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An Empirical Analysis of Impact of New Taxation policy on Automobile Sector

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Abstract: The Automobile Sector of today is one of the key sectors of the country contributing majorly to the economy of India. The automobile industry is one of India's most vibrant and growing industries. The automobile sector is compartmentalized in four different sectors which are as follows: Two-wheelers which comprise of mopeds, scooters, motorcycles and electric two-wheelers.

Passenger Vehicles which include passenger cars, utility vehicles and multi-purpose vehicles: Commercial Vehicles that are light and medium-heavy vehicles.

The major players in the commercial vehicle segment are Ashok Leyland ltd, Hindustan Motors ltd, Bajaj Tempo Ltd, Eicher Motors ltd, Mahindra and Mahindra ltd, Swaraj Mazda ltd There is fluctuation in prices of petrol, diesel and gas due to market new policies. Goods and Service Tax has affected a lot in spare part it has reduced from 28% to 18%.

There are various spare parts require to make a vehicle complete. All spare part has an individual rate and tax code as per HSN code. All sector has affected by Implementation

This research is regarding study and implementation of taxation policy on automobile sector. The secondary data was analyzed by statistical methods. It has been found that there is positive impact of GST on automobile sector. However, decrease in sales in automobile sector indicates that there are other factors which are responsible for decrease in sales has been discussed.

Keywords: Taxation policy, Automobile Sector, Impact factors, Commercial Vehicles.

I. INTRODUCTION

Indian automobile sector has diverse rang in terms of vehicles and gradually moving towards petrol, diesel, gasoline to electrification. India is one of the biggest vehicle makers in the world in cars, being the biggest producer of bikes, three-wheelers and farm haulers. Accordingly, the vehicle sector is an essential donor in the Indian economy. Earlier varied taxes were set up which have now been subsumed under taxation policy.

Introduction of new taxation policy had led to humorous positives on automobile sector. In earlier taxation, system dealers could not claim taxes, which have influenced the purchase price of vehicle. In Taxation system, their claims will be available as credit in dealing with further supply. In short, has resulted in eliminated in cascading effect of taxes and reduction in price of vehicles.

II. LITERATURE REVIEW

Literature review is a systematic review of published journal research papers, company websites and newspaper media and government websites

Amandeep Kaur examined that new taxation is the biggest tax structure in India. She found that there is a reduction in prices of Auto Commercial vehicles. Taxation will result in boosting the business environment in India.

SaravanaRajan S & Kirubakaran found that taxation has elevated the economy of India. It has eliminated cascading effects and will engender revenue for state and central government. GST taxation structure will prove as a transparent taxation system.

MilandeepKour et al (2016) investigated that The taxation System is fundamentally organized to improve the current Indirect Tax framework in India. An all-around planned is an appealing technique to dispose of deformity of the current interaction of various tax collection too government has guaranteed that taxation will lessen the consistency trouble at present there will be no qualification among imported and Indian products and they would be charged at a similar rate. Numerous Indirect Taxes like Sales Tax, VAT, and so forth, will be done on the grounds that there will be one expense framework for example GST, that will decrease consistence present weight. GST will confront numerous challenges after its execution and will result give numerous advantages.

Pooja Jha & F.B. Singh. analyzed that implementation of taxation appeared to be positive for the auto industry in terms of further developed proficiency in street logistics, lower cost of little vehicle and bike so now these would not be a thing of extravagances rather would become part and incomplete of regular day to day existence and lower taxation would prone to be the key advantage of taxation for the auto industry yet at the same time more noteworthy clearness is anticipated on the different aspect of the draft model of taxation law like treatment of tooling cost, tax for work worker, dealer, exemption issue of tank, etc. needs to be tended to address.

Davinder Kaur stated that Goods and Service Tax is an aberrant assessment (or utilization charge) imposed in India on the supply of labor and products taxed is imposed at each progression in the creative interaction, yet is discounted to all gatherings in the chain of creation other than the last customer. The duty came into impact from July 1, 2016, through the execution of One Hundred and the First Amendment of the Constitution of India by the Indian government. The assessment supplanted existing different falling duties demanded by the focal and state governments. The present paper expects to examine the research which has been directed on ebb and flow point till now so the analysts can make knowledge on what has been done work now.

Thus above literature review indicates that there are numerous advantages of new taxation reforms on Automobile sector.

III. RESEARCH METHODOLOGY

This research is based on secondary data. Research type:-Exploratory and descriptive in nature The following Analytical tools are undertaken for the research study in order to analyze the secondary regarding the new taxation and its impact on Indian economy and further formulating the statistical result derived out of it from various statistical techniques such as, Mean, Standard Deviation, Correlation Regression analysis of variance.

