

2. Review of Results

2.1 Introduction

2.1.1 The main findings of the survey, which covers the registered manufacturing sectors of the entire country, are highlighted in the following sections including the present one. These results, both in aggregates and in percentage terms, are presented at macro level and are based on the central sample data collected by the FOD, NSSO and processed by the CSO (IS Wing). Some of the important structural ratios and technical coefficients, wherever relevant, have also been computed and incorporated in some of the statements presented in these sections. The discussions of the results are mainly based on the all-India results.

2.1.2 Another important point may also be noted here that the rates and ratios of some parameters presented in this report at the disaggregate level, particularly for the smaller states and UTs cross classified by 2-digit level of activity classification, are subject to the limitation of small sample and thus, the user may cautiously interpret the changes of these parameters over time. In order to facilitate better understanding of the estimates of these rates and ratios, the number of factories available in the frame, number of factories selected for the survey and number of factories surveyed for ASI 2008-09 are given in Statement 0 separately for each state and all-India.

2.2 Principal Aggregates – All India

2.2.1 Statement 1 presents the estimates for principal characteristics for all industries taken together at all-India level for 2008-09 with comparative estimates for the preceding four years.

2.2.2 The statement shows that in the year 2008-09, there have been 1,55,321 factories registered with the Chief Inspector of Factories (CIF) in all States and Union Territories except the States of Arunachal Pradesh, Mizoram and Sikkim and Union Territory of Lakshadweep. These factories include those which were, at the time of survey, found to be either (i) opened and operated, or (ii) existed in the given location and had engaged some employees during the reference period, but could not initiate production or did not produce anything during the reference period due to various reasons, and can take up production any moment once the problems are sorted out, or (iii) existed in the given location, but did not engage any employee during the reference period, and also, did not initiate production or produce anything during the reference period. The number of factories in 2008-09 is found to be higher by 6.10 percent than that of last year. These factories together have a total stock of fixed capital worth Rs. 10,55,96,614 Lakhs and invested capital of Rs. 15,35,17,773 Lakhs. These are higher by 24.95 and 19.92 percent, respectively compared to those estimated as per ASI 2007-08. These factories have provided gainful employment to 1,13,27,485 persons showing an increase of 8.37 percent with respect to the preceding year and distributed Rs. 1,29,44,123 Lakhs as emoluments to employees, showing an increase of 22.76 percent in one year. These factories have consumed inputs both industrial and non-industrial in nature, worth Rs. 26,61,48,638 Lakhs, produced Rs.

32,72,79,786 Lakhs, worth of goods and services valued at ex-factory prices and contributed by the way of net value added by organized manufacturing sector Rs. 5,27,76,558 Lakhs to the national income. These are found to be higher by 19.73, 17.91 and 9.59 percent, respectively compared to those estimated as per previous ASI.

2.3 Structural Ratios and Technical Coefficients

2.3.1 A few structural ratios and technical coefficients derived from the macro level estimates of principal characteristics for the current and the preceding four years have been given in Statement 2. It may be noted that the measuring changes in ratios over time are subject to certain limitations. Some of these ratios - particularly value based characteristics - are not strictly comparable over time due to the changes in prices of commodities from year to year. Two new structural ratios viz. output per worker and net value added per worker and a new technical coefficient viz. fuel consumed to output, perceived as an indicator of energy efficiency of an industry has been newly introduced in Statement 2.

2.3.2 Statement 2 reveals that the average size of the factory, measured in terms of value based characteristics, namely, fixed capital, gross output and net value added by manufacture have maintained a steady upward trend over years. As stated in the preceding paragraph, the increase in the value-based characteristics may be the combined result of the increase in physical output as well as increase in prices. The survey results revealed that in 2008-09, a factory with an average investment of Rs. 680 Lakhs in fixed capital have provided gainful employment to 73 persons, produced goods and services at ex-factory prices worth Rs. 2,107 Lakhs and contributed by way of net value added by manufacture Rs. 340 Lakhs to the national income. However, taking an employee as a unit of measurement, the survey revealed that an employee in the organized manufacturing sector during 2008-09 has, on an average, worked with a fixed capital stock of Rs. 9,32,216, gave an output of Rs. 28,89,254 and contributed to the national income by way of net value added by manufacture Rs. 4,65,916. The corresponding averages in the preceding year are, respectively, Rs. 8,08,453, Rs. 26,55,537 and Rs. 4,58,282. The average emoluments drawn by an employee was Rs. 1,14,272 during 2008-09 and average wages given to a worker was Rs. 68,103 during the same period.

