

Analysing the effect of Implementation of GST on the Over-All Tax Pool

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ABSTRACT

India has just witnessed a radical redesign in its indirect tax regime. This change has given an impact not only to the tax collected by the nation but also on several other aspects. Understanding the key revolution in our tax system becomes really very important for the reason that GST itself is a chief contributor for the revenue of the country. This new legislation not only attests beneficial but also has its own issues and challenges bundled with it. The revenue collection regularly witnesses a variation because of the frequent change in the rates of the tax. This research paper studies the effect of the implementation of GST on the revenue collected by the nation as a whole.

1. Introduction

The replacement of the several indirect by just one tax – Goods and services tax (GST), is marked as a major milestone in the history of indirect taxation system of India. The GST model adopted in our country has to subsume most of indirect taxes under a single taxation regime. The multiplicity of the indirect taxes has been rationalized by the introduction of GST. It has helped to reduce the cascading effect of the taxes. It gives buoyancy to the revenue that the country receives from its citizens upon payment of taxes. GST has brought simplicity in the field of Indirect taxes. Though most of the countries like Canada, Brazil follow unified model of GST, upon the recommendation of The Institute of Chartered Accountants of India, dual tax structure of GST levy has been adopted by our country. It means that the tax levy would be done parallelly, one at union level and the other one at state level. Custom duty is a tax that is collected on import and export of goods in a country. CBEC (Central Body of Excise & Customs) is the governing body for the custom duty. There are several types of custom duties such as, basic custom duty, countervailing duty, safe guard duty and anti-dumping duty and so on. The rates of custom duty may be specifically set or also may be on ad valorem basis.

2. Review of Literature:

1. **(Debnath, 2016)**. Implementation of Goods and Service Tax (GST) in India and its control over the tax collection – In this paper, the need for replacement of earlier indirect tax system by the GST model has been studied. The opportunities and the challenges faced to implement the GST model is discussed. This study mainly focuses on the working mechanism of GST. It explains in detail about the levy and collection of GST, control of GST model over tax collection and sharing of taxes between the Central government and State government. It also highlights about the availability of input tax credit and the manner in which it can be utilized.
2. **(Bindal & Gupta, 2018)**. Impact of GST on Indian Economy – This study is focused on the evaluation of the advantages and challenges of implementation of GST in India. It draws a comparison between GST in

India and GST in other countries. The implementation of GST has significantly affected the price of the products. This paper has explained about the major products that have become cheaper and products that have become dearer after GST. The use of IT in the implementation of GST has been studied. The offences under GST and their penalties are also explained in detail.

3. **(Dwevedi, 2018)**. Role of GST on Import Sector in India – In this paper, the impact of implementation of GST on the import sector is analysed. The replacement of former indirect tax by the GST has been studied. It discusses in detail about the effect of GST on the import of cross border supply and service import. The provisions of GST applicable to Export-oriented companies and special economic zones are also studied. The rate of GST applicable on the imports (IGST), exemptions available authorized business activities and the tax refund procedures to be followed by the importers after the implementation of GST has been explained.
4. **(Kowalski, 2005)**. Impact of changes in tariffs on developing countries' government revenue – This study discusses the influence of changes in tariffs on production, trade, welfare, consumption patterns and government revenue. The need for co-ordination of tariff reforms with other tax policies is assessed. The simulation results of tariff reduction are obtained by using the Swiss formula and linear formula. It has also explained the different approaches that can be used to evaluate welfare and revenue impacts of tariff reduction.
5. **(J.Hemavathi, 2017)**. Goods & Service Tax: Implication in Indian household budget – In this paper, the concept of GST is studied. The role & importance of GST in India and its impact on the Indian economy is evaluated. It analyses the effect of GST on the household budget (expenditure) of the citizens. The influence of GST on the food items, household items,

personal care product, medicine, travelling, restaurants, electronics & apparel brands and end-users is examined.

