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## AN ANALYSIS OF IMPACT OF GOODS AND SERVICES TAX ON FMCG SECTORS

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**Abstract:** In our study we investigate the impact of GST on FMCG sector. The secondary data for methodology has been used to see the increase in tax can affect the stock indices of FMCG industries. The data is collected from NSE historic data. The parameter used is pre and post GST. The Paired sample t test is applied to check the comparison between the variables to test the hypothesis. The result of testing of hypothesis is that it accepts the alternative hypothesis.

**Index Terms** - GST, FMCG sector, NSE, stock indices, pre and post.

### Introduction

The Fast Moving Consumer Goods (FMCG) is consumer packaged goods. Its product touches every aspect of human life. It is the key contributor of the Indian economy. They are inexpensive products that require little shopping efforts. The FMCG sector has grown from US\$31.6 billion in 2011 to US\$49 billion in 2016. The sector is further expected to grow at a Compound Annual Growth Rate (CAGR) of 20.6 percent to reach US\$ 103.7 billion by 2020 (Jayanthi, 2017).

The One Hundred and Twenty Second Amendment Bill of the constitution of India, formally alluded to the Constitution (One Hundred and First Amendment) Act, 2016 presented a national goods and service tax in India from 1 July 2017 (Gupta, 2018) and abolished all the indirect taxes such as VAT, excise tax, service tax etc. It emerged as “**Transparent Taxation System**” in the indirect tax. The board settled on four-chunk rate GST structure of 5%, 12%, 18% and 28%. The Lok Sabha finally passed the bill due to significant impact on every consumer and every industry. (Yogesh, 2017) It is a dual model of tax system containing central government and state government’s share. Indian government has taken the biggest step in taxation reform and is all to integrate state economy and boost overall growth.

### Models of GST

There are three prime model of GST. They are -

- **Central Government Level** – CGST stands for Central Goods and Services Tax, the tax is levied based on intrastate supply of goods and services. It replaces all the central taxes like Central Excise Duty, Service Tax, Custom Duty etc, the share of this tax compensates all loss of current service tax and excise duty of central government. (Babu & Hariharan, 2018).
- **State Government Level** – SGST stands for State Goods and Services Tax, this is similar to CGST, as part of tax diverted which help to credit the revenue department of state government. It replaces state taxes like VAT/Sales tax, Entertainment tax, Luxury tax, entry tax, etc. (Patil, 2016). In SGST, taxes are exacted by within one state where transaction of goods and services take place.
- **Both Central and State Government Level** – Local states, GST 50% quantum tax is transferred to SGST and in case of local sales, 50% of quantum tax which was under GST has been redirected to SGST tax.

## Segments of Fast Moving Consumer Goods

Fast Moving Consumer Goods (FMCG) are called as packed goods that are consumed or sold at regular and small intervals. It is the fourth largest sector in the Indian economy. The prices of products are less and profits earned through such sales are more volume based. (Nagarajan & Sheriff, 2013). It has many segments and main FMCG segments can be classified as Personal Care, Household care, Branded and Packaged food and Spirits and Tobacco. (Alie, Iqbal, Ahmed & Bhat, 2019).

- **Personal Care** – It consists of oral care, hair care, skin care, personal wash, cosmetics, shoe care etc.
- **Household Care** – It consist utensil cleaners, floor cleaners, toilet cleaners, metal polish etc.
- **Branded and packaged Food Beverages** – It consists of soft drinks, snack food, chocolates, tea, coffee etc.
- **Spirits and Tobacco** – An exact product wise sales break up for each of the items is difficult.

## Literature Review

Literature review helps the researcher to gain additional knowledge about the problem. Alie et.al (2019) defined that research concludes that GST has impact on various aspects of FMCG companies and as of now, it seems that new tax regime is beneficial to these companies. Babu & Hariharan (2018) analysis that GST was fruitful for big companies but small firms were negatively affected by the GST tax rate. Urvashi Gupta (August, 2018) defines that the impact of GST on textile industry and also shows the detail of exempted goods came under the present tax system. Jayanthi (December 2017) identified the foreign investments in FMCG sectors have grown gradually to reach the current size and are trying to influence consumer with intelligent deals. It also helps in development of economics. Yogesh (October, 2017) the research investigates that GST has bring the transparency in collection of indirect taxes. It is designed in such a way that it is expected to generate amount of revenue for both central and state government. All businessmen and services providers will be beneficial in long run. Kumar & Kumar (April 2017) defines that FMCG sector of India include 50% of food and beverage industry and 30% from personal care. This sector also helps to account 10% in GDP in India. Pankaj Kumar & Subhrangshu Sekhar Sarkar (March 2016) identified the challenges are between the centre and state government proportion in taxes majorly but directly or indirectly it is adding wealth to the nation. GST has been implemented had positive impact on their economies. Pramod Patil (February 2016) defines that the completion from unorganized sector can be overcome by increasing consumer brands awareness and by reducing cost through sharing resources such as distribution network. Favorable development happening in demand side supply side and systematic drivers shows that this sector has very bright future. Geetha Nagarajan & Sheriff J Khaja (January, 2013) defines the study highlights the different types of problems faced and solution. FMCG industries and markets are shifting towards the rural areas by making new strategies and promotional policies.