IV. OBJECTIVE OF THE STUDY

- To Study new economic reforms in India (Goods and Service Tax).
- To understand the process of implementation and rate structure of Goods and service tax in automobile sector.
- To investigate the impact of Goods and service tax on automobile sector.

- To identify the Sectors, stand to lose or gain from the implementation of taxation policy.
- To find out causes of recession in automobile industry in India.

V. DATA ANALYSIS

Price before GST (Spicer Dana – Chakan)

Table No 5.1 – Price before GST

Item Description	Basic Price	Old Tax	Total
SYSTEM BALANCE DRIVESHAFT SPL70	8360	2340.8	10700.8
COUPLING SHAFT 1410	2500	700	3200
DRIVE SHAFT 1410	4000	1120	5120
COUPLING SHAFT SPL70	1250	350	1600
LPO1512/TC 47WB (EXPORT) MCS	11355	3179.4	14534.4
DRIVESHAFT SPL100	5500	1540	7040
LPO1618/LPO1512/LP1512/4X2FE	1200	336	1536
COUPLING SHAFT C2040	5000	1400	6400
DRIVESHAFT C2040	3500	980	4480
SHORT COUPLE 2040	300	84	384
DRIVESHAFT C2045	1200	336	1536
LPO1618 55WB 4X2FEBUS EX QUATA	4200	1176	5376
LPO1618 55WB4X2FE BUS EX QUATA	4200	1176	5376
DRIVESHAFT 2040L	5000	1400	6400
COUPLING SHAFT C2040L	2500	700	3200
COUPLING SHAFT C2040 L	2500	700	3200
DRIVE SHAFT SPL100	6300	1764	8064
SBDS SPL100	150	42	192
COUPLING SHAFT SPL100	2500	700	3200
SYSTEM BALANCED DRIVE SHAFT SPL100	3600	1008	4608
LPO1512/TC55WB(EXPORT)SPL100CS	2550	714	3264

Source: Spicer Dana

Interpretation: - Table 5.1 shows the prices of their automobile spare parts before implementation of GST.

Price after GST (Spicer Dana – Chakan)

Table No-5.2 – Price after GST

S.N	Item Description	Basic Price	CGST	SGST	Total Taxable Value
1	SYSTEM BALANCE DRIVESHAFT SPL70	8360	752.4	752.4	9864.8
2	COUPLING SHAFT 1410	2500	225	225	2950
3	DRIVE SHAFT 1410	4000	360	360	4720
4	COUPLING SHAFT SPL70	1250	112.5	112.5	1475
5	LPO1512/TC 47WB (EXPORT) MCS	11355	1021.95	1021.95	13398.9
6	DRIVESHAFT SPL100	5500	495	495	6490
7	LPO1618/LPO1512/LP1512/4X2FE	1200	108	108	1416
8	COUPLING SHAFT C2040	5000	450	450	5900
9	DRIVESHAFT C2040	3500	315	315	4130
10	SHORT COUPLE 2040	300	27	27	354
11	DRIVESHAFT C2045	1200	108	108	1416
12	LPO1618 55WB 4X2FEBUS EX QUATA	4200	378	378	4956

13	LPO1618 55WB4X2FE BUS EX QUATA	4200	378	378	4956
14	DRIVESHAFT 2040L	5000	450	450	5900
15	COUPLING SHAFT C2040L	2500	225	225	2950
16	COUPLING SHAFT C2040 L	2500	225	225	2950
17	DRIVE SHAFT SPL100	6300	567	567	7434
18	SBDS SPL100	150	13.5	13.5	177
19	COUPLING SHAFT SPL100	2500	225	225	2950
20	SYSTEM BALANCED DRIVE SHAFT SPL100	3600	324	324	4248
21	LPO1512/TC55WB(EXPORT)SPL100CS	2550	229.5	229.5	3009

