

Registered manufacturing sector and Haryana's industrial growth: Trends, patterns and comparisons

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Abstract

In order to evaluate the performance of industry in general and registered manufacturing in particular for Haryana, the paper raise the following questions and seek answers: What is the contribution of Haryana in industrial development of the country? Was Haryana able to improve its share in overall registered manufacturing scene of the country? What are the changes in pattern of registered manufacturing in Haryana? What is the contribution of industry (manufacturing) in Haryana's economic development? Using data from Annual Survey of Industry (ASI) paper examines the structure of industries in Haryana, position of Haryana on industrial landscape of India and changes over time. Paper also presents many structural ratios and technical coefficient for Haryana computed from ASI data and compares changes in these ratios and coefficients over time.

Keywords: industrial development, haryana, registered manufacturing sector, structural ratios

1. Introduction

The sustained increase in the level of industrialization is a mark of economic strength and stability of any economy. Economic history indicates that for developing countries, the increase in level of per-capita income has normally been led by the growth of manufacturing sector. Manufacturing has long been recognized for its role as "leading sector" or "engine of growth" in the development process (Kaldor, 1966) ^[3]. Pieper (2000) ^[5] established that industrial performance correlates with the overall performance of an economy and therefore is the key sector in explaining the sustainability of different regional patterns. Szirmai (2012) ^[6] analysing growth pattern of 65 developing countries established that there are powerful empirical and theoretical arguments in favour of industrialisation as the main engine of growth in economic development of developing countries. The study observed that there are no important examples of success in economic development in developing countries since 1950, which have not been driven by industrialisation. All the Asian success stories are stories of industrialisation. Neither tourism, nor primary exports, nor services have played a similar role, with the possible exception of India since 2000. Thus, the literature on economic development of developing countries undoubtedly recognised the importance of Industrialisation in the process of their economic development. However Lall (1992) ^[4] observed that the inefficiencies and external shocks aggravated by poor policies have resulted in making many industries a drag on their economies rather than engines of growth.

Recognising its importance for development, Haryana has rightly progressed on the path of industrialization. Conducive business environment and policies enablers were put in place for the progress of Industry in the state. Since coming into existence as the seventeenth State of the Indian union on Nov. 1, 1966 after bifurcation of the Punjab State, Haryana placed emphasis on

industrialisation. Though, the agro-climatic conditions in a large part of the State were not favourable for industrialization and also the state did not inherit a healthy industrial set up at the time of its inception but the state was able to attract sizeable investment from MNCs, large business houses, foreign investors, NRIs and small scale entrepreneurs. To generate employment, create investment and to facilitate dispersal of economic activities particularly in the backward areas of the State, Haryana government has calibrated its industrial policies adapting to changing environment. The state announced Industrial Policy-2005, Industrial and Investment Policy-2011 and Enterprises Promotion Policy-2015. Presently, Haryana is known for its vibrant agrarian economy and strong industrial base and is amongst the front runners of Industrial development in India that is showcased with its leading position in production of a number of industrial / consumer goods i.e. nearly 80% of escalators, 52% of cranes, 50% of passenger cars, 33% of two-wheelers, 25% of sanitary wares, 20% of scientific instruments and 15% of tractors are manufactured in the State (Government of Haryana, 2015). The State enjoys a number of advantages including proximity to the national capital of Delhi, excellent law & order situation, planned quality infrastructure, favorable policy setting, harmonious labour relations, trained & skilled manpower, responsive administration, etc.

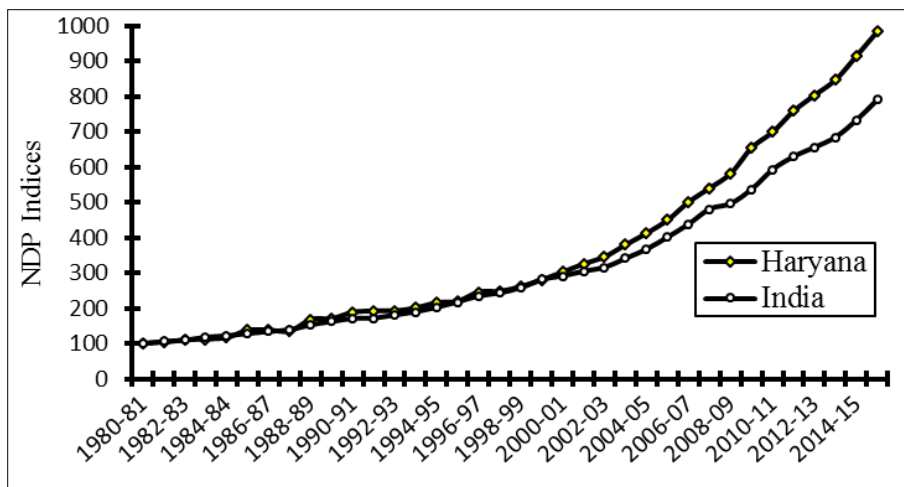
In order to evaluate the performance of industry in general and registered manufacturing in particular for Haryana, we raise the following questions and seek answers: What is the contribution of Haryana in industrial development of the country? Was Haryana able to improve its share in overall registered manufacturing scene of the country? What are the changes in pattern of registered manufacturing in Haryana? What is the contribution of industry (manufacturing) in Haryana's economic development? The data for the study has been obtained mainly from Annual Survey of Industries

