

Impact of foreign direct investment on automobile industry: An Indian perspective

¹ Tom Jacob, ² Thomas Paul Kattookaran

¹ Assistant Professor, Department of Commerce, Christ College, University of Calicut, Irinjalakuda, Kerala, India

² Associate Professor & H.O.D, Research Department of Commerce, St. Thomas College, University of Calicut, Thrissur, Kerala, India

Abstract

FDI Inflows to Automobile Industry have been at an increasing rate as India has witnessed a major economic liberalization over the years in terms of various industries. The basic advantages provided by India in the automobile sector include, advanced technology, cost-effectiveness, and efficient manpower. Besides, India has a well-developed and competent Auto Ancillary Industry along with automobile testing and R&D centers. The major foreign players, who have a significant role in the development of Indian automobile industry, were discussed and to analyze the impact of FDI in automobile in relation to the development of production and export of automobile industry in India and this study shows there is significant impact on automobile production and the development of Indian economy.

Keywords: FDI inflows, automobile sector, passenger car, growth rate and policy regulation

Introduction

The automobile industry in India is one of the largest industries and a key sector of the economy. It is in fact the 'industry of industries' as it has considerable forward and backward linkages. Foreign Direct Investment (FDI) in automobile sector has made a significant contribution to the growth in this sector specific and also developments and growth in the other related industries, like, metal, paint, electrical electronic gadgets, tube and tyre, auto components, etc. In India, the Automobile industry was regulated like all other industries & investors needed to obtain licenses. There were also several other restrictions till late 1970's and had only four principal manufacturers in the market. Reforms happened over the years but the breakthrough was in early 90's that greatly influenced the developments to the industry in general and specifically to the automobile industry.

In 1991, the government of India liberalized its policies regarding the automobile industry and FDI entered the sector. In 1993, FDI was also permitted in the passenger car segment of Indian automobile industry. The norms for foreign investment and import of technology have also been liberalized over the years for manufacture of vehicles. At present, 100% foreign direct investment is permissible under the automatic route in this sector, including passenger car segment. The growth of Indian middle class, the increasing purchasing power, the strong macro-economic fundamentals have attracted the major auto manufacturers to Indian market. The market linked exchange rate, well established financial market, stable policy governance work and availability of trained manpower have also benefitted the flow of capital to the auto industry of India. All these factors have contributed to a remarkable improvement in the industry's productivity, which is one of the highest in Indian manufacturing sector.

Apart from the reforms & regulations taken for the industry, the announcement of 'Automotive Mission Plan' for the period of 2006-2016 was a major step taken to make India a global automotive hub. The Mission Plan aims to make India emerge as the destination of choice in the world for design and manufacture of automobiles and auto components, with

output reaching a level of US\$ 145 billion (accounting for more than 10% of the GDP) and providing additional employment to 25 million people by 2016. The Indian automotive industry has been emerging as a sunrise sector of the economy. It is not only meeting the growing domestic demands, but also gradually increasing its penetration in the international markets. It has been continuously restructuring itself and absorbing newer technologies in order to align itself to the global developments and realize its potentialities.

Objectives of Study

Main objective of the study is to analyze the growth of automobile industry with a special focus on foreign direct investment. The following are the specific objectives of the study

- Analyzing the progress of Indian Automobile Industry through Foreign Direct Investment
- To estimate the growth and role of automobile industry in terms of production, domestic sales & exports

Hypothesis

H₁: There is a significant association between FDI inflows in automobile sector and growth in production of automobile.

H₂: There is a significant association between automobile production and country's rapid economic and industrial development.

Research Methodology

Data Collection

The data is based on secondary data, automobile sector data published by Society of Indian Automobile Manufactures (SIAM), and reports published by Information Credit Rating Agency (ICRA). FDI flows are collected from official publication of government of India, various publications of RBI, Planning Report and from official web RBI and DIPP. Other data was collected from economic reviews, newspapers, journals, magazines etc.