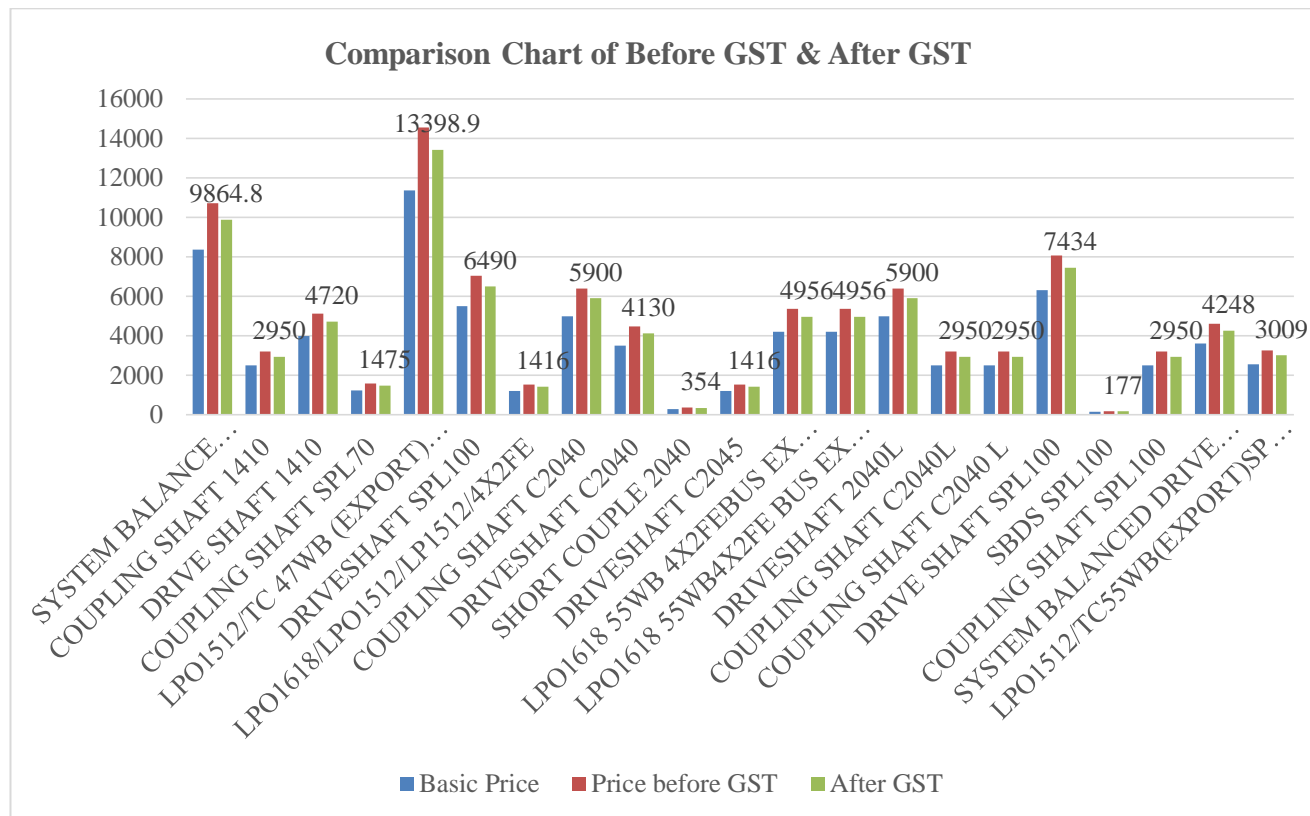
Source: Spicer Dana

Interpretation: - Table .2 shows the prices of their automobile spare parts after implementation of GST.**Table-5.3 Comparison of Price before GST &After GST**

S.N	Item Description	Basic Price	Price before GST	After GST
1	SYSTEM BALANCE DRIVESHAFT SPL70	8360	10700.8	9864.8
2	COUPLING SHAFT 1410	2500	3200	2950
3	DRIVE SHAFT 1410	4000	5120	4720
4	COUPLING SHAFT SPL70	1250	1600	1475
5	LPO1512/TC 47WB (EXPORT) MCS	11355	14534.4	13398.9
6	DRIVESHAFT SPL100	5500	7040	6490
7	LPO1618/LPO1512/LP1512/4X2FE	1200	1536	1416
8	COUPLING SHAFT C2040	5000	6400	5900
9	DRIVESHAFT C2040	3500	4480	4130
10	SHORT COUPLE 2040	300	384	354
11	DRIVESHAFT C2045	1200	1536	1416
12	LPO1618 55WB 4X2FE BUS EX QUATA	4200	5376	4956
13	LPO1618 55WB4X2FE BUS EX QUATA	4200	5376	4956
14	DRIVESHAFT 2040L	5000	6400	5900
15	COUPLING SHAFT C2040L	2500	3200	2950
16	COUPLING SHAFT C2040 L	2500	3200	2950
17	DRIVE SHAFT SPL100	6300	8064	7434
18	SBDS SPL100	150	192	177
19	COUPLING SHAFT SPL100	2500	3200	2950
20	SYSTEM BALANCED DRIVE SHAFT SPL100	3600	4608	4248
21	LPO1512/TC55WB(EXPORT)SPL100CS	2550	3264	3009

Source: Spicer Dana

Interpretation: Table 5.3 indicates that there is change in price after GST.