(various issues), Statistical Abstract of Haryana (various issues), RBI's Real Time Handbook of Statistics on the Indian Economy, Economic Survey of Haryana (various issues) and other government publications. Annual growth rates are estimated by using semi-logarithmic function of the form $Y = ab^t$. The inter-temporal comparisons of trend rates are done by fitting separate functions for sub-periods.

2. Macro Level Growth Trends

We have traced the comparative picture of the movement

in the index of net domestic product at 1993-94 prices for Haryana and all-India by plotting the indices of NSDP in case of Haryana and NDP in case of India in Fig-1. It is seen that Indices for Haryana has moved ahead of that for India especially since 2000-01. We have compared growth rate of Haryana with all India average on year to year basis and found that out of 35 years, in 15 years growth rate Haryana has been lower than that of India's average. But in 16 year after 2000-01, there are only 3 periods (2005-06, 2007-08 and 2010-11) when growth rate of Haryana was lower than India.



Source: Indices constructed by using data from RBI Handbook on Indian Economy

Fig 1: Movement in NDP Indices (1980-81 = 100)

This trend is also noticeable in the graph as the index of NSDP has moved well ahead of index of NDP. Results presented in Table-1 also illustrate that the secular growth rate in net domestic product of Haryana has been

above the national average as annual growth rates of real Net State Domestic Product (NSDP) has been higher than real NDP in all the decades since 1971-72.

Table 1: Annual growth rates of Real Net State Domestic Product (NSDP) and Real Per Capita NSDP

Period	NSDP		Per Capita NSDP	
	Haryana	All India	Haryana	All India
1971-02 to 1980-01	4.82*	3.66*	2.22*	1.23*
1981-02 to 1990-01	6.68*	5.60*	4.12*	3.36*
1991-02 to 2000-01	6.71*	6.03*	4.42*	4.07*
2001-02 to 2010-11	8.67*	7.45*	6.74*	5.64*
2011-12 to 2015-16	6.99*	6.20*	5.37*	4.18*

Note: * - All are statistically significant at 5 per cent level.

Source: Calculated using CSO data on National Accounts Statistics collected from RBI Handbook of Statistics and Economic Survey of Haryana (various years)

The state has undergone significant structural changes conforming to the general trend in the country. The share of Agriculture and Allied Sector in GSDP declined from 58.8 percent in 1980-81 to 18.81 percent in 2015-16

while the share of Industry Sector increased from 11.0 percent in 1980-81 to 26.13 percent in 2015-16 and the share of service sector increased from 30.2 percent to 55.08 percent during this period.

Table 2: Sectoral Composition of SGDP at Current Price

	Haryana			India		
	Agriculture & allied	Industry	Service	Agriculture & allied	Industry	Service
1980-81	53.76	19.47	30.13	35.79	19.55	44.66
1990-91	44.10	24.82	31.08	29.33	20.92	49.75
2000-01	31.10	29.15	39.75	23.48	20.01	56.53
2010-11	21.28	28.74	50.01	18.21	19.27	62.52
2014-15	18.81	26.13	55.08	18.03	21.59	60.36

Source: RBI's Handbook of Statistics on Indian Economy for India, and CSO.