Data Analysis

Data can be analyzed with the help of statistical tools like average, Compounded Annual Growth Rate (CAGR), proportion analysis, trend analysis, pie-diagram etc.

Limitations of the Study

The study is based on secondary data and finding of the study depends entirely on the accuracy of such data.

Table 1: Foreign Direct Investment and Automobile Industry in India

YEAR	FDI Inflows(Cr)	FDI inflows in Automobile Sector (Cr)	Percentage contribution of FDI in Automobile Sector
2008-09	142829	5212	3.6
2009-10	123120	5609	4.6
2010-11	97320	5864	6.0
2011-12	165146	4347	2.6
2012-13	121907	8384	6.9
2013-14	147518	9027	6.1
2014-15	189107	15794	8.4
Total	986947	54237	5.5

Source: DIPP

Cumulative FDI equity inflows received in our country during 2008-2014 were Rs.986947 Cr. Out of this the amount of FDI inflows in automobile industry during the same period is Rs.54237 Cr, which is five percentage of the total FDI inflows.

Analysis of Automobile Industry

This section contains the statistical data and its analysis about Indian Automobile Industry and its break up namely passenger vehicles, commercial vehicles, three wheelers and two wheelers. The analysis can be broken into three parts namely.

Table 2: Growth in Production of Automobile Sector (In Units)

	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	Total
Passenger vehicle	18,38,697	23,57,411	29,82,772	31,46,069	30,87,973	32,20,172	1,66,33,094
Commercial vehicles	4,17,126	5,67,556	7,60,735	9,29,136	6,99,035	6,97,083	40,70,671
Three wheelers	5,01,030	6,19,194	7,99,553	8,79,289	8,30,108	9,49,021	45,78,195
Two wheelers	84,18,626	1,05,12,903	1,33,49,349	1,54,27,532	1,68,83,049	1,84,99,970	8,30,91,429

Source: SIAM

Table 3: Regression analysis

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.631 ^a	.398	.247	4047285.22620

a. Predictors: (Constant), FDI Inflows in Automobile

Table 4: ANOVA^a

Model	Sum of Squares	df	Mean Square	F	Sig.	
1	Regression	43308898660827.586	1	43308898660827.586	2.644	.179 ^b
	Residual	65522070808853.945	4	16380517702213.486		
	Total	108830969469681.530	5			

a. Dependent Variable: Automobile Production

b. Predictors: (Constant), FDI Inflows in Automobile

Table 5: Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	
	B	Std. Error	Beta			
1	(Constant)	7946970.285	6436577.272		1.235	.285
	FDI Inflows in Automobile	1578.742	970.926	.631	1.626	.179

a. Dependent Variable: Automobile Production

The R value represents the simple correlation i.e 0.631, which indicate the medium degree of relationship between two variable. The adjusted R square value indicate how much of the total variation in the dependent variable. The adjusted R square value is 24 percent and P value is 0.179 i.e more than 0.05. Therefore there is no significant relationship between

FDI inflows in automobile and automobile production in India.

This section contains the statistical data and its analysis about Indian Automobile Industry and its break up namely passenger vehicles, commercial vehicles, three wheelers and two wheelers.

