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A STUDY ON GROWTH AND EXPORT POTENTIAL OF AUTOMOBILE INDUSTRY IN INDIA

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ABSTRACT:

The automobile industry is one of the most important drivers of the economic growth of India and with high participation in global value chains. It plays a key role in both macroeconomic expansion and technological advancement. The industry contributes almost 6.4 per cent of India's GDP and 35 per cent of manufacturing GDP and is a leading employment provider. India enjoys a strong position in the global heavy vehicles market as it is the largest tractor producer, second-largest bus manufacturer, and third-largest heavy truck manufacturer in the world. Two-wheelers and passenger vehicles dominate the domestic demand. In addition to streamlining and simplifying the regulatory policy framework for ease of doing business, the Indian government also introduced the Automotive Mission Plan 2006-2016 in 2006 and the AMP 2016-2026 in 2016. Faster Adoption and Manufacturing of Hybrid & Electric Vehicles (FAME) and the National Electric Mobility Mission Plan (NEMMP) 2020 are two other significant government initiatives. These programs/plans envisioned a strong and rapid expansion of automobiles to achieve the desired position among the international leaders in the automotive industry, such as the United States, Japan, Europe, and China. Due to the impact of COVID-19 and the consequent lockdown since March 2020, the automobile industry moved into the negative zone in terms of production and domestic sales. The second wave of COVID-19 which came with much greater force, scale and speed made automobile production slow down even before the COVID-19 pandemic started. The only area where the industry has done well is the export front. Against this background, this study tried to analyse the performance of the Indian automobile industry for the period 2000-01 to 2021-22.

KEYWORDS:

ECONOMIC GROWTH, GROSS DOMESTIC PRODUCT, AUTOMOBILE, MANUFACTURING, TECHNOLOGY, NATIONAL ELECTRIC MOBILITY MISSION PLAN.

I INTRODUCTION

Due to its crucial role in both technological innovation and macroeconomic expansion, the Indian automobile sector has historically been a reliable indication of how the economy is doing. Its past has been tumultuous for more than eighty years. History began modestly. Motor vehicles were either fully imported or assembled from parts imported in a completely knocked down condition until the end of the 1940s. During this time, General Motors and Ford imported some 20,000 vehicles for the Indian market [1]. When Hindustan Motors in 1942 and Premier Auto in 1944 established their manufacturing plants by importing the know-how from General Motors and FIAT respectively, our country witnessed the dawn of vehicle manufacturing activity. Automobile Products of India (API) entered the two-wheeler market in the early 1950s. New producers like Bajaj Tempo, TELCO, and Mahindra & Mahindra entered the commercial vehicle market in the 1960s and 1970s. All of these manufacturers began their production by securing a licence from various global leaders to import CKD or SKD modules, which they then localised in India [2]. It gradually expanded.

The two divisions of the automobile industry are component manufacturing and vehicle manufacture. For historical reasons, vehicle manufacturers first handled the component manufacturing process either in-house or through import. Later, with the help of technology, automakers discovered it was impossible to run the full operation and began focusing more on vehicle assembly, offloading or dividing the ancillary manufacturing activity. Principal considerations leading to this decision were: a huge amount of capital used to get blocked with the vehicle manufacturers because the component industry itself required a high degree of specialization and investment to reap the benefits of economies of scale. Since 1953, when the Indian government launched its import substitution programme, vehicle manufacturing and components-producing activity became separate and distinct.

II SIGNIFICANCE OF THE AUTOMOBILE INDUSTRY

The automobile industry, globally, as well as in India, is one of the key sectors of the economy. It is not only an issue of consumption but also regard as an industry that drives the entire economy. The automobile industry's most obvious benefit is its input into the motor transport industry namely, ferrying goods and people from one place to another in a more flexible and very efficient manner than by other forms of transport. Due to its deep forward and backward linkages with several key segments of the economy, the automobile industry has a strong multiplier effect and is capable of being the driver of economic growth. Today, the Indian automobile industry

contributes 12 per cent of the Gross Value Added (GVA) in the manufacturing sector, 6.4 per cent of India's GDP, 35 per cent of manufacturing GDP and is responsible for 32 million jobs [3]. As of date, there are 12 essential categories of vehicles on Indian roads. It includes scooters, motorcycles, and mopeds in the two-wheeler segment; passenger carrying and load carrying in the three-wheelers segment; passenger cars, multi-utility vehicles, vans, quadricycles, light commercial vehicles, buses and trucks and tractors in four- and six-wheeler segment. In each category, there are several manufacturing firms and they produce different models of vehicles of varying sizes and capacities.