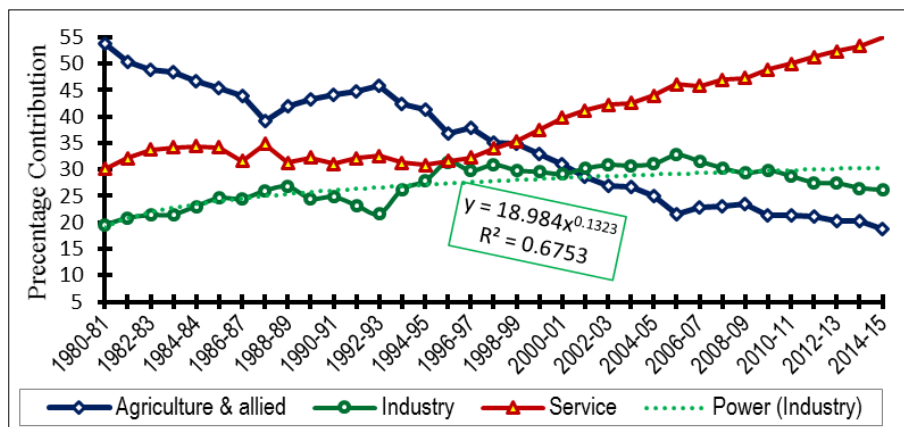


Fig 2: Components of State Gross Domestic Product (At Market Prices) 1980-81 to 2014-15

Fig 2 depicts that the share of service sector has increased continuously for the period whereas share of agriculture and allied activities has continuously decreased. The share of manufacturing sector has also shown an increasing trend for the period but it has shown decreasing trend after the period 2005-06. Table-3 shows that the service sector has recorded the highest average annual growth rate for the period since 1991-92 for

Haryana. The industrial sector in Haryana recorded an impressive growth in the decade of 1980s and also in the following decades of 1990s and 2000s. It can be seen that though the service sector is growing at a significant rate for Haryana during post reform period but it is accompanied by a significant growth rate of industry also.

Table 3: Annual Growth Rates in Components of Net Domestic Product

	Haryana			India		
	Agriculture & allied	Industry	Service	Agriculture & allied	Industry	Service
1981-02 to 1990-01	3.37*	15.08*	7.49*	2.95*	7.34*	6.46*
1991-02 to 2000-01	4.07*	8.37*	8.38*	3.33*	7.37*	7.63*
2001-02 to 2010-11	3.27*	9.05*	12.07*	3.32*	7.54*	9.15*
2011-12 to 2014-15	2.84*	4.59*	8.07*	3.37*	6.90*	6.50*

Source: RBI's Handbook of Statistics on Indian Economy for India, and Economic Survey of Haryana for data pertaining to Haryana.

3. Share of Haryana in India's Industrial Scene

The results presented in table-4 exhibits that the share of Haryana is 5.01 percent of the total Gross Value Added by the registered manufacturing sector in the country and was ranked 5th after Maharashtra, Gujarat, Tamil Nadu and Karnataka. Haryana was ranked 6th on the total output (5.34 percent), total number of person engaged (5.61 percent) and Gross Value of Plant & Machinery by

the registered manufacturing sector (5.36 percent). This is an important contribution because Haryana accounts for 3.58 percent of India's NDP, 3.61 percent of Industrial output and 4.19 percent of Manufacturing output (registered + unregistered). The fact that Haryana has only 1.34 percent of the country's area and 2.09 percent of country's population makes its contribution in registered manufacturing even more impressive.

Table 4: Haryana vis-à-vis other states on Select Indicators of Organised Manufacturing

	Fixed Capital		Gross Value of Plant & Mach.		Total Persons Engaged		Total Output		Gross Value Added	
	% share	Rank	% share	Rank	% share	Rank	% share	Rank	% share	Rank
Maharashtra	13.62	2	13.57	2	19.54	1	16.26	2	21.43	1
Gujarat	17.69	1	10.53	3	10.93	3	18.44	1	17.41	2
Tamil Nadu	8.94	4	15.33	1	13.50	2	10.17	3	9.02	3
Karnataka	6.83	5	7.02	4	7.80	4	6.71	4	5.85	4
Haryana	3.55	9	5.36	6	5.61	6	5.34	6	5.01	5
Uttar P.	4.40	7	6.36	5	5.84	5	6.14	5	4.42	6
Uttarakhand	2.06	15	2.70	13	2.34	12	2.76	11	4.27	7
Rajasthan	3.09	12	3.51	11	3.33	10	3.22	9	3.35	8
Himachal P.	1.97	16	1.50	16	1.82	17	1.79	17	3.18	9
Telangana	2.32	14	4.99	7	3.51	8	2.32	13	2.96	10
Andhra P.	5.99	6	3.81	10	3.35	9	3.66	8	2.88	11
Madhya P.	3.93	8	2.48	14	2.25	13	2.69	12	2.20	12
Jharkhand	3.06	13	1.31	18	2.09	15	1.76	18	2.18	13
Punjab	1.66	17	4.20	9	2.92	11	2.76	10	2.11	14

West Bengal	3.49	10	4.56	8	3.80	7	3.83	7	1.89	15
Chhattisgarh	3.15	11	1.29	19	1.77	18	1.74	19	1.86	16
Odisha	9.27	3	1.89	15	2.14	14	1.90	14	1.71	17