6. **(Nanda, Pandey, Rawal, Kumar, & M.L.Sukhpal, 2015).** Role of CBEC in the GST regime – This paper examines the role of Central Board of Exercise and Customs (CBEC) in the administrative efficiency, audits & enforcement, compliance costs and revenue collections from GST. It has explained the need for Risk Based Audit Screening Services (RBASS) and realignment of Directorate General (DG) system & data management by the CBEC. The different approaches and mechanism for dispute resolution under GST has also been studied.

3. Research Design:

a) Statement of Problem

Implementation of GST has tangled the entire indirect tax regime of the country. The concept of "ONE NATION-ONE TAX" is entirely new to the nation. Earlier the indirect tax levies were completely different. Each state had its own law and there was a corresponding law for the nation too. However, the old law was a prey for the cascading effect. This has now been wiped out. The 101st amendment of the constitution has bestowed both, the state and the centre to make laws and even to charge the tax. This may affect the allocation of the revenue amongst the states and the centre. Also, the regular changes in the rates of GST may have an indirect impact on the total tax collection.

b) Sources of Data:

The data for the research has been obtained from secondary sources. The researchers have collected the data from trusted websites. Annual indirect tax collection [which includes the customs duty and other indirect taxes (VAT and Service tax for 'pre-GST' period and the GST collection after the implementation of GST)] has been obtained and some statistical and non-statistical methods have been applied for data analysis.

c) Hypothesis:

H0: - There is no significant impact of the GST and the Custom duty collected on the revenue of India.

H1: - There is significant impact of the GST and the Custom duty collected on the revenue of India.

4. Data Analysis

Following is the data showing the indirect tax collection by the country. (The figures shown are in crores).

Month	GST Collections(2017-18)	Month	VAT & Service Tax (2016-17)
Jul-17	92,283	Jul-16	52164
Aug-17	93,590	Aug-16	48451
Sep-17	93,029	Sep-16	49046
Oct-17	95,132	Oct-16	56555
Nov-17	85,931	Nov-16	54848

d) Data Analysis tools:

The researchers have used certain statistical and non-statistical methods for the study and analysis of the data. Linear regression has been performed using the software SPSS for establishing a relationship and effect of the indirect tax collection on the total tax revenue of India. Event study has been carried on for elucidating the effect of implementation of GST and its contribution to the revenue comparing the earlier indirect taxes. The results of the event study are analysed with the help of certain graphical methods.

e) Expected Outcome:

The recent change in the indirect tax regime of the country has not only given a sweeping impact on the tax-payers but also has affected the revenue and such other extraneous factors. Since GST is a new concept that is blooming in India, a frequent change in the GST rates, in every GST council is evident. To meet the global tariff agreements, frequent changes in the custom duty is also observed. Hence, this research paper aims to prove an effect of the constant changes of the GST rates & the custom duty on the revenue of India. This research has been carried out with a view to establish an empirical relationship between the GST tax collected and the total tax revenue of the nation. The study also aims at drawing a comparison between the earlier indirect tax system and the present regime (GST).

f) Limitations:

To establish an effect of the relationship between the GST collection and the total tax collection, apt data is required. Since, the revenue collection of the country is confidential; obtaining the data was one of the dilemmas faced. GST was a recent legislation adopted by the nation. It has hardly been a year since it was implemented. Therefore, it is really challenging to draw conclusion about the effect of GST on the tax collection and even to study it comparing the earlier tax system for the reason that only limited data is available.

Dec-17	83,716	Dec-16	49558
Jan-18	88,929	Jan-17	57101
Feb-18	88,047	Feb-17	51832
Mar-18	89,264	Mar-17	116835
Apr-18	1,03,458	Apr-17	10224
May-18	94,016	May-17	45512
Jun-18	95,610	Jun-17	55985

5. Statistical Tests

1) Stationarity Test

A stationary series is one whose statistical properties such as mean, variance and correlation are constant over time.

H0: Customs 2016-17 & 2017-18, Indirect taxes 2016-17 & GST data 2017-18 and Total revenue 2016-17 & 2017-18 are not stationary. (It has a unit root)

H1: Customs 2016-17 & 2017-18, Indirect taxes 2016-17 & GST data 2017-18 and Total revenue 2016-17 & 2017-18 are stationary. (It has no unit root)

The series of data selected is tested for stationarity. The data is not stationary at level mainly because the tax collection does not follow a particular trend this test paves a path to comment that the data set is stable. The data was stationary at level one (first difference). Once the data set is stable/stationary, it can be used for the further analysis. Regression analysis is used for the further study.

