGR (%)		
Meat	69078	161241	11.18		
Fishery and other	36964	231096	25.75		
Fruit and vegetables	12139	330753	51.15		
Oils and fats	466027	672844	4.70		
Dairy	318776	795291	12.11		
Grain milling	465006	522397	1.47		
Starches	24448	77966	15.60		
Bakery	190974	404614	9.84		
*Sugar	207785	222409	0.98		
Confectionery	127375	215505	6.79		
Macaroni, noodles etc.	11389	52399	21.02		
Prepared meals and dishes	11962	41959	16.98		
Other food	507295	1351636	13.03		
Animal feeds	57136	300402	23.05		
Beverages	842625	1323199	5.80		
All food and beverages	3029904	6703711	10.44		
All India Manufacturing	44932732	90165276	9 10		

Source: Gol (various issues), Annual Survey of Industries, MOSPI, Government of India

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*For CAGR, value of income is taken for year 2009-10 in case of sugar as value for the same was negative in 2008-09.

The growth of profits in all subsectors of food processing has been showed in the table 10 which revealed that during 2008-09 to 2015-16. Beverages having highest amount of profit among all is followed by other food, oil and fat, grain milling and dairy in 2008-09 whereas sugar and fruits and vegetables have negative value of profits for the same year. The amount of profits of beverages are found to be highest followed by other food, oil and fat, dairy and bakery **Table 10.Growth of Profits in different su** where as sugar and prepared meals and dishes have negative value of profits in 2015-16. On the other hand, fruit and vegetable has been registered highest CAGR i.e., 51.15 percent followed by fishery, animal feed, macaroni, noodles etc. and prepared meals and dishes. Grain milling, sugar, and confectionary have registered negative CAGR in terms of profits among all sub sectors.

able 10.Growth o	of Profits in	different sub	sectors of	of food p	processing	industries	in India
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		(Value in Lakh)			
Sub sectors	2008-09	2015-16	CAGR (%)		
Meat	53384	98331	7.93		
Fishery and other	14982	120992	29.84		
*Fruit and vegetables	10196	215549	54.63		
Oils and fats	383453	488920	3.08		
Dairy	155825	315831	9.23		
Grain milling	307254	158384	-7.95		
Starches	10272	36314	17.10		
Bakery	130291	217093	6.59		
Sugar	-429417	-352122	-2.45		
Confectionery	95963	87651	-1.13		
Macaroni, noodles etc.	8519	33428	18.64		
**Prepared meals and dishes	2572	-36413	-		
Other food	310715	795418	12.47		
Animal feeds	29250	168578	24.48		
Beverages	678605	887462	3.41		
All food and beverages	1728568	3235417	8.15		
All India Manufacturing	29699112	51319338	7.08		

Source: Gol (various issues), Annual Survey of Industries, MOSPI, Government of India

*For CAGR, value of profit for fruit and vegetables is taken for year 2009-10 as value for the same was negative in 2008-09.

**For prepared meals and dishes CAGR is not calculated as the value is found to be negative in 2015-16

Compound Annual Growth Rate (CAGR) of different variables in different sub sectors of food processing industries in India

The compound annual growth rates have been calculated for all subsectors have been shown collectively in table 11. The CAGR of number of factories in prepared meals and dishes has been found the highest. The other subsectors such as dairy, meat, fruit and vegetable and beverages has registered significant growth rates in terms of number of factories during the time period. Although grain milling, oil and fat etc have large number of units but they are considered traditional sectors and registered slow growth rates as compared to new emerging sectors. The CAGR of fixed capital in animal feed is found to be highest followed by prepared meals and dishes, starches and fishery. Oil and fat and bakery grew at slower growth in terms of fixed capital. Prepared meals and dishes grew at highest CAGR with 23.59 percent followed by macaroni, noodles etc, and fishery. Other food, grain milling, oil and fat and sugar have registered negative growth during the study period.