Source: Calculated using the data extracted from ASI, 2014-15

More importantly the share of Haryana on various indicators has shown upward trend. Its share in NVA of registered manufacturing has increased by 1.25 percent and on the strength of it, the state is able to improve its position from 9th in 1998-99 to 5th in 2014-15. Similarly, Haryana has also improved its percentage contribution and rank on other important indicators as depicted in table-5. Based on the analysis of the results presented in table 4 and 5, we can construe that Haryana’s

contribution in manufacturing output of the country has been significant in relation to its size and its contribution has been increasing with passage of time. Haryana has taken lead in terms of planned industrial and urban growth compared to neighboring States, which has resulted in development of vibrant urban and industrial complexes. Haryana is a preferred destination for auto majors and auto-component manufacturers.

Table 5: Change in Haryana Contribution in the Manufacturing Sector of India: 1998-99 and 2014-15

Characteristics	1998-99			2014-15			Δ share	Δ Rank
	% share	Rank	Top state (% share)	% share	Rank	Top state (% share)		
Net Value Added	3.76	9	Maharashtra (21.52)	5.01	5	Maharashtra (21.43)	1.25	4
Fixed Capital	2.84	10	Gujarat (17.76)	3.55	9	Gujarat (17.69)	0.71	1
Invested Capital	3.25	9	Gujarat (16.31)	3.87	8	Gujarat (17.26)	0.62	1
Total Employment	4.38	8	Maharashtra (16.23)	5.36	6	Tamil Nadu (15.33)	0.98	2
Total Emoluments	4.67	8	Maharashtra (21.48)	5.61	6	Maharashtra (19.54)	0.94	2
Total Inputs	4.49	7	Maharashtra (20.47)	5.39	6	Gujarat (18.76)	0.9	1
Value of Output	4.32	8	Maharashtra (20.56)	5.34	6	Gujarat (18.44)	1.02	2
GCF	4.88	6	Gujarat (17.39)	4.39	6	Gujarat (26.11)	-0.49	0
GFCF	4.39	7	Gujarat (17.64)	4.30	7	Gujarat (30.79)	-0.09	0

Source: Calculated from the data extracted from ASI, 2014-15

4. Growth and Pattern of Organised Manufacturing in Haryana

Manufacturing sector is divided into two categories namely organised and unorganised sector. The organised sector, also referred as registered sector, is defined as units employing 10 or more workers using power, and those employing 20 or more workers without using power and other factories registered under section 85 by state government. The industrial growth of Haryana has been

phenomenal. As evident from table-6, Haryana State has progressed enormously in the field of industries. The number of registered working factories were 11326 in 2014 as compared to 1168 in 1966, showing an increase of 9.67 times. As regards the employment, a remarkable increase has been noticed. In the year 1966, the total number of the workers employed in working factories was 71016, but it rose to 852762 in 2014 showing 12 times increase.

Table 6: Number of Registered Factories and Employment in Haryana

Year	Under Section 2 m (i)	Under Section 2 m (ii)	With Power	Total	Number of registered working factories.	No. of workers employed in working factories
1966	1,011	44	215	1,270	1,168	71,016
1970	1,064	25	373	1,462	1,359	88,675
1975	1,554	36	590	2,180	1,791	109,834
1980	2,711	48	803	3,562	3,176	175,025
1985	3,858	67	933	4,858	4,484	226,476
1990	4,549	118	985	5,652	4,843	269,411
1995	5,838	65	1,098	7,001	6,498	391,386
2000	7,469	65	1,097	8,631	8,631	498,656
2005	8,115	67	1,100	9,282	9,282	574,591
2010	9,345	67	1,101	10,513	10,513	782,463
2013	10,047	67	1,151	11,265	11,265	836,497
2014	10,048	126	1,152	11,326	11,326	852,762

Source: Statistical Abstract Haryana; Labour Commissioner, Haryana.