III PERFORMANCE OF THE AUTOMOBILE INDUSTRY

In addition to streamlining and simplifying the regulatory policy framework for ease of doing business, the Indian government also introduced the Automotive Mission Plan 2006-2016 in 2006 and the AMP 2016-2026 in 2016. Faster Adoption and Manufacturing of Hybrid & Electric Vehicles (FAME) and the National Electric Mobility Mission Plan (NEMMP) 2020 are two other significant government initiatives. These programs/plans envisioned a strong and rapid expansion of automobiles to achieve the desired position among the international leaders in the automotive industry, such as the United States, Japan, Europe, and China [4].

PRODUCTION

India enjoys a strong position in the global heavy vehicles market as it is the largest tractor producer, second-largest bus manufacturer, and third-largest heavy truck manufacturer in the world (IBEF, 2022). The industry manufactured a total of 22.9 million vehicles during 2021-22 as against 4.7 million during 2000-01. The share of different categories of vehicles in terms of production is presented in Table 1. Table 1 indicates that the two-wheeler segment dominates the market in terms of production, owing to a growing middle class and a huge percentage of India's population is young. Moreover, the growing interest of companies in exploring the rural markets further aided the growth of the sector. The two-wheeler segment enjoyed an average of 77.8 per cent market share during 2000-01 to 2021-22. The passenger vehicles segment accounts for an average of 14.4 per cent, the three-wheeler segment is 4.1 per cent and the commercial vehicle segment account for an average of 3.7 per cent market share.

Table 2 shows the growth rate of vehicle production during 2000-01 to 2021-22 for each segment as well as for the whole industry. Except for four years, the growth rate of vehicle production has never been very high or consistent. The economic slowdown in India has also affected the Indian automobile industry. During 2000-01, the industry recorded a decline of 2 per cent in terms of production over the previous year. Similarly, during 2007-08, the automobile industry has not grown as anticipated due to a variety of reasons, mostly external to the industry. On the other hand, the industry registered a production growth rate of 25.8 per cent over the previous year. Passenger vehicle production crossed 2 million and two-wheeler production crossed 10 million (Table 1). In contradiction, the automobile industry recorded a negative growth rate of 14.8 per cent during 2019-20. Due to the impact of COVID-19 and the consequent lockdown since March 2020, automobile production again registered a de-growth of (-) 14 per cent during 2020-21. The second wave of COVID-19 which came with much greater force, scale and speed made automobile production slow down even before the COVID-19 pandemic started.

In terms of CAGR, the passenger vehicle segment has grown by 16.6 per cent from 2000 to 2011. This dropped to 1.5 per cent from 2011 to 2022. Similarly, the two-wheeler segment which grew at a CAGR of 13.5 per cent from 2000 to 2011 fell to 1.4 per cent. During the same periods, the three-wheeler segment CAGR fell from 14.7 per cent to (-) 1.5 per cent and the commercial vehicles segment fell from 17 per cent to (-) 1.4 per cent.