## Statement of Problem

The implementation of new tax regime has subsumed all the indirect taxes in one tax known as GST. It is a dual model of tax system containing central government and state government's share. For such purpose there is need to understand the Goods and Services Tax.

## Objective

- To compare pre and post GST on FMCG sector
- To find out the impact of GST on the Retail sector

## Hypothesis

- **Null hypothesis ( $H_0$ ):** There is no significant difference between stock indices of pre and post GST in India.
- **Alternative hypothesis ( $H_1$ ):** There is a significant difference between the stock indices of pre and post GST in India.

## Methodology for First Objective

The research design for the first objective is from secondary data. Altogether 10 products related to FMCG goods after implementation of GST had been taken. The products are taken from the [www.avalaar.com](http://www.avalaar.com). The data was collected on 19 July 2020. The products are as fallows -

*Product 1:* Detergent; *Product 2:* Shampoo; *Product 3:* Sanitary Napkins; *Product 4:* Skin Care; *Product 5:* Hair Dyes; *Product 6:* Ayurveda Medicine; *Product 7:* Toothpastes, Soaps & Hair Oil; *Product 8:* Paints; *Product 9:* Branded Paneer; *Product 10:* Butter, Ghee & Cheese.

Table – 1 Changes in Tax Rate after Implementation of GST

Sl.No	Product	Before GST taxed at	After GST taxed at	Companies Impacted
1.	Detergents	23%	28%	HUL, P&G, Jyothy Laboratories.
2.	Shampoo	24-25%	28%	HUL, P&G, Dabur, Himalaya, Patanjali.
3.	Sanitary Napkins	10-11%	18%	P&G, Hygiene and Health Care.
4.	Skin Care	24-25%	28%	HUL, Dabur, Himalaya, Patanjali.
5.	Hair Dyes	23-28%	28%	Godrej consumer products.
6.	Ayurveda Medicine	7-10%	12%	Dabur, Emami
7.	Toothpastes, soaps, hair oil	22-24%	18%	Colgate – Palmolive, HUL, P&G.
8.	Paints	25-26%	28%	Asian Paints, Berger Paints, Nerolac.
9.	Branded Paneer	3-4%	5%	Nestle, Mother Dairy.
10.	Butter ghee, Cheese	4-5%	12%	Amul, Nestle, Mother Dairy.

Source – Compiled by Avalara Retrieved from <https://www.avalara.com/blog/changing-rates-impact-of-gst>

### Analysis of First Objective

Many changes had been seen in the product after implementation of GST. In Detergent there was before in tax rate was 23% but after that the tax rate was 28%; In Shampoo also changes was seen from 24-25% to 28%; In Sanitary Napkins the changes was from 10-11% to 18%; In Skin Care from 24-25% to 28% changes had been seen; In Hair Dyes changes occurred from 23-28% to 28%; Ayurveda Medicine changes seen from 7-10% to 12%; In Toothpastes, soaps, hair oil changes occurred from 22-24% to 18%; In Paints 25-26% to 28% changes has been seen; In Branded Paneer 3-4% to 5% has occurred; In Butter, ghee, cheese 4-5% to 12% had been seen.

### Methodology of Second Objective

The research design for the second objective is from secondary data. Altogether 10 companies related to FMCG goods after implementation of GST had been taken. The companies are taken from the NSE websites and collected was collected from 1 January 2017 to 30 June 2017 as pre GST and for post GST from 1 July 2017 to 31 December 2017. The companies are as follows -

*Company 1:* CNX FMCG Index; *Company 2:* Colgate - Palmolive (India) Limited; *Company 3:* Nestle India; *Company 4:* Britannia Industries Limited; *Company 5:* Marico Limited; *Company 6:* Procter and Gamble; *Company 7:* Gillette India; *Company 8:* Dabur India Limited; *Company 9:* Hindustan Unilever Limited.

Companies are denoted by symbol. *Company 1* is denoted as INDEX; *Company 2* is denoted by COLPAL; *Company 3* is denoted as NESTLEIND; *Company 4* is denoted as BRITANNIA; *Company 5* is denoted as MARICO; *Company 6* is denoted as PGHH; *Company 7* is denoted as GILLETTE; *Company 8* is denoted as DABUR; *Company 9* is denoted as HINDUNILEVR.

### Analysis of Second Objective

The sample population was with 9 companies. All companies' normality was taken out through log. Based upon the sample of impact of GST on FMCG companies, Paired – Samples T Test is applied. The result extracted through paired samples t test are shown in the Paired Samples Statistics in Table 2 and Paired Samples Test in Table 3. Further Table 2 reflects Paired Samples Statistics with sampling that the mean of all the nine companies of post GST is more than pre GST.