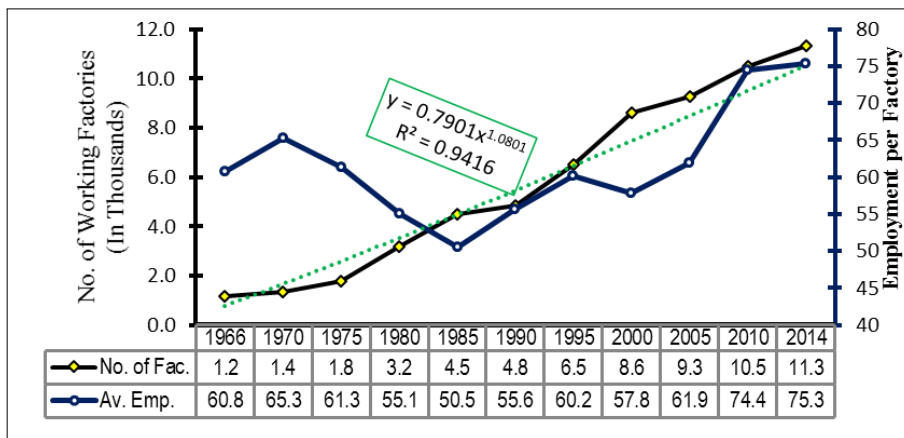
Note: Sections 2m (i) and 2m (ii) of the Factories Act, 1948 refer to the establishments using power and employing 10 or more workers and those not using power and employing 20 or more workers on any day of the preceding 12 months respectively. Under Section 85 of the factories act, 1948, the State Government is empowered to notify any factory not covered under the above two sections.

Fig-3 depicting per factory employment reveals that per factory employment has increased since 1985 where

average size of employment is 75.3 workers per registered working factor. The employment per factory

has shown a dip in the period from 1970-71 to 1985-86 but there after it has shown an upward trend indicating

expansion of the scale in the state factory sector.



Source: Plotted from the data obtained from Statistical Abstract of Haryana

Fig 3: Number of Registered Working Factories and Average Employment in Haryana

Percentage distribution of factories in operation by size of employment in Haryana is portrayed in Table-7. Majority of the industries, 34.50 percent, in Haryana employ less than 14 workers. Only 0.28 percent of the factories in Haryana employ more than 5000 workers

against 0.22 percent for all India average. 76.5 percent of total factories in the factory sector of Haryana employ less than 100 workers whereas comparable figure for the country is 83.63 percent.

Table 7: Percentage Distribution of Factories by Size of Employment- 2013-14

Employment Size	All India	Haryana	Karnataka	Maharashtra	Tamilnadu	Gujarat	Uttar Pradesh
0-14	40.72	34.50	32.04	31.21	33.73	43.36	36.26
15-19	9.60	5.71	10.03	10.86	9.74	10.34	10.77
20-29	11.12	11.49	13.98	11.86	11.44	11.15	11.09
30-49	11.24	12.56	12.10	14.34	12.50	9.51	12.58
50-99	10.95	12.24	10.90	12.11	12.81	11.03	11.47
100-199	7.31	8.79	7.26	8.83	8.99	5.89	9.47
200-499	5.14	8.75	6.39	6.42	5.75	5.10	5.49
500-999	2.02	3.16	3.53	2.51	2.27	1.88	1.87
1000-1999	1.05	1.40	1.79	1.26	1.31	1.20	0.56
2000-4999	0.63	1.13	0.93	0.49	1.30	0.42	0.39
Above 5000	0.22	0.28	1.06	0.11	0.16	0.13	0.04

Source: Summary Results for Factory Sector, ASI 2013-14.

The Spatial distribution of registered factories in Haryana depicts wide disparities in location of the Industries in the state. Table-8 reveals that amongst the districts in Haryana, Faridabad is at the top having 2478 registered working factories and employing 216329 workers. In terms of Employment Gurgaon is at the top employing

279625 in 2200 registered manufacturing industries. Yamunanagar district has 1305 working factories employing 43400 workers followed by Panipat, Sonipat and Jhajjar district. Table also depicts that Mewat, Palwal, M'Garh, Fatehabad and Kaithal are least developed district of the state.

Table 8: Spatial Distribution of Registered Working Factories and Employment in Haryana

District	Under Section 2m (i)	Under Section 2 m (ii)	With Power	No. of working factories	No. of workers employed in working factories	Per Factory Workers
Faridabad	2224	12	242	2478	216329	87
Gurgaon	2099	39	62	2200	279625	127
Y'Nagar	1185	11	109	1305	43400	33
Panipat	761	22	88	871	51106	59
Sonipat	643	4	71	718	46392	65
Jhajjar	568	2	23	593	33029	56
Karnal	419	6	77	502	30753	61
Ambala	347	7	63	417	16053	38
Hisar	324	3	63	390	15013	38
Rohtak	268	2	55	325	18825	58

Rewari	218	1	19	238	28805	121
Bhiwani	160	2	68	230	15519	67
Jind	151	8	34	193	14791	77
Kurukshetra	119	1	55	175	4100	23
Panchkula	151	1	12	164	12472	76
Sirsa	130	0	33	163	8182	50
Kaithal	99	0	32	131	3053	23
Fatehabad	103	0	27	130	4285	33
M'Garh	42	0	19	61	4306	71
Palwal	23	5	0	28	5704	204
Mewat	14	0	0	14	1020	73

