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GOODS AND SERVICES TAX (GST) LAW IN INDIA-AN ANALYSIS OF REVENUE PERFORMANCE

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Abstract

Goods and Services Tax (GST) is considered to be a major and one of the biggest reforms in India. GST was introduced in India on 1st July 2017, with the objective of replacing multiple Indirect taxes, which were prevailing in India and also overhauling the indirect taxation system in the country. The roll out of GST has completed almost four years and therefore, in this research paper, the researchers try to study the performance of GST since its inception and also try to study the recent impact of covid 19 pandemic on GST collection in India. For the purpose of the study, secondary data were used and descriptive statistics, Kruskal-Wallis test, DSCF pairwise comparisons test and forecasting method, were employed.

Keywords: GST, Indirect Tax, GST revenue, CGST and Covid 19 pandemic.

JEL Code: H2, H20, H21 and H25

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1. Introduction

The development of any economy depends upon the taxation system of that country. In India, the taxes, levied by the government, are divided into direct tax and indirect tax (Das, 2020). Direct tax in India mainly consists of income tax and indirect taxes consist Goods and Services Tax (GST), which was introduced in India on 1st July 2017, by subsuming multiple number of taxes like service tax, VAT, excise duties, customs etc (Agarwal, 2019). GST is basically comprehensive, multi-stage, destination-based tax, that is applied to every value addition in the supply chain (Banik & Das, 2017). GST in India are of different types, like CGST, SGST, IGST (Nayyar & Singh, 2018). CGST is Central Goods and Services Tax and it is collected by the central government, on sales conducted inter-state. SGST is State Goods and Services Tax and it is collected by the state government, on the sale of goods and services within the state. The central government collects IGST (Integrated Goods and Services Tax) on inter-state sales. Besides these three main components, another important component of GST in India is GST Compensation Cess or GST Comp. Cess, which was introduced to compensate for any possible revenue loss to different states, due to the introduction GST law. GST is a newly introduced tax law in India and the success of any tax law is determined on the basis of its revenue collection. Therefore, the authors in this research paper attempted to study the GST revenue performance in India since its inception and to analyse the recent impact of Covid 19 pandemic outbreak on the performance of GST revenue in India.

2. Review of Literature

Several researchers have attempted to describe the evolution of tax system in India.

The literature extant reviews the performance of the economy after the implementation of GST and compares the Indian GST model to that of other developing economies. Manoj (2019) believes that GST is going to unify the entire tax system in the country and pave the way to a strong and sound economy. Gupta, 2020 highlights the positive impact of GST implementation on the Indian economy but suggests amendments to the GST Act to strengthen the process further. Tiwari (2020) and Baby (2020) consider GST as an important reform in the post-independence India. But they recommend involvement and support of all stakeholders for the successful implementation of the GST system. Kothari (2019) and Gobindalal & Atanu (2018) examine the hurdles and obstacles faced by the industry while adopting GST. Naeem & Khan (2020) observe an increase in inflation and negative growth in core sectors of the economy, after studying the socio-economic impact of GST implementation. Many researchers have investigated the GST revenue collection patterns in India. Mukherjee (2020) forecasts the state-wise as well as overall GST collections, for the period 2020-21. It determined the state wise GST gap, compensation cess and expected surplus revenue needed to bridge the gap. Similar work of Bholane (2020) examines the national tax collection from 2013-14 to 2017-18, through direct and indirect taxes. He also studied the tax to GDP ratio. Govindan (2019) suggests that a total of Rs. 18,11,442 thousand crores worth revenue has been collected, through GST, since its inception. The study recommends reforms in GST registration, GST return filing and so on. According to Leemput et al., (2017) GST will lead to an increase in the overall economy in India. Researchers have also

attempted to compare the GST structure of India with other global economies. Tracy & Nirmala Devi (2020) compared the indirect tax system of India with that of Nigeria. Their results reveal that both the countries should continuously review their tax model to make it more robust. Radhakrishnan et al., (2019) and Kumari & **Jyothi, (2017)** also made a comparative study of GST system in India with that of other countries. The study establishes that GST implementation will boost the economic development in India. Akhil & Thattil (2018) explain that India follows a complex structure compared to other countries in the world. Scholars have examined the GST collections amidst the global corona virus pandemic and suggest measures to make the system more effective. Clemens & Veuger (2020) observe that the pandemic will lead to a shortfall of roughly 106 billion dollars in the sales and income tax revenue of state governments, in the United States of America, for the fiscal year 2020-21. Ward et al., (2020) reveal that the surge in online retail activity, due to the pandemic, has had a declining impact on the sales tax revenue of state and central government in the United States. Naydenov & Tsenov (2021) assess the dynamics of tax gaps and social insurance revenue during this pandemic. The study reveals that the pandemic has had negative impact on the tax gaps in Bulgaria, with slowdown in the economy. Olejniczak & Mačí (2021) analysed the nature and extent of the impact of pandemic on the public revenue of Poland and Czech Republic. Their results show deep impact of the pandemic on the collection of corporate and personal tax. Bansal et al., (2020) discuss the impact of the global pandemic on Indian economy, with special emphasis on GST.