TABLE 1: SHARE OF DIFFERENT SEGMENTS IN TOTAL PRODUCTION

(NUMBER OF VEHICLES)

Year	Passenger Vehicles	Percent	Commercial Vehicles	Percent	Three Wheelers	Percent	Two Wheelers	Percent	Quadricycle	Percent	Grand Total	Percent
2000-01	640934	13.5	156706	3.3	203234	4.3	3758518	79.0	0	0.0	4759392	100.0
2001-02	669719	12.6	162508	3.1	212748	4.0	4271327	80.3	0	0.0	5316302	100.0
2002-03	723330	11.5	203697	3.2	276719	4.4	5076221	80.8	0	0.0	6279967	100.0
2003-04	989560	13.7	275040	3.8	356223	4.9	5622741	77.6	0	0.0	7243564	100.0
2004-05	1209876	14.3	353703	4.2	374445	4.4	6529829	77.1	0	0.0	8467853	100.0
2005-06	1308913	13.4	391078	4.0	434424	4.5	7600801	78.1	0	0.0	9735216	100.0
2006-07	1545223	13.9	519982	4.7	556126	5.0	8436212	76.1	30454	0.3	11087997	100.0
2007-08	1777583	16.4	549006	5.1	500660	4.6	8009292	73.8	17389	0.2	10853930	100.0
2008-09	1838593	16.5	416870	3.7	497020	4.4	8395613	75.1	24179	0.2	11172275	100.0

2009-10	2357411	16.8	567556	4.0	619194	4.4	10510336	74.8	2567	0.0	14057064	100.0
2010-11	2982772	16.7	760735	4.3	799553	4.5	13349349	74.6	0	0.0	17892409	100.0
2011-12	3146069	15.4	929136	4.6	879289	4.3	15427532	75.7	0	0.0	20382026	100.0
2012-13	3231058	15.6	832649	4.0	839748	4.1	15744156	76.3	0	0.0	20647611	100.0
2013-14	3087973	14.4	699035	3.3	830108	3.9	16883049	78.5	0	0.0	21500165	100.0
2014-15	3221392	13.8	698298	3.0	949019	4.1	18489311	79.2	0	0.0	23358020	100.0
2015-16	3465045	14.4	786692	3.3	934104	3.9	18830227	78.4	0	0.0	24016068	100.0
2016-17	3801670	15.0	810253	3.2	783721	3.1	19933739	78.7	1584	0.0	25330967	100.0
2017-18	4020267	13.8	895448	3.1	1022181	3.5	23154838	79.6	1713	0.0	29094447	100.0
2018-19	4028471	13.0	1112405	3.6	1268833	4.1	24499777	79.2	5388	0.0	30914874	100.0
2019-20	3424564	13.0	756725	2.9	1132982	4.3	21032927	79.8	6095	0.0	26353293	100.0
2020-21	3062221	13.5	624939	2.8	614613	2.7	18349941	81.0	3836	0.0	22655550	100.0
2021-22	3650698	15.9	805527	3.5	758088	3.3	17714856	77.2	4061	0.0	22933230	100.0
Average		**14.4**		**3.7**		**4.1**		**77.8**		**0.0**		**100.0**

Source: Various Annual Reports of the Society of Indian Automobile Manufacturers

TABLE 2: TRENDS IN GROWTH RATE OF VEHICLE PRODUCTION

(IN PER CENT)

Year	Passenger Vehicles	Commercial Vehicles	Three Wheelers	Two Wheelers	All Vehicles
2000-01	-8.6	-9.7	-1.1	-0.5	-2.0
2001-02	4.5	3.7	4.7	13.6	11.7
2002-03	8.0	25.3	30.1	18.8	18.1
2003-04	36.8	35.0	28.7	10.8	15.3
2004-05	22.3	28.6	5.1	16.1	16.9
2005-06	8.2	10.6	16.0	16.4	15.0
2006-07	18.1	33.0	28.0	11.0	13.9
2007-08	15.0	5.6	-10.0	-5.1	-2.1
2008-09	3.4	-24.1	-0.7	4.8	2.9
2009-10	28.2	36.1	24.6	25.2	25.8
2010-11	26.5	34.0	29.1	27.0	27.3
2011-12	5.5	22.1	10.0	15.6	13.9
2012-13	2.7	-10.4	-4.5	2.1	1.3
2013-14	-4.4	-16.0	-1.1	7.2	4.1
2014-15	4.3	-0.1	14.3	9.5	8.6
2015-16	7.6	12.7	-1.6	1.8	2.8
2016-17	9.7	3.0	-16.1	5.9	5.5
2017-18	5.8	10.5	30.4	16.2	14.9
2018-19	0.2	24.2	24.1	5.8	6.3
2019-20	-15.0	-32.0	-10.7	-14.2	-14.8
2020-21	-10.6	-17.4	-45.8	-12.8	-14.0
2021-22	19.2	28.9	23.3	-3.5	1.2