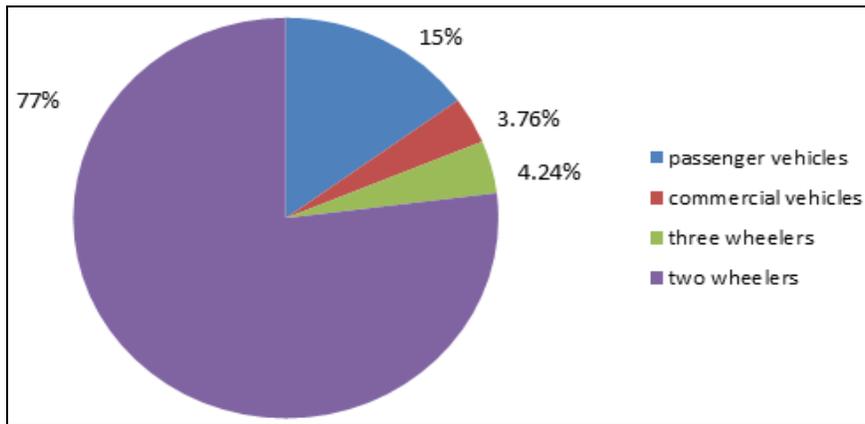


Fig 1: Market Share of Automobile Industry (production)

Above diagram depicts the market share production of automobile industry in India. From this, it is clear that more than three-fourth of production took place in two wheeler sector. It accounts 77% of the total production. Passenger

vehicles stand 2nd position. The least production took place in commercial vehicles. Three wheelers contribute only 4 percentage of the total production.

Table 6: Growth in Domestic Sales of Indian Automobile Industry (In Units)

Category	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	Total
Passenger vehicles	15,51,880	19,51,333	25,01,542	26,29,839	26,65,015	25,03,509	1,38,03,118
Commercial vehicles	3,84,122	5,32,721	6,84,905	8,09,499	7,93,211	6,32,851	38,37,309
Three wheelers	3,49,719	4,40,392	5,26,024	5,13,281	5,38,290	4,80,085	28,47,791
Two wheelers	74,37,670	93,70,951	1,17,68,910	1,34,09,150	1,37,97,185	1,48,06,778	7,05,90,644

Source: SIAM

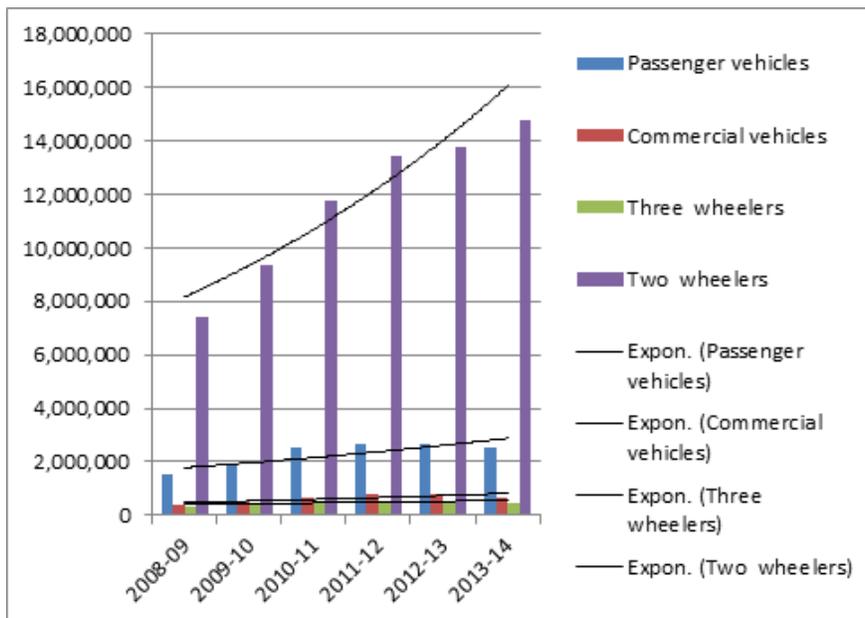


Fig 3: Trends in Domestic Sales of Indian Automobile Industry.

The growth rate of overall domestic sales during the entire period is increasing trend. The growth in percentage of sale of different vehicles have been due to the enhanced purchasing power, especially among middle class people of India, easy

availability of finance, favourable government policy, development of infrastructure projects, replacement period of vehicle.