3. Statement of the Problem

It is evident from the literature review that a limited number of studies have been undertaken in the area, to study the GST performance in India. The GST law is considered to be one of the major landmark laws of India since independence. GST was introduced with the purpose of pushing up the indirect tax revenue in India and it is, therefore, very important to study the revenue performance of the newly introduced tax law in the Country.

4. Need of the Study

For any nation, the most important component which contributes to the nation building is how the taxation system is performing in that nation. Since GST is a newly introduced tax law, it becomes very important to know if the tax system is functioning or not. This paper will evaluate the level of performance of GST since its introduction and will present the status report on GST in India. The output of the study will help the policymakers, tax department and researchers as a whole.

5. Objectives of the Study

- a) To evaluate GST revenue performance in India since its introduction.
- b) To compare different GST revenue components in India.
- c) To analyze the impact of Covid 19 pandemic on GST revenue collection of India.

6. Hypotheses of the Study

NH-1: There is no significant difference between different GST revenue components in India.

NH-2: There is no significant difference between CGST and SGST revenue collection in India.

NH-3: There is no significant difference between CGST and IGST revenue collection in India

NH-4: There is no significant difference between CGST and Comp. Cess collection in India.

NH-5: There is no significant difference between SGST and Comp. Cess collection in India.

NH-6: There is no significant difference between IGST and Comp. Cess revenue in India.

7. Research Methodology

7.1 Sample Selection

The purpose of the study was to evaluate GST revenue performance in India and also to analyse the impact of Covid 19 pandemic on GST revenue. For the study, the monthly GST revenue collection, starting from July 2017 when GST was introduced in India and ending on March 21, was taken. The sample consisted of a total 45 observations for the study.

7.2 Sources of Data

The present study was based on secondary data, compiled by authors from www.gst.gov.in/download/gststatistics, www.gstcouncil.gov.in/gst-revenue and Press Information Bureau of Government of India.

7.3 Period of the Study

The period of the study was from July 2017 to March 2021.

7.4 Tools used in the Study

Descriptive analysis was employed to evaluate the GST revenue performance in India. Kruskal-Wallis Test was applied, with Jamovi statistical software, to compare different GST revenue components in India. Further, DSCF pairwise comparisons test was used to check significant difference from each GST component. Finally, forecasting method was adopted, using Microsoft Excel 2019, to analyze the impact of Covid 19 pandemic on GST revenue collection of India.

8. Data Analysis

8.1 Evaluating GST Revenue Performance in India

Table-1 depicts that over the years, the CGST, SGST, IGST, Comp. Cess and total GST collection have shown an upward trend and it was expected that in the long run, collection from GST will scale up, but from the month of March 2020, there would be a slowdown in the revenue collections, as a result of Covid 19 pandemic. For the month of March 2021, there had been recovery in revenue collection from CGST, SGST, IGST, Comp. Cess and total GST revenue collection of India. The highest CGST collection was in the month of March 2021 i.e Rs. 22,973 crores, the highest SGST collection was in the month of March 2021 i.e Rs. 29,329 crores, the highest IGST collection was in the month of March 2021 i.e Rs. 62,842 crores, the highest Comp. Cess collection was in the month of February 2021 i.e Rs. 9,525 crores and the highest total GST collection was in the month of March 2021 i.e Rs. 1,23,902 crores.

8.2 Kruskal-Wallis Test

The Kruskal-Wallis (Kruskal & Wallis, 1952) is a test, that analyses the differences among two or more independently sampled groups, on a non-normally distributed data. As per the Shapiro Wilk Test (Table-2), assumption of normality was not met and as a result, non parametric Kruskal-Wallis Test was applied. As

per the Kruskal Wallis Test (**Table-3**), there was significant difference between different GST revenue components in India i.e., between CGST, SGST, IGST and Comp. Cess as p value was <0.001. Therefore, the formulated hypothesis NH-1 was rejected.