Table - 2: Paired Samples Statistics

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	PRE GST LOGINDEX	4.37	123	0.029	0.00262
	POST GST LOGINDEX	4.41	123	0.011	0.00103
Pair 2	PRE GST LOGCOLPAL	2.98	123	0.030	0.00273
	POST GST LOGCOLPAL	3.03	123	0.012	0.0011
Pair 3	PRE GST LOGNESTLEIND	3.80	123	0.020	0.00182
	POST GST LOGNESTLEIND	3.85	123	0.024	0.00220
Pair 4	PRE GST LOGBRITANNIA	3.52	123	0.031	0.00282
	POST GST LOGBRITANNIA	3.63	123	0.037	0.00337
Pair 5	PRE GST LOGMARICO	2.46	123	0.034	0.00310
	POST GST LOGMARICO	2.50	123	0.011	0.00105
Pair 6	PRE GST LOGPGHH	3.86	123	0.024	0.00221
	POST GST LOGPGHH	3.93	123	0.025	0.00231
Pair 7	PRE GST LOGGILLETTE	3.64	123	0.030	0.00277
	POST GST LOGGILLETTE	3.75	123	0.040	0.00366
Pair 8	PRE GST LOGDABUR	2.44	123	0.011	0.00104
	POST GST LOGDABUR	2.50	123	0.023	0.00209
Pair 9	PRE GST LOGHINDUNILEVR	2.96	123	0.041	0.00374
	POST GST LOGHINDUNILEVR	3.08	123	0.022	0.00202

Source – unless otherwise noted, bootstrap results are based on 1000 bootstrap samples.

Table - 3: Paired Samples Test

		Paired Differences			t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean			
Pair 1	PRE GST LOGINDEX – POST GST LOGINDEX	-.04148	.03286	.00296	-14.002	122	.000
Pair 2	PRE GST LOGCOLPAL – POST GST LOGCOLPAL	-.04315	.03574	.00322	-13.390	122	.000
Pair 3	PRE GST LOGNESTLIEND – POST GST LOGNESTLEIND	-.05411	.01574	.00142	-38.121	122	.000
Pair 4	PRE GST LOGBRITANNIA – POST GST LOGBRITANNIA	-.11484	.01521	.00137	-83.724	122	.000
Pair 5	PRE GST LOGMARICO - POST GST LOGMARICO	-.03926	.04344	.00392	-10.023	122	.000
Pair 6	PRE GST LOGPGHH – POST GST LOGPGHH	-.07091	.01200	.00108	-65.523	122	.000
Pair 7	PRE GST LOGGILLETTE - POST GST LOGGILLETTE	-.11585	.02186	.00197	-58.772	122	.000
Pair 8	PRE GST LOGDABUR - POST GST LOGDABUR	-.06031	.02105	.00190	-31.779	122	.000
Pair 9	PRE GST LOGHINDUNILEVR - POST GST LOGHINDUNILEVR	-.11822	.02554	.00230	-51.332	122	.000

Source - unless otherwise noted, bootstrap results are based on 1000 bootstrap samples

In above table of paired sample test (Table 3), the mean showing the average difference between the two variables, the standard deviation shows the deviation of different scores and df shows the degree of freedom of test. The df of all the companies are 122. The significant 2 tailed value equal to (Sig.) of  $0.000 < 0.05$  that means the data has significant difference between. The data collected shows that the result of CNX FMCG Index, Colgate Palmolive Limited, Nestle Limited, Britannia Industries Limited, Marico Limited, Procter and Gamble, Gillette India, Dabur India Limited and Hindustan Unilever Limited is Sig. (2-tailed) .000. Thus the test rejects the null hypothesis ( $H_0$ ) and accepts the alternative hypothesis ( $H_1$ ). Thus the result shows that there is significant difference between the pre and post GST.

## Findings

- From the Table 1 in changes in Tax Rate after implementation of GST, we find that there are changes from before and after GST.
- From the Table 2 in paired sample statistics, it is being found that the mean value of pre is less than the post GST. That means the stock indices of pre does not affect significantly than the stock indices of post.
- The Table 3 in paired sample t test in of 9 pairs shows the significant 2-tailed value is less than .05 which means the alternative hypothesis is accepted and null hypothesis is rejected.
- The result from the test is that it accepts the alternative hypothesis. It shows that there is significant difference between pre and post GST in India.

## Conclusions and Discussion

From the above information we concluded that on 1 July 2017 a change came across in tax with a slogan of “One Nation One Tax” which is called as Goods and Service tax is has abolished all the other indirect taxes. Now there is only one indirect tax. We have taken the secondary data from five companies of FMCG of National Stock Exchange and equity of FMCG. The data is six months before and after GST. Paired samples t test is applied in all the six stock indices to see the result. The result shows that there is significant difference between the pre and post. So, it can be seen that implementation of goods and service taxes has affected the different sectors of Indian economy. The result of the study seems to be effected by financial reforms. Therefore, GST has proved to be major financial reform can be a step towards better economy.



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