The CAGR has been found highest i.e., 33.58 in input of prepared meals and dishes followed

by fishery, animal feed and meat. Although oil and fat accounts for major share of amount of input, yet it has grown with only 3.14 percent growth rate which is lowest among all subsectors. It has been found that although such sectors accounted for smaller amount of output, yet the growth of them is significant as prepared meals and dishes has registered highest CAGR i.e., 30.23 percent followed by fishery and macaroni noodles etc. Although oil and fat accounts for major share of amount of output, yet this very sector has grew with only 3.21 percent growth rate which is lowest among all subsectors. The CAGR of fruit and vegetable has been found highest i.e., 33.69 percent followed by animal feed, macaroni, noodles etc. and prepared meals and dishes. Grain milling, oil and fat registered low growth rates in terms of value addition among all sub sectors.

Fruit and vegetable is growing at the highest CAGR i.e., 51.15 percent in terms of income followed by fishery, animal feed, macaroni, noodles etc. and prepared meals and dishes. Sugar has registered lowest growth rates in terms of income among all sub sectors. Fruits and vegetables registered highest growth rate of profit during the study period followed by fishery, animal feed, macaroni noodles etc where as oil and fat, beverages and bakery have slower growth rate as compared to other subsectors. Confectionary, sugar and grain milling registered negative growth rate in terms of profit. E: ISSN NO.: 2349-980X

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Table 11.CAGR of different variables in different sub sectors of food processing industries in India

(value in Percent)								
	Number of	Fixed	Total Persons	Total	Total	Net Value		
Sub sectors	Factories	Capital	Engaged	Inputs	Output	Added	Income	Profit
Meat	6.41	12.36	8.93	18.02	17.31	10.97	11.18	7.93
Fishery and other	5.35	19.32	8.99	18.89	18.99	20.03	25.75	29.84
Fruit and vegetables	6.71	12.08	3.83	13.16	15.53	30.69	51.15	54.63
Oils and fats	3.29	6.62	-1.37	3.14	3.21	3.98	4.70	3.08
Dairy	7.37	19.22	6.07	16.33	16.03	12.00	12.11	9.23
Grain milling	4.50	11.67	-1.03	11.76	11.26	3.98	1.47	-7.95
Starches	1.62	24.26	4.15	17.39	17.26	15.27	15.60	17.10
Bakery	6.36	9.91	6.75	7.74	8.23	9.95	9.84	6.59
Sugar	0.78	10.22	-1.48	12.42	12.51	16.51	0.98	-2.45
Confectionery	2.69	17.91	5.21	15.77	14.38	7.07	6.79	-1.13
Macaroni, noodles etc.	4.84	19.28	9.93	17.80	18.98	21.01	21.02	18.64
Prepared meals and dishes	29.86	24.86	23.59	33.58	30.23	20.20	16.98	17.64
Other food	4.25	15.43	-0.50	15.56	15.05	12.45	13.03	12.47
Animal feeds	6.69	26.86	8.59	18.58	18.97	23.03	23.05	24.48
Beverages	6.30	10.15	3.67	11.18	9.99	5.99	5.80	3.41
All food and beverages	4.71	12.37	1.53	11.16	11.06	9.72	10.44	8.15
All India Manufacturing	5.21	13.01	2.96	9.72	9.70	9.27	9.10	7.08

Source: Calculated from Annual Survey of Industries, GoI (various issues), MOSPI, Government of India Conclusion *http://www.panelamonitor.org/media/doci*

The new emerging sectors of food processing industries are meat products, fishery, fruits and vegetables, prepared meals and dishes, dairy products, beverages, macaroni, noodles etc. and other food products which have increased in terms of selected variables as urbanisation, increased income, changing lifestyle and foreign influence has induced demand for such products. The relative share of traditional sector such as oils and fats and grain mill and starch products has been decreased, especially for oils and fats, although these sectors account for a larger share in terms of number of units, employment and output. The food processing industry has a strong potential in India and there is still a scope for further development and improvement to meet the national objective of employment and income generation.

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