8.3 DSCF Pairwise Comparisons Test

Table-4 shows the results of DSCF (Dwass-Steel-Critchlow-Fligner) pairwise comparisons test (Critchlow and Fligner 1991). According to this test, all GST revenue components recorded significant differences among themselves i.e., CGST & SGST, CGST & Comp Cess, SGST & IGST, SGST & Comp. Cess, IGST & Comp. Cess, as p value was <0.001. Hence the formulated hypotheses, NH-2, NH-3, NH-4, NH-5 and NH-6, were rejected.

8.4 Impact of Covid 19 Pandemic on GST Revenue

In India, due to the covid 19 pandemic, a lockdown was imposed from May 2020 and it had seriously affected the tax revenue of the country, particularly the GST revenue. Figure-1 shows that there was a sudden fall in GST revenue collection in India, from March 2020 to March 2021, when the lockdown, due to Covid 19 pandemic, was announced in India. Figure-1 clearly depicts that from March 2020, there was substantial difference between the actual and forecasted GST revenue trend line, which implies that as a result of Covid 19 Pandemic, India had suffered a huge GST revenue loss, from March 2020 to March 2021. Table-5 shows that due to Covid 19 pandemic, for almost all the months from March 2020 to March 2021, there was shortfall of GST revenue collection as compared to the forecasted collection.

9. Findings of the Study

From the study, it is evident that CGST, SGST, IGST, Comp. Cess and total GST collection of India was positively contributing to the indirect tax collection of the nation but due to Covid 19 pandemic, the indirect tax revenue of the nation had taken a hit. The estimated GST revenue loss, which authors had calculated was approximately Rs. 2,66,007 Crores. The research also revealed that there was significant difference between the CGST, SGST, IGST and Comp Cess collection of the country.

10. Suggestions

The tax department of the country had taken a huge hit from the shortfall in GST revenue. In order to restore the loss, the Government of India should try to improve the GST collection of the country. The Government of India should instruct each state level tax departments, to develop some strategies and polices, to improve the future inflow of GST collection and also to mitigate the loss caused by Covid 19 pandemic.

11. Conclusion

The major objective of the study was to study the overall practice of Goods and Services Tax in India since its introduction. For measuring the performance of the GST law, the researchers had examined if the new tax law had been pushing up the tax collection of the nation or not. From the research, it can be concluded that the total GST revenue and its various components like the CGST, SGST, IGST and Comp. Cess in the country, had shown a growth since its inception but the roadblock created by the pandemic, had reduced the speed of the revenue collection. The effect of this roadblock will be a short-term affair as the revenue of GST has already started to recover from March

2021 (**Table-1**) onwards and it is expected to move in an upward direction and in the near future, the GST revenue collection will definitely recover the shortfall, suffered due to the Covid 19 pandemic.

12. Limitation of the Study

The study was restricted only to the indirect tax law i.e., GST in India and cannot be generalized for the direct tax law in India. The period of study was limited to July 2017 to March 2021 as the GST law was a new tax law, initiated from July 2017 in India.

13. Scope for Further Research

Since GST is a new law, this research can be extended to study the level of compliance towards GST in India, by the business taxpayers and various factors can be identified which may affect the compliance behaviour of Indian taxpayers, towards the GST law.

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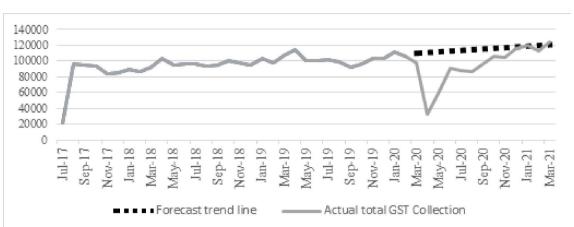


Figure-1: Forecasted GST collection of India Vs actual GST collection of India.

Source: Author's compilation using excel

Table-1: CGST, SGST, IGST, Comp. Cess and Total GST Revenue Collection from July 2017 to March 2021 (Rs. in Crore)

Months	CGST	SGST	IGST	Comp. Cess	Total GST Collection
Jul-17	10	10	20,958	593	21,572
Aug-17	15,252	23,257	49,968	7,156	95,633
Sep-17	15,131	21,979	48,930	8,024	94,064
Oct-17	14,962	22,345	47,995	8,032	93,333
Nov-17	13,690	20,294	42,693	7,103	83,780
Dec-17	13,928	19,700	42,765	7,922	84,314
Jan-18	14,874	21,542	45,338	8,070	89,825
Feb-18	14,763	20,621	42,382	8,196	85,962
Mar-18	16,266	22,055	46,326	7,520	92,167
Apr-18	18,653	25,704	50,548	8,554	1,03,459
May-18	15,866	21,691	49,120	7,339	94,016
Jun-18	15,968	22,021	49,498	8,122	95,610
Jul-18	15,877	22,293	49,951	8,362	96,483
Aug-18	15,303	21,154	49,875	7,628	93,960
Sep-18	15,318	21,061	50,070	7,993	94,442
Oct-18	16,464	22,826	53,419	8,000	1,00,710
Nov-18	16,812	23,070	49,726	8,031	97,637
Dec-18	16,442	22,459	47,936	7,888	94,726

Table-1: continued...