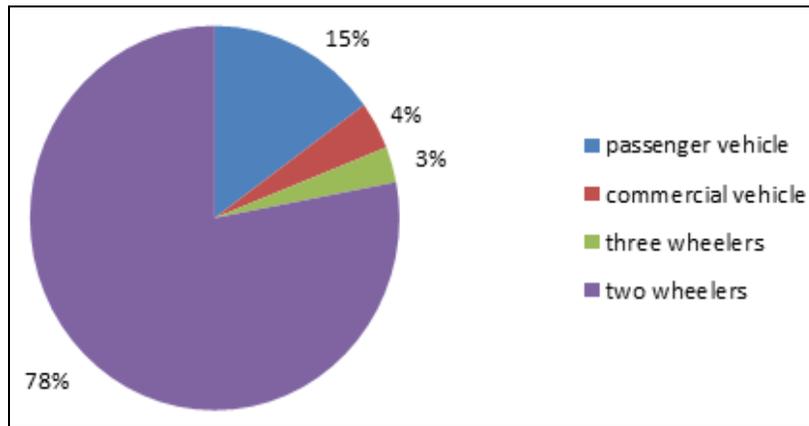


Fig 4: Market Share of Automobile Industry (Domestic Sales)

Above diagram shows that the market share of domestic sales of passenger vehicles, commercial vehicles, three wheelers and two wheelers in the automobile industry. Here, more sales took place in two wheeler sector and it constitutes 78% of the total production. The least production took place in three wheeler sector.

Automobile Export Trends

The automobile industry has earned a strong reputation in the

export market. Indian vehicles and their components are in great demand all over the world. Automotive industry of India is now finding increasing recognition worldwide. While a beginning has been made in export of vehicles, the potential in this area still remains to be fully tapped. Significantly, during the last two years the exports in this sector has grown specifically in export of car and two / three wheelers. Table below gives the exports trends of automobile industry in terms of number of vehicles.

Table 7: Export Trend in Indian Automobile Industry (In Units)

Category	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	Total
Passenger vehicle	3,35,739	4,46,145	4,44,326	5,08,783	5,59,414	5,96,142	28,90,519
Commercial vehicles	42,673	45,009	74,043	92,258	80,027	77,050	4,11,060
Three wheelers	1,48,074	1,73,241	2,69,968	3,61,753	3,03,088	3,53,392	16,09,516
Two wheelers	10,04,174	11,40,058	15,31,619	19,75,111	19,56,378	20,84,000	96,91,340