2) Regression analysis

a) Analysis for Indirect taxes other than customs 2016-17

ANOVA^a

Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	47513070236.906	1	47513070236.906	20.219	.001 ^b
Residual	23498840200.010	10	2349884020.001		
Total	71011910436.917	11			

Indirect taxes, other than customs 2016-17 have a significant impact on the total tax revenue. We can conclude this because the significant value of Indirect taxes other than customs 2016-17 is "0.001" i.e. less than 0.05.

b) Analysis for Customs 2016-17

ANOVA^a

Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	5749364076.834	1	5749364076.834	.881	.370 ^b
Residual	65262546360.082	10	6526254636.008		
Total	71011910436.917	11			

Customs of 2016-17 has no significant impact on the total tax revenue. This is because the significant value of Customs is "0.370" i.e. greater than 0.05.

c) Analysis for customs 2017-18

ANOVA^a

Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	5028290709.838	1	5028290709.838	.830	.384 ^b
Residual	60563069412.829	10	6056306941.283		
Total	65591360122.667	11			

Customs 2017-18 has no significant impact on the total tax revenue as the significant value is "0.384" i.e. greater than 0.05.

d) Analysis for GST 2017-18

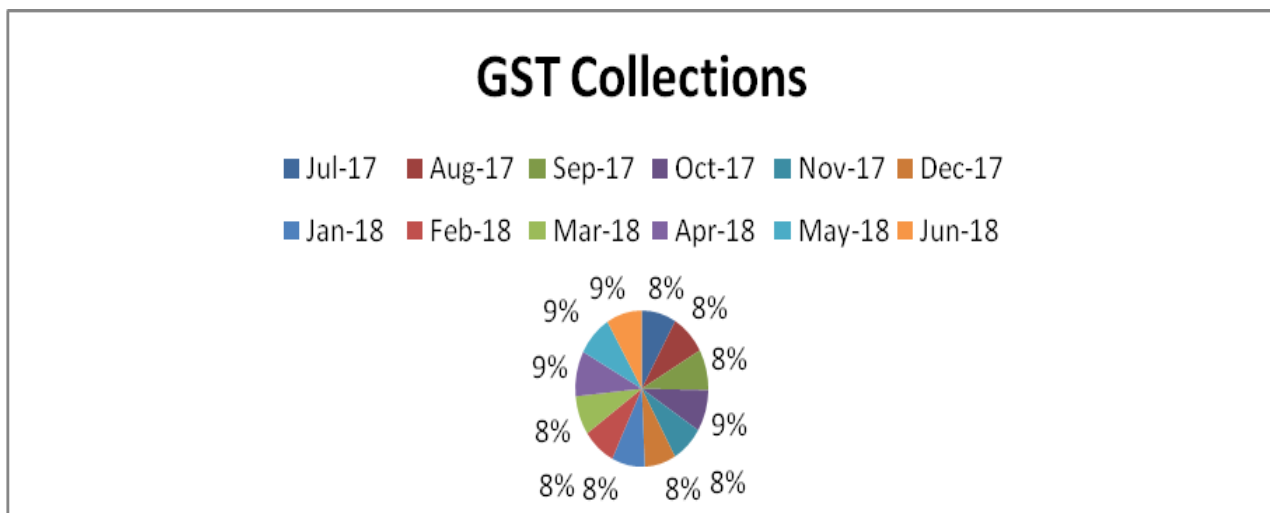
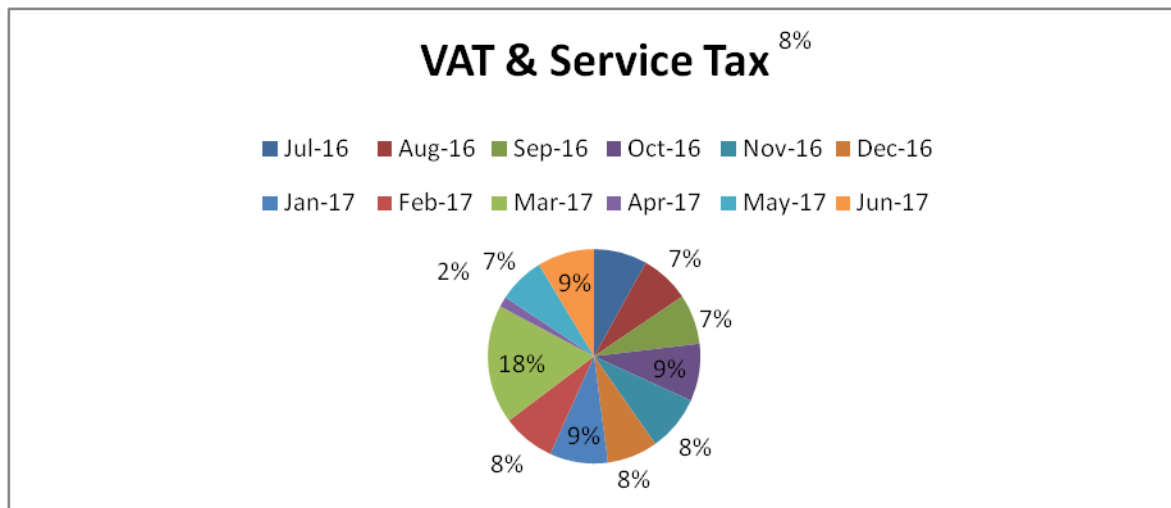
ANOVA^a

Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	5235850898.442	1	5235850898.442	.868	.374 ^b
Residual	60355509224.225	10	6035550922.422		
Total	65591360122.667	11			

Goods and service taxes 2017-18 has no significant impact on the total tax revenue. This is because the significant value of goods and service tax 2017-18 is "0.374" i.e. greater than 0.05.

Non Statistical tests: -

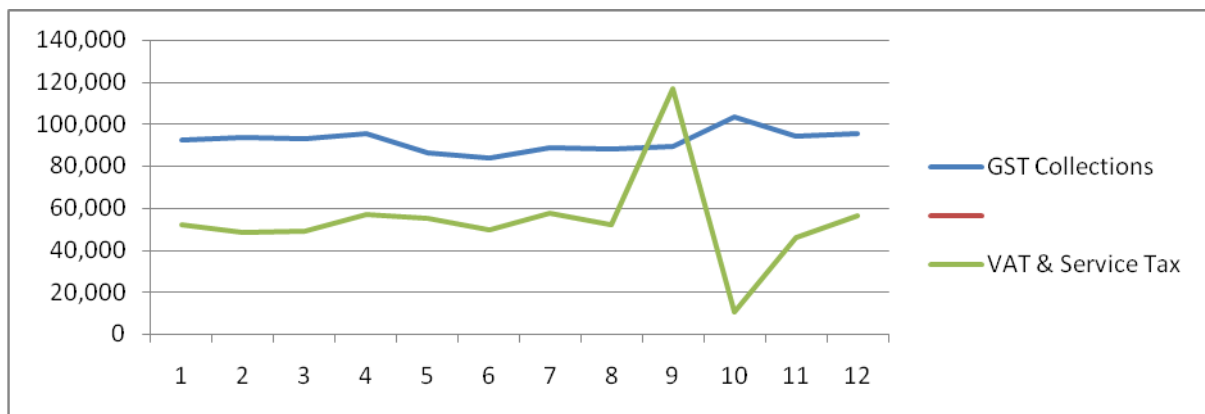
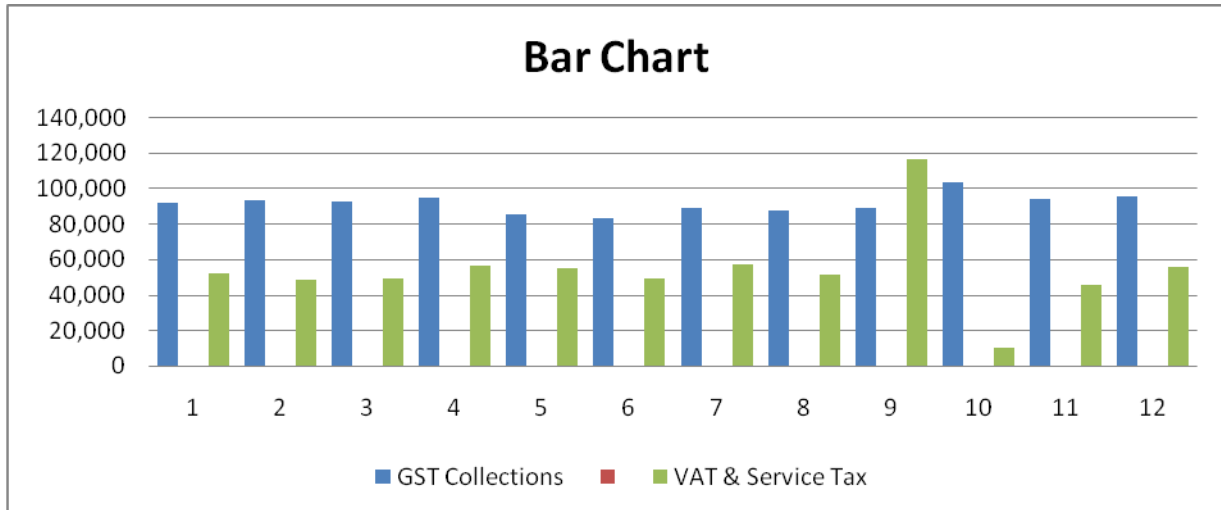
- Test for Uniformity