2.3.3 The capital output ratio which provides a measure of the capital required to produce one unit of net output (i.e. net value added) has increased to 2.0 in 2008-09 from 1.76 in 2007-08. The capital required to produce one unit of gross output has also increased from 0.30 in 2007-08 to 0.32 in 2008-09. The level of efficiency, measured by the ratio of the net value added to gross output has been 0.16 in 2008-09 against 0.17 as observed in 2007-08. The share of labour in net value added, measured by the ratio of emoluments to the net value added has increased from 0.22 in 2007-08 to 0.25 in 2008-09. Fuel consumed to produce one unit of output has remained same (0.05) over the period of five years at least at the macro level.

Figure 1: Number of workers and total persons engaged during 2004-05 to 2008-09

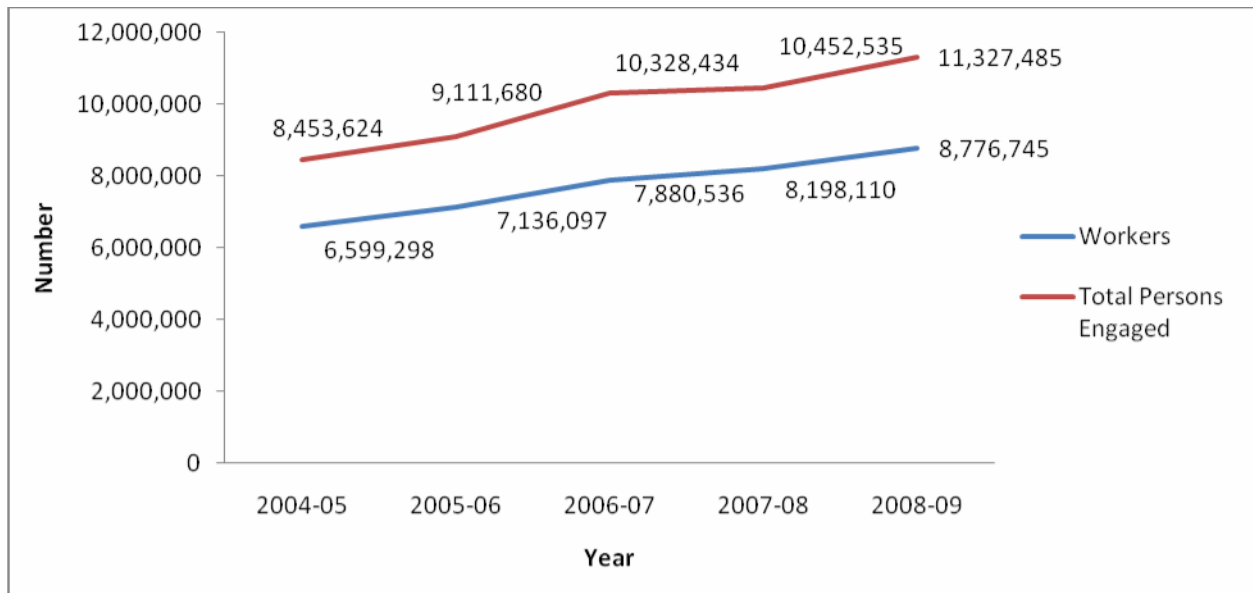


Figure 1 is showing the number of workers and total persons engaged during 2004-05 to 2008-09. The above figure is showing an upward trend of both workers and total persons engaged. However, the total persons engaged are slightly steeper than the workers. It implies that the number of auxiliary employees, managerial staff, etc. that are not directly linked with the production, is increasing over time in comparison to the employment directly linked to the production process.