Source: Statistical Abstract Haryana; Labour Commissioner, Haryana

The factory output of the state is concentrated in few sectors. 28.04 percent of total factory sector output and 19.73 percent of factory sector of GVA of the state is manufactured by Motor Vehicles, Trailers and Semi-Trailers (*Industry Code-29*) industries. Combined with 10.68 percent output and 11.90 percent GVA by manufacturers of other transport equipment industry in the state, this sector is an important part of manufacturing in the state. It may be noted that Motor Vehicles, Trailers and Semi-Trailers accounts for 6.05% of the total output at all India level and among the States, the corresponding proportionate highest share of gross value of output is seen in Haryana (28.04%), Tamil Nadu (17.60%) and Uttrakhand (13.11%). The share of various two digit industries in Haryana’s manufacturing sector is presented in table 9 are:

- The Share in numbers of factories is higher in Industry Code - 13(Manufacture of textiles- 12.4 percent), Industry Code - 25(Manufacture of fabricated metal – 9.8 percent), Industry Code - 10 (Manufacture of food products – 9.2 percent); Industry Code - 23(Manufacture of other non-metallic mineral products-8.8 percent) and Industry Code – 19 (Manufacture of coke and refined petroleum products – 8.0 percent).

- The share in amount of fixed capital is higher in Industry Code -29 (Manufacture of motor vehicles, trailers and semi-trailers – 34.8 percent), Industry Code -24 (Manufacture of Basic Metals- 6.8 percent), Industry Code -30 (Manufacture of other transport equipment – 6.4 percent) and Industry Code -10 (6.2 percent).
- The share in amount of invested capital is higher in Industry Code -29 (34.8 percent), Industry Code -10 (14.0 percent), Industry Code -24 (7.4 percent) and Industry Code -28 (Manufacture of machinery and equipment n.e.c.- 6.3 percent).
- The share in Gross value added is maximum in Industry Code -29 (19.73 percent), Industry Code -30(11.9 percent), Industry Code -01(Agriculture and forestry- 10.3 percent), Industry Code -28(7.6 percent) and Industry Code -10 (7.2 percent).
- The share in total output of the organised manufacturing sector in Haryana is maximum in the Industry Code -29 (28.04 percent), Industry Code -24(12.31 percent), Industry Code -10(11.2 percent), Industry Code -30(10.68 percent) and Industry Code -28 (5.5 percent).

Table 9: Share of Major Industries on different Indicators within Haryana

2 digit Industry Code	Brief nomenclature	Factories (no.)	Fixed Capital	Invested Capital	Gross Value of P & M	Total Output	Fuels Consumed	Materials Consumed	Total Inputs	Gross Value Added	Net Value Added	Gross Capital Formation	Income
01	Agriculture and Forestry	1.0	0.1	0.3	0.0	2.2	0.2	0.9	0.8	10.3	12.4	0.0	14.6
10	Food Products	9.2	6.2	14.0	4.8	11.2	2.8	13.4	11.9	7.2	7.7	14.7	5.4
11	Beverages	1.2	2.0	1.6	1.7	0.9	1.1	0.9	0.9	1.1	1.0	0.8	1.0
12	Tobacco Products	0.4	0.1	0.1	0.0	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1
13	Textiles	12.4	3.9	4.1	2.4	3.3	3.4	3.2	3.2	3.9	4.1	5.3	4.1
14	Wearing Apparel	7.0	3.1	3.9	1.4	3.7	1.7	2.8	3.4	5.6	6.2	3.7	6.2
15	Leather Products	2.7	1.2	1.6	0.9	1.3	0.6	1.2	1.2	1.9	2.1	1.8	1.9
16	Wood Products	5.1	0.4	0.7	0.2	1.0	0.5	0.6	1.1	0.4	0.5	0.5	0.3
17	Paper Products	1.6	1.2	1.0	1.1	0.6	0.9	0.5	0.5	0.8	0.7	1.4	0.7
18	Printing	0.9	1.1	0.9	1.1	0.4	0.3	0.4	0.4	0.6	0.5	0.9	0.3
19	Coke and Petroleum Products	0.4	0.1	0.1	0.3	0.1	0.4	0.1	0.1	0.1	0.0	0.1	0.0
20	Chemicals and chem.Products	3.5	3.4	3.3	3.2	2.8	2.2	2.9	2.9	2.5	2.5	2.4	2.6
21	Pharmaceuticals	1.6	0.8	0.8	0.7	0.7	0.4	0.6	0.6	1.1	1.1	0.7	1.2
22	Rubber and Plastics Products	4.4	2.3	2.4	2.6	2.2	1.6	2.0	2.1	3.0	3.1	3.0	3.2