CAGR					
2000-01 to 2010-11	16.6	17.1	14.7	13.5	14.2
2011-12 to 2021-22	1.5	-1.4	-1.5	1.4	1.2

Source: Calculated from various Annual Reports of the Society of Indian Automobile Manufacturers

DOMESTIC SALES

Table 3 shows the trends in the growth rate of different categories of vehicles in terms of domestic sales. The industry made a total sale of 17.5 million vehicles during 2021-22 as against 4.6 million during 2000-01. Due to the very low level of investments, especially in the infrastructure sector, the sales of commercial vehicles declined by 15.4 per cent during 2000-01. Sales of two-wheelers and three-wheelers also declined marginally by 1.6 per cent and 2.6 per cent respectively during the same period. The overall domestic sales of automobile vehicles recorded a decline of 2.8 per cent over the previous year. However, the overall domestic sales managed to register a growth rate of 12.5 per cent and 16 per cent during 2001-02 and 2004-05 respectively. Due to a variety of reasons, mostly external to the industry, the overall domestic sales again declined by 4.5 per cent during 2007-08 and registered a growth rate of 0.6 per cent during 2008-09. In contradict the overall domestic sales of automobile vehicles registered a growth rate of 26.8 per cent and 25.9 per cent during 2009-10 and 2010-11 respectively. COVID-19 has further increased the problems in the Industry. It has pushed the industry back by many years, into the negative zone. During 2020-21, cumulative sales of the passenger vehicle segment were below the level of 2015-16, the two-wheeler segment was below the level of 2014-15 and sales of the commercial vehicle segment were below the 2010-11 level. The three-wheeler segment has been the worst hit, with sales being pushed back by around two decades.

EXPORT

Though the economic slowdown in India has affected the Indian automobile industry, the only area where the industry has done well is the export front. During 2000-01, the overall export growth of automobile vehicles registered 20.2 per cent over the previous year. Both commercial vehicles (38.9 per cent) and two-wheelers (33.5 per cent) export grew quite significantly. However, the passenger vehicle segment (-4.6 per cent) and three-wheeler segment (-11.6 per cent) saw declining exports during the same period. During 2002-03, the passenger vehicle and two-wheeler segment registered a growth rate of 35.4 per cent and 72.5 per cent respectively over the previous year. The overall performance in terms of export was quite encouraging as it registered a growth of 66.4 per cent during the same period over the previous year. Due to the extended slowdown in the European market, the overall automobile exports registered a de-growth of (-) 1.34 per cent during 2012-13 over the previous period. However, the growth of automobile vehicles in terms of export managed to register 15 per cent and 16 per cent during 2014-15 and 2017-18 respectively over the previous year. During 2020-21, overall automobile exports declined by (-) 13.05 per cent. Export growth of passenger vehicles, commercial vehicles, three-wheelers and two-wheelers also declined by (-) 38.9 per cent, (-) 16.6 per cent, (-) 21.7 per cent, and (-) 6.9 per cent respectively. In contradict, the export of passenger vehicles increased from 404,397 to 577,875 units, commercial vehicles increased from 50,334 to 92,297 units, three-wheeler increased from 393,001 to 499,730 units and two-wheelers increased from 3,282,786 to 4,443,018 units during 2021-22 over the previous period. The overall export of the automobile industry registered a growth rate of 36 per cent over the previous year.