Test for uniformity is performed to understand the data. It gives out whether the data collected is uniformly spread across the period or not. This study becomes important when the study of the data is done for a particular period. If the result of this test showcases "uniform", then it is considered that there are no seasonal factors affecting the data. Suppose on the other hand, the result is "not uniform", then there may be some extraneous or some seasonal factors that may have affected the data. The above two pie graphs display the uniformity of the tax collected by the country. It is quite evident that more or

less the revenue is equally spread throughout the year. This diagram does not portray the quantum of tax collection but only gives out the 'fairly-even' monthly contribution through the tax collection. This does not change in the current tax regime as well as the earlier one. However, due to some indefinite reason the VAT and Service tax collection in the month March 2017 is comparatively high and also the VAT and the Service tax revenue for the month April 2017 is relatively low. Apart from these two, the revenue collection remains uniform. Also, there are no seasonal factors affecting the tax collection.

• **Event analysis**



Event analysis is carried on to comment on the impact of two variables which are related and which are more or less dependent on each other. The two events identified in the study is tax collection pre and post implementation of the GST in India. A base date has to be identified which marks the differentiation of the two events. Since GST was introduced on 1 July 2017, the same has been considered as the 'event date'. Prior to the event date there was the previous indirect tax regime which was existent across the nation. VAT, Service tax, Excise duty and Central Sales tax were the prominent indirect taxes collected. On 1 July 2017 after adopting the new tax regime, GST is the key indirect tax that is being collected. The above bar and line graphs give out the revenue collected from the earlier indirect taxes and the current GST. It is evident from both the graphs that the average monthly revenue from the GST is more than the revenue collected by the nation comparing the earlier indirect taxes. These graphs help to prove that there has been an escalation in the tax collection from the GST upon the implementation of the GST law.

6. Findings and Conclusion

In India, Income tax, GST, Custom duties are the prominent taxes collected. In these, income tax is the key contributor for the revenue generated from tax. The indirect taxes have a trivial impact on the taxes. The Indian income tax

has a wider base compared to the indirect taxes. This is quite evident from the study that was conducted. The indirect taxes that were prevalent before the implementation of the GST also did not have any effect on the total tax revenue of the nation. Similarly, the present indirect tax, GST, has less impact on the total tax revenue. GST, being a new legislation, has been in existence only for eighteen months. This period is very less for projecting any significant findings. However, upon implementation of GST, the average monthly revenue from the GST is more than the revenue collected by the nation comparing the earlier indirect taxes.

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