Source: SIAM

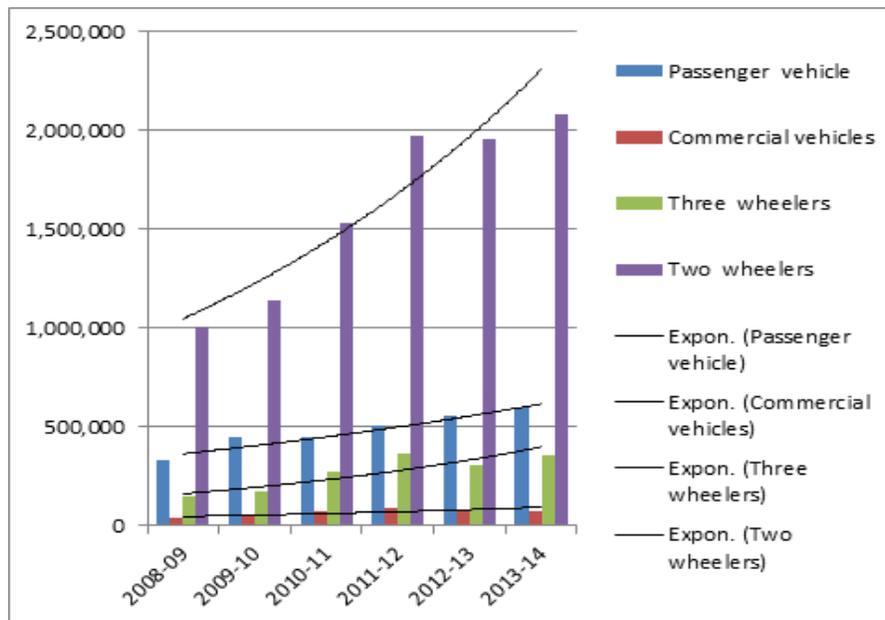


Fig 5: Export Trend in Indian Automobile Industry

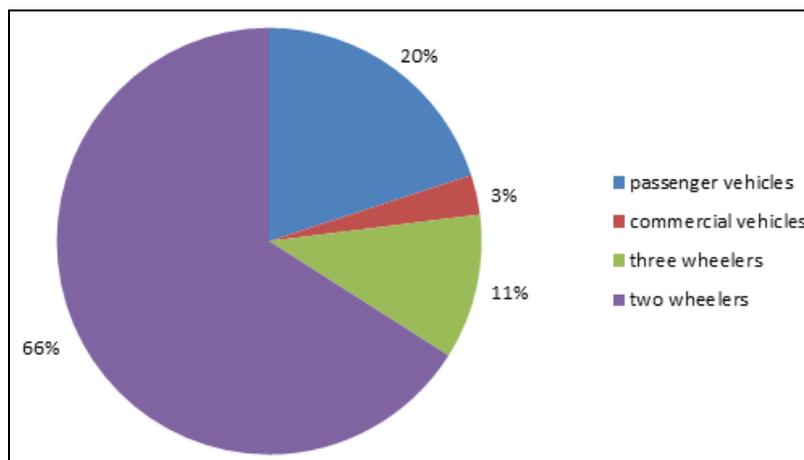


Fig 6: Market Share of Automobile Industry (Exports)

Above diagram shows the export of passenger vehicles, commercial vehicles, three wheelers and two wheelers in the automobile industry. From this, it is clear that more than half

of the export took place in two wheeler sector. The passenger vehicles stand 2nd position which constitutes about 20%. The least export took place of commercial vehicles.

Table 8: Overall Growth Rate of Production, Domestic Sales and Export

Category	CAGR (%) Production	CAGR (%) Domestic Sales	CAGR (%) Export
Passenger vehicles	11.86	10.04	12.17
Commercial vehicles	10.82	10.50	12.54
Three wheelers	13.63	6.54	19
Two wheelers	17.05	14.76	15.72

This table shows the overall growth rate of Indian automobile industry in terms of production, domestic sales, and export. On the basis of production the two wheelers recorded the highest CAGR at 17.05 percent. On the basis of domestic sales two wheelers recorded the highest CAGR at 14.76 percent. On the basis of export three wheelers recorded the highest CAGR at 19 percent.

Automobile Industry and Economic Growth of India

Table 9: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.981 ^a	.962	.952	4320.66250

a. Predictors: (Constant), Automobile Production

Table 10: ANOVA^a

Model	Sum of Squares	df	Mean Square	F	Sig.	
1	Regression	1866534671.490	1	1866534671.490	99.985	.001 ^b
	Residual	74672497.910	4	18668124.477		
	Total	1941207169.400	5			

a. Dependent Variable: GDP
b. Predictors: (Constant), Automobile Production

Table 11: Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	3389.177	7685.901		.441	.682
	Automobile Production	.004	.000	.981	9.999	.001

a. Dependent Variable: GDP

Above table shows adjusted R square value is 0.952 i.e. 95 percent of variability is explained by automobile production and P Value is less than 0.05. Therefore there is a significant relationship between production in automobile and economic growth of our country.

Conclusion

Automobile industry plays a vital role in the fabric of Indian economy. This sector of industry has made a rapid & steady growth in India, particularly after 90s due to delicensing, favorable Government policy and whole hearted support of

the Government, opening up of the automobile industries for 100% FDI, increase in purchasing power capacity of middle class and easy and cheap auto-finance facility. This study shows that FDI inflows in automobile have no impact on the production of Indian automobile industry and automobile sector shows significant impact on the progress in the economic growth rate of our country.

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