TABLE 3: TRENDS IN GROWTH RATE OF DOMESTIC SALE

(NUMBER OF VEHICLES)

Year	Passenger Vehicles	Growth Rate (%)	Commercial Vehicles	Growth Rate (%)	Three Wheelers	Growth Rate (%)	Two Wheelers	Growth Rate (%)	Quadri cycle	Growth Rate (%)	Grand Total	Growth Rate (%)
2000-01	690560	-5.9	136585	-15.4	181899	-2.6	3634378	-1.6	0	0.0	4643422	-2.8
2001-02	675116	-2.2	146671	7.4	200276	10.1	4203725	15.7	0	0.0	5225788	12.5
2002-03	707198	4.8	190682	30.0	231529	15.6	4812126	14.5	0	0.0	5941535	13.7
2003-04	902096	27.6	260114	36.4	284078	22.7	5364249	11.5	0	0.0	6810537	14.6
2004-05	1061572	17.7	318430	22.4	307862	8.4	6209765	15.8	0	0.0	7897629	16.0
2005-06	1143037	7.7	350683	10.1	360187	17.0	7056317	13.6	0	0.0	8910224	12.8
2006-07	1379979	20.7	467765	33.4	403910	12.1	7842572	11.1	0	0.0	10094226	13.3
2007-08	1549882	12.3	490494	4.9	364781	-9.7	7232210	-7.8	0	0.0	9637367	-4.5

2008-09	1552703	0.2	384194	-21.7	349727	-4.1	7411174	2.5	0	0.0	9697798	0.6
2009-10	1951333	25.7	532721	38.7	440392	25.9	9368240	26.4	0	0.0	12292686	26.8
2010-11	2501542	28.2	684905	28.6	526024	19.4	11768910	25.6	0	0.0	15481381	25.9
2011-12	2629839	5.1	809499	18.2	513281	-2.4	13409150	13.9	0	0.0	17361769	12.1
2012-13	2665015	1.3	793211	-2.0	538290	4.9	13797185	2.9	0	0.0	17793701	2.5
2013-14	2503509	-6.1	632851	-20.2	480085	-10.8	14806778	7.3	0	0.0	18423223	3.5
2014-15	2601236	3.9	614948	-2.8	532626	10.9	15975561	7.9	0	0.0	19724371	7.1
2015-16	2789208	7.2	685704	11.5	538208	1.0	16455851	3.0	0	0.0	20468971	3.8
2016-17	3047582	9.3	714082	4.1	511879	-4.9	17589738	6.9	0	0.0	21863281	6.8
2017-18	3288581	7.9	856916	20.0	635698	24.2	20200117	14.8	0	0.0	24981312	14.3
2018-19	3377389	2.7	1007311	17.6	701005	10.3	21179847	4.9	627	0.0	26266179	5.1
2019-20	2773519	-17.9	717593	-28.8	637065	-9.1	17416432	-17.8	942	0.0	21545551	-18.0
2020-21	2711457	-2.2	568559	-20.8	219446	-65.6	15119387	-13.2	-12	0.0	18618837	-13.6
2021-22	3069499	13.2	716566	26.0	260995	18.9	13466412	-10.9	124	0.0	17513596	-5.9

Source: Various Annual Reports of the Society of Indian Automobile Manufacturers

TABLE 4: TRENDS IN GROWTH RATE OF EXPORT

(NUMBER OF VEHICLES)