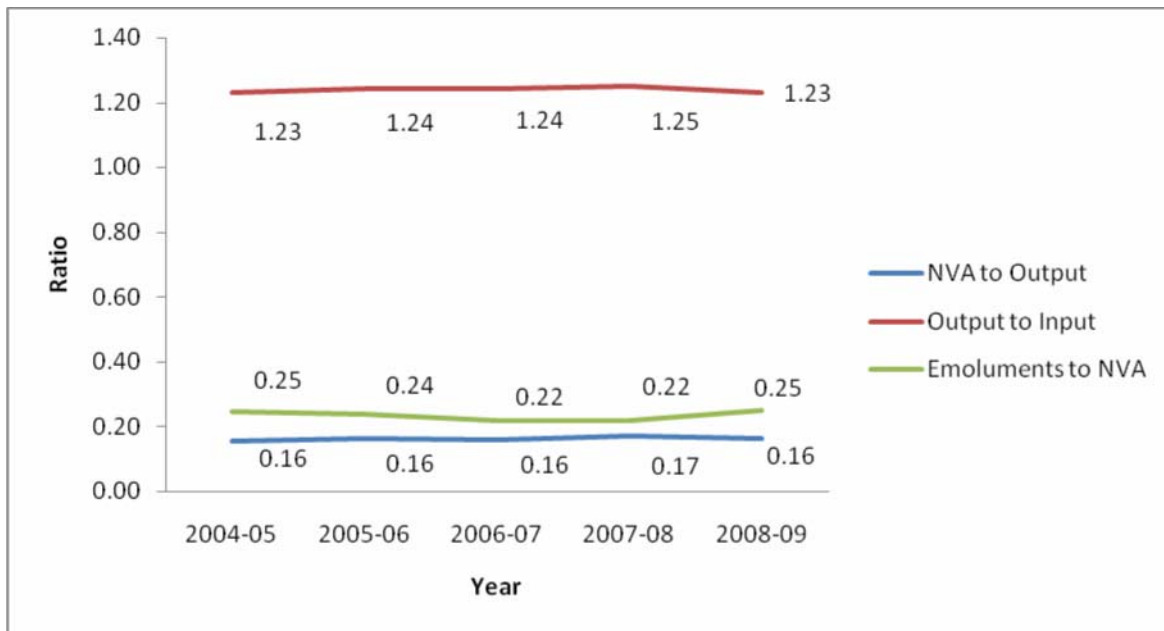
Figure 2: Technical coefficients during 2004-05 to 2008-09

Figure 2 presents some technical coefficients during 2004-05 to 2008-09. Here, the technical coefficients are estimated on the basis of NVA to output, output to input and emoluments to NVA. From the above figure, it is found that output to input ratio that indicates the industrial efficiency has remained static over past few years. The other two coefficients viz. NVA to output and emoluments to NVA have also remained stable over the last five years.

Statement 0: Number of factories in the frame, selected for survey and actually surveyed in ASI 2008-09

State/UT	No. of factories		
	In frame	selected	surveyed
Jammu & Kashmir	784	392	387
Himachal Pradesh	1852	883	746
Punjab	13228	2935	2790
Chandigarh	339	184	184
Uttarakhand	2066	874	844
Haryana	6123	2191	2184
Delhi	4096	1316	1284
Rajasthan	7679	1858	1839
Uttar Pradesh	13733	3839	3694
Bihar	2273	598	585
Nagaland	110	110	104
Manipur	90	90	87
Mizoram	412	412	412
Tripura	98	98	97
Assam	2528	867	829
West Bengal	7629	2250	2183
Jharkhand	2270	777	633
Odisha	2358	719	689
Chattisgarh	2316	757	746
Madhya Pradesh	4037	1430	1365
Gujarat	20417	5237	5126
Daman&Diu	1999	639	624
D&N Haveli	1486	525	490
Maharashtra	26181	7417	5791
Andhra Pradesh	24295	5134	5107
Karnataka	10712	3424	3344
Goa	610	386	375
Kerala	6796	2208	1740
Tamilnadu	35360	10252	8095
Puducherry	864	472	464
A&N Islands	26	26	26
All India	202767	58300	52864