23	Other non-metallic Products	8.8	2.9	2.2	2.4	1.1	2.9	0.9	1.0	1.8	1.7	2.1	1.7
24	Basic Metals	4.8	6.8	7.4	7.9	12.3	6.9	15.8	13.6	5.3	5.4	3.7	3.5
25	Fabricated Metal	9.8	3.8	4.5	3.0	3.2	2.0	2.9	3.0	4.5	4.8	5.3	4.7
26	Computer and Electronic	1.7	0.9	1.0	1.4	0.9	0.4	0.6	0.6	2.6	2.8	1.5	2.9
27	Electrical Equipment	3.2	3.1	3.6	2.8	3.6	1.0	3.4	3.5	4.2	4.3	3.6	4.2
28	Machinery & Equipment n.e.c.	6.5	6.0	6.3	4.3	5.5	1.3	5.4	5.1	7.6	8.3	5.5	9.2
29	MVs, Trailers & Semi-trailers	8.0	34.8	27.4	41.6	28.0	65.8	27.7	29.5	19.7	14.6	34.5	14.9
30	Other Transport Equipment	2.1	6.4	5.4	7.8	10.7	2.9	12.4	10.5	11.9	12.7	0.0	14.6
31	Furniture	0.4	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
32	Other Manufacturing	0.9	1.1	1.0	1.2	0.7	0.5	0.5	0.5	1.4	1.4	1.8	1.5
33	Repair & Installation of Machinery and Equipment	0.2	0.1	0.1	0.0	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1
	Other	2.1	8.5	6.3	7.1	3.3	0.1	0.9	3.5	2.4	2.0	6.5	1.2

Source: Summary Results for Factory Sector, ASI 2013-14.

Based on the preceding analysis, we may conclude that though Haryana has made significant progress in industrial development but it is concentrated in few pockets of the state and in limited number of industries. This presents an opportunity to the state for diversifying its industrial base and spreading industries in deprived parts of the state.

5. Registered Manufacturing in Haryana vis-à-vis National Average

The data presented in the table-10 shows that total output and NVA by registered manufacturing has increased faster than all India average.

Table 10: Annual growth rates of Selected Characteristics of Registered Manufacturing Sector - 1998-99 to 2014-15

Characteristics	Haryana	India	Characteristics	Haryana	India
Number of Factories	4.93	3.43	Products & By-products	14.41	13.31
Fixed Capital	13.14	11.28	Depreciation	14.14	11.5
Working Capital	12.85	12.27	Net Value Added	14.05	11.71
Invested Capital	12.88	11.45	Rent Paid	24.53	8.96
Outstanding Loans	10.79	9.9	Interest Paid	12.08	9.48
Fuels Consumed	16.65	11.58	Net Income	15.19	13.05
Materials Consumed	14.94	14.06	Gross Capital Formation	15.43	11.12
Total Inputs	15.00	13.79	Profits	20.16	16.03
Value of Output	14.71	13.34	GFCF	15.71	11.73

Source: Calculated using semi-log function using the data obtained from Annual Survey of Industries, all issues from 1998-99 to 2014-15.

Note: All annual growth rates are significant at 1% level of significance.

In order to comprehend the nature of industrial status of the state it will be useful to examine some of the structural ratios and technical coefficients in the factory sector of Haryana. Table 11 and 12 presents the structural ratios and technical coefficient of industrial sector in Haryana. We begin with the capital labour ratio (fixed capital per employee) which reflects the capital intensity and found that industry in Haryana is less capital intensive than the national average. The difference in the capital intensity becomes more pronounced with passing of time as evident from the table 11. Though capital intensity is low in Haryana but capital productivity is

high in Haryana as both ‘Fixed Capital to NVA ratio’ and Fixed Capital to Output ratio’ for Haryana is lower than national average indicating better utilisation of capital in the state. Fixed capital per factory as well as gross output per factory has increased from 2001-02 to 2014-15 indicating expansion of the scale. Other measure of size such as ‘Total Persons Engaged per Factory’ and ‘Workers per Factory’ also reveals expansion of size in factory sector. As evident from table-11, the scale of operation is larger in Haryana, as compared to national average.