Year	Passenger Vehicles	Growth Rate (%)	Commercial Vehicles	Growth Rate (%)	Three Wheelers	Growth Rate (%)	Two Wheelers	Growth Rate (%)	Quadri cycle	Growth Rate (%)	Grand Total	Growth Rate (%)
2000-01	27112	-4.6	13770	38.9	16263	-11.6	111138	33.5	0	0.0	168283	20.2
2001-02	53165	96.1	11870	-13.8	15462	-4.9	104183	-6.3	0	0.0	184680	9.7
2002-03	72005	35.4	12255	3.2	43366	180.5	179682	72.5	0	0.0	307308	66.4
2003-04	129291	79.6	17432	42.2	68144	57.1	265052	47.5	0	0.0	479919	56.2
2004-05	166402	28.7	29940	71.8	66795	-2.0	366407	38.2	0	0.0	629544	31.2
2005-06	175772	5.6	40581	35.5	76885	15.1	513256	40.1	0	0.0	806494	28.1
2006-07	198452	12.9	49537	22.1	143896	87.2	619644	20.7	0	0.0	1011529	25.4
2007-08	218401	10.1	58994	19.1	141225	-1.9	819733	32.3	0	0.0	1238353	22.4
2008-09	335729	53.7	42625	-27.7	148066	4.8	1004134	22.5	40	0.0	1530594	23.6
2009-10	446145	32.9	45009	5.6	173214	17.0	1140008	13.5	50	0.0	1804426	17.9
2010-11	444326	-0.4	74043	64.5	269968	55.9	1531619	34.4	0	0.0	2319956	28.6
2011-12	508783	14.5	92258	24.6	361753	34.0	1975111	29.0	0	0.0	2937905	26.6
2012-13	559414	10.0	80027	-13.3	303088	-16.2	1956378	-0.9	0	0.0	2898907	-1.3
2013-14	596142	6.6	77050	-3.7	353392	16.6	2084000	6.5	0	0.0	3110584	7.3
2014-15	621341	4.2	86939	12.8	407600	15.3	2457466	17.9	0	0.0	3573346	14.9
2015-16	653053	5.1	103124	18.6	404441	-0.8	2482876	1.0	0	0.0	3643494	2.0
2016-17	758727	16.2	108271	5.0	271894	-32.8	2340277	-5.7	1556	0.0	3480725	-4.5
2017-18	748366	-1.4	96865	-10.5	381002	40.1	2815003	20.3	1605	0.0	4042841	16.1
2018-19	676192	-9.6	99933	3.2	567683	49.0	3280841	16.5	4400	0.0	4629049	14.5
2019-20	662118	-2.1	60379	-39.6	501651	-11.6	3519405	7.3	5185	0.0	4748738	2.6

2020-21	404400	-38.9	50334	-16.6	393001	-21.7	3277724	-6.9	3529	0.0	4128988	-13.1
2021-22	577875	42.9	92297	83.4	499730	27.2	4443018	35.6	4326	0.0	5617246	36.0

Source: Various Annual Reports of the Society of Indian Automobile Manufacturers

IV CONCLUSION

The Indian automobile industry has immense potential for driving economic growth and employment and also supporting a host of other manufacturing industries like auto components, machine tools, steel, aluminium, plastics, chemicals, electronics, etc. In addition, the auto sector also supports the services sector which includes IT and software, banking, insurance, repair and maintenance, transport and logistics including public transport etc. The current policy debate is around the issue of how greater resource efficiency can be achieved and the need for newer materials in light of the industry's plans to produce electric vehicles in India. Innovation in new product development is lagging and remains critical for the future of India to achieve competitive superiority or at least maintain its low-cost advantage. Manufacturing technologies need to be upgraded continuously. Large investments in developing new indigenous technologies that are green and compliant with recognized high-efficiency standards would help India move up the value chain.

REFERENCES

1. Tapas Piplai. Automobile Industry: Shifting Strategic Focus. *Economic and Political Weekly*, Vol. 36 Issue 30, July, 2001, pp. 2892-2897.

2. ACMA. Emulating World Class Practices - Background Paper. Automotive Component Manufacturers Association of India, New Delhi. 1998.

3. IBEF. Automobiles Industry Report, India Brand Equity Foundation (IBEF), New Delhi, 2022.

4. Nikita Arya. A Review of Growing Automobile Industry in India. *International Journal of Research and Analytical Reviews*, Vol. 6, Issue 1, 2019, pp. 787-801.

5. SIAM. Annual Report - 2000-01, Society of Indian Automobile Manufacturers, New Delhi.

6. SIAM. Annual Report - 2005-06, Society of Indian Automobile Manufacturers, New Delhi.

7. SIAM. Annual Report - 2009-10, Society of Indian Automobile Manufacturers, New Delhi.

8. SIAM. Annual Report - 2012-13, Society of Indian Automobile Manufacturers, New Delhi.

9. SIAM. Annual Report - 2015-16, Society of Indian Automobile Manufacturers, New Delhi.

10. SIAM. Annual Report - 2017-18, Society of Indian Automobile Manufacturers, New Delhi.

11. SIAM. Annual Report - 2020-21, Society of Indian Automobile Manufacturers, New Delhi.