Months	CGST	SGST	IGST	Comp. Cess	Total GST Collection
Jan-19	17,763	24,826	51,225	8,690	1,02,503
Feb-19	17,625	24,192	46,953	8,476	97,247
Mar-19	20,353	27,520	50,418	8,286	1,06,577
Apr-19	21,163	28,801	54,733	9,168	1,13,865
May-19	17,811	24,462	49,891	8,125	1,00,289
Jun-19	18,366	25,343	47,772	8,457	99,938
Jul-19	17,912	25,008	50,612	8,551	1,02,083
Aug-19	17,733	24,239	48,958	7,273	98,203
Sep-19	16,630	22,598	45,069	7,620	91,917
Oct-19	17,582	23,674	46,517	7,607	95,380
Nov-19	19,592	27,144	49,028	7,727	1,03,491
Dec-19	19,962	26,792	48,099	8,331	1,03,184
Jan-20	20,944	28,224	53,013	8,637	1,10,818
Feb-20	20,569	27,348	48,503	8,947	1,05,366
Mar-20	19,183	25,601	44,508	8,306	97,597
Apr-20	5,066	5,950	20,029	1,249	32,294
May-20	10,324	12,905	32,700	6,080	62,009
Jun-20	18,980	23,970	40,302	7,665	90,917
Jul-20	16,147	21,418	42,592	7,265	87,422
Aug-20	15,906	21,064	42,264	7,215	86,449
Sep-20	17,741	23,131	47,484	7,124	95,480
Oct-20	19,193	25,411	52,540	8,011	1,05,155
Nov-20	19,189	25,540	51,992	8,242	1,04,963
Dec-20	21,365	27,804	57,426	8,579	1,15,174
Jan-21	21,923	29,014	60,288	8,622	1,19,847
Feb-21	21,092	27,273	55,253	9,525	1,13,143
Mar-21	22,973	29,329	62,842	8,757	1,23,902

Source : Author's compilation

Table-2:Results of Descriptive Statistics showing the Values CGST, SGST, IGST & Comp. Cess.

	N	Missing	Minimum	Maximum	Shapiro-Wilk p
CGST	45	0	10	22,973	< 0.001
SGST	45	0	10	29,329	< 0.001
IGST	45	0	20,029	62,842	< 0.001
Comp. Cess	45	0	593	9,525	< 0.001

Source: Author's calculation using jamovi

Table-3: Results of Kruskal-Wallis Test witnessing the Differences among Independent Sampled Groups on a Non-Normally Distributed Data

	χ²	Df	P Value
GST revenue Collection (Between CGST, SGST, IGST and Comp. cess)	150	3	< 0.001

Source: Author's calculation using jamovi

Table-4: Result of DSCF Pairwise comparisons Test

		W	P Value
CGST	SGST	9.5	< 0.001
CGST	IGST	11.41	< 0.001
CGST	Comp Cess	-10.55	< 0.001
SGST	IGST	10.64	< 0.001
SGST	Comp Cess	-10.55	< 0.001
IGST	Comp Cess	-11.55	< 0.001

Source: Author's calculation using jamovi

Table-5: Calculation of Estimated GST revenue loss for India. (Rs. in Crores)

Months	Forecasted GST collection-A	Actual total GST Collection-B	Estimated GST Revenue Loss. A-B
Mar-20	1,09,698	97,597	12,101
Apr-20	1,10,601	32,294	78,307
May-20	1,11,475	62,009	49,466
Jun-20	1,12,378	90,917	21,461
Jul-20	1,13,252	87,422	25,830
Aug-20	1,14,155	86,449	27,706
Sep-20	1,15,058	95,480	19,578
Oct-20	1,15,932	1,05,155	10,777
Nov-20	1,16,835	1,04,963	11,872
Dec-20	1,17,710	1,15,174	2,536
Jan-21	1,18,613	1,19,847	-1,234
Feb-21	1,19,516	1,13,143	6,373
Mar-21	1,20,332	1,23,902	-3,570
	Total Estimated GST Re	Rs. 2,66,007	

Source: Author's calculation using excel.