Table 11: Structural Ratios for Factory Sector in Haryana – 2001-02 and 2014-15 (Value figures in Rs. Lakh, Others in Number)

Structural Ratios	2001-02		2014-15 (Current Prices)		2014-15 (2001-02 Prices)	
	Haryana	All India	Haryana	All India	Haryana	All India
Fixed Capital per worker	6.51	6.43	23.01	15.14	12.64	8.32
Fixed Capital per Factory	314	304	1067	1074	586	590
Total Persons Engaged per Factory	68	61	90	60	90	60
Workers per Factory	49	47	70	47	70	47
Gross Output per Factory	1004	706	4458	2988	2449	1642
Net Value Added per Factory	125	109	592	423	325	232
Output per Person Engaged	14.85	11.60	49.39	49.61	27.13	27.25

GVA per Person Engaged	2.36	2.23	7.90	8.39	4.34	4.61
NVA per Person Engaged	1.85	1.80	6.56	7.02	3.60	3.86
Wages per Worker	0.49	0.48	1.23	1.31	0.68	0.72

Source: Own calculation using data from ASI, 2001-02 and 2014-15; the manufacturing price index was used to derive real values at 2001-02 prices.

Labour productivity gets reflected in the ratio of value added per employee. The results shows that NVA per person engaged has increased from Rs. 1.85 lakh per employee in 2001-02 to Rs. 3.60 lakh per employee (at 2001-02) prices nearly doubling in the period. It may be noted that this ratio was higher than national average in 2001-02 but it become lower than national average in 2014-15 reflecting slow growth of labour productivity in Haryana. This has been supported by trends in other proxy measure of labour productivity, viz. output per person engaged and GVA per person engaged.

Table 12: Technical coefficients in Industries for Factory Sector – 2001-02 and 2014-15

Technical Coefficients	2001-02		2014-15	
	Haryana	All India	Haryana	All India
Fixed Capital to NVA	2.51	2.78	1.80	2.54
Fixed Capital to Output	0.31	0.43	0.24	0.36
NVA to Output	0.12	0.15	0.13	0.14
GVA to Fixed Capital	0.508	0.446	0.67	0.47
Output to Input	1.19	1.24	1.19	1.20
Profit to Output	0.03	0.04	0.06	0.07

Source: Own calculation using data from ASI, 2001-02 and 2014-15; the manufacturing price index was used to derive real values at 2001-02 prices.

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 decreased to 1.80 in 2014-15 from 2.51 in 2001-02. The capital required to produce one unit of gross output has also decreased from 0.31 in 2001-02 to 0.42 in 2014-15. Both these indicators points to better utilisation of capital in the state and an improvement during the period. The level of efficiency, measured by the ratio of the net value added to gross output has been 0.13 in 2014-15 against 0.12 as observed in 2001-02. This become more important has the ratio has decreased by one percent point in the period. Table –12 shows that output to input ratio, an indicator the industrial efficiency, has remained static at 1.19 in Haryana but it is still lower than the national average. This indicates that growth of output in Haryana is input driven in the period from 2001-02 to 2014-15. This can also be seen from table-10, which depicts that total input in Haryana as increased at the trend rate of 15.0 percent per annum as compare to output which increased at the rate of 14.71 percent per annum. As result of this input as percentage of output has increased from 80.8 percent in 2001-02 to 83.1 percent in 2014-15. There has been an increase in profitability in organized manufacturing, with the ratio of profit to output increasing from 0.03 in 2001-02 to 0.06 in 2014-15 but the ratio is less than national average.

6. Summing Up

Since 2000-01, Haryana Economy has recorded impressive growth rates in comparison to national

average as growth rate of Haryana has been higher than India for all years excepting three years. Industrial sector has been an important component of this growth. It is pertinent to mention here that share of Industries in Haryana SGDP is much higher in comparison to national average. Given its size and population, Haryana occupies an important place at the national level. It occupies 5th position in terms of NVA and 6th position in term of total organised industry output. More importantly the share of Haryana on various indicators has shown upward trend. Its share in NVA of registered manufacturing has increased by 1.25 percent for the period 1998-99 to 2014-15. The factory output of the state is concentrated in few sectors such as motor vehicles, trailers and semi-trailers, basic metals, food products and other transport equipments. Also the industries in Haryana are concentrated in few districts. We found that in spite of making good progress in industrial development, its performance on many structural and technical coefficients has been inferior to national average. Such as low output to input ratio for Haryana is an indicator that industrial growth in Haryana has been mostly input driven. The state should diversify its industrial base by creating clusters of excellence in other industries also. The location dispersion must be ensured by identifying lagging areas, exploring industrial avenues in these areas and providing fiscal and financial incentives to the entrepreneurs.

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