Interpretation –From the above graph it can conclude that after GST Implementation there is reduction in Automobile Spare Sprats and less paper work as compared to Old Taxation System.

Statistical Analysis

H₁=" There is difference in price after implementation of GST."

H₀ =" There is no difference in price after implementation of GST."

Anova: Single Factor						
SUMMARY						
Groups	Count	Sum	Average	Variance		
Basic Price	21	77665	3698.333	7204103		
Price before GST	21	99411.2	4733.867	11803203		
After GST	21	91644.7	4364.033	10030993		
ANOVA						
Source of Variation	SS	Df	MS	F	P-value	F crit
Between Groups	11565837	2	5782919	0.597444	0.553456	3.150411
Within Groups	5.81E+08	60	9679433			
Total	5.92E+08	62				

As p value is greater than 0.05 and computed value is less than critical value we cannot accept null hypothesis

Thus, there is statistical significant difference between the price of spare part before GST and after GST Tax Rate.

[2]. As GST has changed whole tax system in India. As for the final preparing of a car all the parts are required like front gear, back gear, axle, driveshaft, nuts, wheels, various screws, spare parts and all other necessity of the model for preparing a car.

Table 5.4 Comparative Chart of before & After GST

Duly structure for automobiles OEM under current and GST regime	Excise duty	VAT	CST	Effective tax	Likely GST	Comments
Two wheelers	12.50%	12.50%	2%	30.40%	17-19%	Likely to get cheaper
Small cars(length <4m)	12.50%	12.50%	2%	30.40%	17-19%	Likely to get Cheaper
Sedans (length > 4m with engine< 1500 CC)	24%	12.50%	2%	43.70%	Higher	Likely to get Cheaper
Sedans (length > 4m with engine >1500 CC)	27%	12.50%	2%	47.20%	Higher	Likely to get Cheaper
SUV'S	30%	12.50%	2%	50.20%	Higher	Likely to get Cheaper
Three Wheelers	12.50%	12.50%	2%	30.40%	17-19%	Likely to get Cheaper
Commercial vehicle	12.50%	12.50%	2%	30.40%	17-19%	Likely to get Cheaper

Source: Times of India.

Interpretation: Table 5.4 shows that after Implementation of GST prices in all sectors are likely to get cheaper.

Table 5.5 Sales of Passenger cars in India

Rank	OEM	April'16	April'17
1	Maruti	125714	81382
	Nexa	26713	15096
	Maruti+Nexa	152427	96478
2	Hyundai	43481	39010
3	Mahindra	17972	16024
4	Tata	17079	10485
5	Toyota	13677	10423
6	Honda	19970	10250
7	Ford	7816	6284
8	Renault	6217	3660
9	Volkswagen	2466	2521
10	Nissan	553	313
	Datsun	2249	991
	Nissan+Datsun	2802	1304
11	Skoda	1260	1076
12	Jeep	1201	509
	FIAT	29	2
	FCA	1230	511

Source: Economic Times

INTERPETATION: Table 5.5 shows that there is reduction in sales of all passenger cars in 2017.

VI. STATISTICAL ANALYSIS

Single factor or one way is used to test the null hypothesis that the means of several populations are equal. The passenger vehicles car of all segments that is Sedan, Hatchback, Compact Sedan, Coupe, 4-Door Coupe, Station Wagon, Crossover Hatchback, Convertible.

The passenger vehicle sales have gone down in 2016-2017.

H_1 = " There is decrease in passenger car sales."

H_0 = " There is no difference in passenger car sales."

Anova: Single Factor				
Groups	Count	Sum	Average	Variance
125714	17	317142	18655.41	1.33E+09
81382	17	214937	12643.35	5.62E+08

ANOVA						
Source of Variation	SS	df	MS	F	P-value	F crit
Between Groups	3.07E+08	1	3.07E+08	0.325218	0.572471	4.149097
Within Groups	3.02E+10	32	9.45E+08			
Total	3.05E+10	33				

As p value is greater than 0.05 and computed value is less than critical value we cannot accept null hypothesis Thus, there is statistical significant difference between the price of spare part before GST and after GST Tax Rate.