Statement 1: Estimate of principal characteristics based on ASI during 2004-05 to 2008-09

Characteristics	Unit	ASI Year					Percentage Growth			
		2004-05	2005-06	2006-07	2007-08	2008-09	2005-06 over 2004-05	2006-07 over 2005-06	2007-08 over 2006-07	2008-09 over 2007-08
Factories	Number	136,353	140,160	144,710	146,385	155,321	2.79	3.25	1.16	6.10
Fixed Capital	Rs Lakhs	51,306,925	60,694,028	71,513,139	84,513,209	105,596,614	18.30	17.83	18.18	24.95
Invested Capital	Rs Lakhs	75,941,770	90,157,861	107,150,382	128,012,553	153,517,773	18.72	18.85	19.47	19.92
Workers	Number	6,599,298	7,136,097	7,880,536	8,198,110	8,776,745	8.13	10.43	4.03	7.06
Total Persons Engaged	Number	8,453,624	9,111,680	10,328,434	10,452,535	11,327,485	7.78	13.35	1.20	8.37
Wages to Worker	Rs Lakhs	3,363,505	3,766,366	4,429,135	5,103,023	5,977,184	11.98	17.60	15.21	17.13
Total Emoluments	Rs Lakhs	6,440,594	7,400,820	8,875,099	10,544,284	12,944,123	14.91	19.92	18.81	22.76
Input	Rs Lakhs	136,294,133	154,365,843	194,836,758	222,295,282	266,148,638	13.26	26.22	14.09	19.73
Output	Rs Lakhs	167,256,142	190,835,548	240,854,764	277,570,904	327,279,786	14.10	26.21	15.24	17.91
GVA	Rs Lakhs	30,962,009	36,469,705	46,018,006	55,275,622	61,131,148	17.79	26.18	20.12	10.59
Depreciation	Rs Lakhs	4,971,324	5,283,286	6,445,480	7,116,354	8,354,590	6.28	22.00	10.41	17.40
NVA	Rs Lakhs	25,990,686	31,186,419	39,572,526	48,159,268	52,776,558	19.99	26.89	21.70	9.59
Rent Paid	Rs Lakhs	453,845	529,948	640,399	750,549	975,778	16.77	20.84	17.20	30.01
Interest Paid	Rs Lakhs	3,245,360	3,339,801	4,131,128	5,148,688	6,868,048	2.91	23.69	24.63	33.39
Income	Rs Lakhs	22,291,481	27,316,670	34,800,999	42,260,031	44,932,732	22.54	27.40	21.43	6.32

Statement 2 : Estimate of structural ratios and technical co-efficients based on ASI during 2004-05 to 2008-09						
		ASI Year				
Structural Ratios	Unit	2004-05	2005-06	2006-07	2007-08	2008-09
Fixed Capital per Factory	Rs Lakhs	376	433	494	577	680
Gross Output per Factory	Rs Lakhs	1227	1362	1664	1896	2107
Net Value Added per Factory	Rs Lakhs	191	223	273	327	340
Workers per Factory	Number	48	51	54	56	57
Employee per Factory	Number	62	65	71	71	73
Fixed Capital per Employee	Rupees	606922	666112	692391	808543	932216
Output per Worker	Rupees	2534454	2674229	3056325	3385791	3728943
Output per Employee	Rupees	1978514	2094406	2331958	2655537	2889254
Net Value Added per Worker	Rupees	393840	437023	502155	587444	601323
Net Value Added per Employee	Rupees	307450	342269	383142	458282	465916
Emoluments per Employee	Rupees	76187	81223	85929	100878	114272
Wages per Worker	Rupees	50968	52779	56203	62246	68103
<u>Technical Co-efficients</u>						
Fixed Capital to NVA		1.97	1.95	1.81	1.76	2.00
Fixed Capital to Output		0.31	0.32	0.3	0.3	0.32
NVA to Output		0.16	0.16	0.16	0.17	0.16
Output to Input		1.23	1.24	1.24	1.25	1.23
Fuel Consumed to Output		0.05	0.05	0.05	0.05	0.05
Emoluments to NVA		0.25	0.24	0.22	0.22	0.25