[4] Sales of tractors in India

In FY'16 tractor sales grew by 10.24 per cent at 878,476 units as compared to 20.52 per cent and 15.74 per cent in FY'16 and FY'16 respectively. On a yearly basis the growth rate was almost halved in FY'15 over FY'16.

The growth was marred due to weak sentiment in later part of the year as sales slipped into negative in February and March 2016 on year-on year. This ensued into the fourth quarter performance posting a year on year decline of 5.78 per cent.

VII. FINANCIAL ANALYSIS

A) SALES GROWTH:

Year	Sales(in crore)
2010	479
2011	608
2012	540
2013	526
2014	666
2015	771
2016	300

B) TAX RATE:

Year	Sales
2010	30%
2011	31%
2012	33%
2013	33%
2014	28%
2015	18%

DOMESTIC TRACTOR SALE

CATEGORY	2010	2011	2012	2013	2014	2016
BELOW 30HP	54506	70811	59866	53136	54114	67617
31-40 HP	233397	223302	202497	180972	201856	254768
41-50 HP	199130	308810	256270	226818	285261	335607
50 HP ABOVE	40735	31228	32830	32838	41613	53486

Anova: Single Factor					
SUMMARY					
Groups	Count	Sum	Average	Variance	
54506	3	473262	157754	10563641593	
70811	3	563340	187780	20209301044	
59866	3	491597	163865.6667	13600643336	
53136	3	440628	146876	10278963012	
54114	3	528730	176243.3333	15333093496	
67617	3	643861	214620.3333	21106941014	

ANOVA						
Source of Variation	SS	df	MS	F	P-value	F crit
Between Groups	8836915379	5	1767383076	0.116412314	0.986292205	3.10587524
Within Groups	1.82185E+11	12	15182097249			
Total	1.91022E+11	17				

As p value is greater than 0.05 and computed value is less than critical value we cannot accept null hypothesis. Thus, there is statistical significant difference between the price of spare part before taxation and after GST Tax Rate.

VIII. FINDINGS

- The prices of ancillary products were reduced by approximately 10% after Implementation of taxation
- There is reduction in prices after Implementation of taxation.
- As compare to earlier taxes after Implementation of taxation it is likely to get cheaper.
- The sales of passenger cars in India has been reduced in 2016.
- Sales of tractor is also reduced in 2016 due to heavy floods all over in India.
- There is drop in sales of Domestic tractors
- Petrol, diesel and gas prices are rising after Saudi attack.
- Forecasting, Trend & Growth shows that petrol, diesel price is likely to get higher in next 5 years.
- Employment Rate is also decreasing in 2016.
- There is reduction in average GDP in 2016.
- The sales of Electric cars are also gaining.
- Instead, the Bharat Stage VI (or BS-VI) emission norm would come into force from April 1, 2016 across the country.

IX. RECOMMENDATION

The auto industry looks forward to introduction of However, based on whatever inputs we got, there are several concerns of the industry which have been mentioned below:

- Taxes to be covered/ subsumed, all kind of domestic indirect taxes should be subsumed in the proposed GST. This should include Road Tax/Motor Vehicle Tax also.
- After introduction of GST, no additional tax should be introduced/ levied. A provision be made in the law that no new levy or tax be introduced.
- Any change, if required, in future (for specific needs like calamity, education, infrastructure, etc.) should be done through modifying the rate of taxation under the GST regime and not through any additional levy/tax/cess, etc.
- Bring in used vehicle trade under GST framework with a token levy to make used vehicle trade more organized. 1% GST rate will provide substantial annual revenue to the exchequer.
- The impacts on OEMs will be both positive and negative and great effort will be required to move over to regime. will have positive impact on profitability due to reduction in tax costs consequent upon free availability of credit for taxes on earlier transactions in the supply chain as well as due to enhanced efficiency and possibility to have re-look at all processes as a result of tax neutrality.

- In case of decrease in sales organizations instead of blaming market or government policies should try to find out new techniques of marketing to attract the customers.

X. LIMITATION OF THE STUDY

- The Study is limited to automobile sector only.
- Had few interactions with limited Industry personnel only.
- The study is confined to limited ancillary industry.

XI. CONCLUSION

Although there might be many flaws in current GST Taxation system. People psychology is to resist changes. However, these flaws can be eliminated with the course of time. It can also be revised as per business environment. Overall impression of implementation of GST is transparent and more useful rather than old taxation system in India.

Recommendations for Future Study

The data must be analyzed for other sectors also. Problems need to addressed from time to time so that the purpose of implementation is solved.

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