

Contribution of GST towards GDP: A Conceptual Approach

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Abstract

Any country's development can be measured by taking GDP into account. GDP gives a clear picture about how is the economic condition of the country. Recently GST has been a booming area of concern for economists in the country. Implementation of GST has brought many changes in the economy. Reframed policies, different economic strategies and moreover utility of destination-based reforms has brought many layers changes in the system. Whenever any factor is introduced in the system, first thing arises is how can this factor be helpful in shaping the economy. The present paper is all about finding out the contribution of GST towards GDP in a conceptual way.

Keywords: Goods and Services Tax, GST, Tax Rates, Gross Domestic Product, GDP

Introduction

The introduction of Goods and Services Tax (GST) on July 1, 2017 is Considered to be one of the major reforms in Indian taxation system. It is termed as "One Nation One Tax" regime, which is considered as pan-India Taxation Regime. GST is a destination-based tax which is levied only on Value addition at each stage because credits of input taxes will be available.

After the implementation of GST there is a paradigm shift in doing business in India. GST has forced taxpayers to renew their strategies, supply chain, costing and systems to meet the quality standards and thereby increasing compliance costs for GST taxpayers.

GST was introduced on a positive note for the benefit of all the stakeholders, which includes Taxpayers as well but every reform is faced with certain problems and limitations.

Framework of GST

- Dual GST: India has adopted a dual GST which is imposed concurrently by the Centre and States.
- Centre has the power to tax sales & States are empowered to tax services
- Destination Based Taxation

As per various studies conducted in India after the implementation of GST, the positive and impacts faced by tax payers are mentioned as under:

1. For Business and Industry

Easy Compliance: A comprehensive IT system would be the foundation of the GST regime in India. Therefore, all tax payer services such as registrations, returns payments, etc. would be available to tax payers online, which would make compliance easy and transparent.

Uniformity of Tax Rates and Structure: GST will ensure that indirect tax rates and structures are common across the country, thereby increasing certainty and ease of doing business.

Improved Competitiveness: Reduction in transaction costs of doing business would eventually lead to an improved competitiveness for the trade and industry.

2. For Central and State Governments

Simple and Easy to Administer: Multiple indirect taxes at the central and state levels are being replaced by GST. Backed with a robust end-to-end IT system, GST would be simple and easier to administer than all other indirect taxes of the central and state levied so far.

Higher Revenue Efficiency: GST is expected to decrease the cost of collection of the tax revenue of the government, and will therefore, lead to high revenue efficiency.

3. For the Consumer

Single and Transparent Tax Proportion to the Value of Goods and Services: Due to multiple indirect taxes being levied by the central and state, with incomplete or no input tax credits available at progressive stages of value addition, the cost of most goods and services in the country today are laden with many hidden taxes. Under GST, there would be only one tax from the manufacturer to the consumer, leading to transparency of tax paid to final consumer.

Relief in Overall Tax Burden: Because of efficiency gains and prevention of leakages, the overall tax burden on most commodities will come down, which will benefit consumers.

GST Eliminates the Cascading Effect of Tax: GST is comprehensive indirect tax that was designed to bring the indirect taxation under one umbrella. More importantly, it is going to eliminate the cascading effect of tax that was evident earlier. Cascading tax effect can be the best described as: tax on tax.

Negative Impact of GST Reform

Increased Cost due to Software Purchase: Business have to either update their existing accounting or ERP software to GST or buy a GST software so that they can keep their business going. But both the options lead to increased cost of software purchase and training of employees for an efficient utilization of the new billing software.

High Compliance Cost: Changing over to a completely new system of taxation requires understanding of the minutiae, which businesses lack right now. Most of them are worried about filling returns, but it is important to note that even before business can reach the filing stage, they have to issue GST-compliant invoices.

For a traditionally pen and paper economy like India, this change to digital record-keeping is going to be massive.

Increase in Cost of Product for Business: Changing over to a completely new system of taxation requires understanding of the minutiae, which businesses lack right now. Most of them are worried about filling returns, but it is important to note that even before business can reach the filing stage, they have to issue GST-compliant invoices. For a traditionally pen and paper economy like India, this change to digital record-keeping is going to be massive.

No Clarity on Tax Regulations and Frequent Amendments: Many manufacturers (textile, pharmaceutical, FMCG industries) enjoy tax holidays and state benefit schemes. There is still no notification regarding these benefits. This will mean increases costs for these industries, which will probably be passed on to the end consumer.

Recent GST Collections in India

Finance Minister Nirmala Sitharaman on Tuesday announced that the gross GST collections for the month of January 2022 is at Rs 1,40,986 crore, which is the highest since the inception of GST.

"The gross GST revenue collected in the month of January 2022 till 3 PM on January 31, 2022, is Rs 1,38,394 crore of which CGST is Rs 24,674 crore, SGST is Rs 32,016 crore, IGST is Rs 72,030 crore (including Rs 35,181 crore collected on import of goods) and Cess is Rs 9,674 crore (including Rs 517 crore collected on import of goods)".

Before January 2022, the highest monthly GST collection was Rs 1,39,708 crore in the month of April 2021.

The revenues for the month of January 2022 are 15% higher than the GST revenues in the same month last year and 25% higher than the GST revenues in January 2020.

Need for the Study

As this year is the 5th year of completion of implementation of GST, the researchers have found to study the influence of GST collections on Gross Domestic Profit (GDP) and to analyze and find out that is there any relationship between GST collections and GDP of India in the last five years of its implementation. Under this study, to identify the influence of GST Collections on Gross Domestic Product the researchers will be using the Amount of GDP collections in INR from the reliable source and Amount of revenue collected by GST Authorities during the Same period in INR.

Review of Literature

Taxes levied by both the Centre and the States before introduction of GST, the difficulties faced by businesses in complying with the multiple levies is evident. Especially the cost of compliance to be borne by small businesses was huge, making such businesses unviable.

The corporates and the larger business houses could manage enough resources to comply with the above laws. But the smaller businesses due to this burden of compliances were almost on the verge of closure. In this background it is now important to study the impact of GST on medium and smaller businesses and whether GST holds promise for the smaller vendors.

1. Putu Artha Satria Wibawa, Ketut Jati, Maria M Ratna Sari, GdeAry Wirajaya (2021) "The Influence of Tax understanding, Technology Readiness, Ease of E filing on MSME Taxpayers Compliance" has concluded in their study that Tax understanding has a positive impact on the compliance, as the tax understanding elevates the compliance level of taxpayers also elevates.
2. Lee Heng Liang, Mohd Norfin Alifiah, Loo Ern Chen proposed "GST compliance model of GST Registered Persons in Malaysia" (May 2019) and concluded with two primary types of factors that influence a compliance behavior: (1) Economic Factors - Tax Rate, Audit Rate and Penalty, and (2) Psychological Factors - Attitude and Knowledge of GST.
3. Rosiati Ramli, Mohd Rizal Palil, Norul, Abu, Ahmad Mustapha (2015) studied on "Compliance cost of goods and services tax among Small and Medium Enterprises". Emphasized in their study that the Compliance Cost of SMEs is expected to increase as soon as GST is implemented and concluded that during the first 5 years of its implementation, compliance cost increased significantly later on. Inland Revenue Board of Malaysia contributed significantly through various measures such as simplification of the tax system, reduction in capital expenditure categories, simplification of business basis period. As a result the compliance costs decreased substantially.
4. Dr. Ambrishstates in his paper "Goods and Service Tax and Its Impact on start-ups" confirms that goods & services tax will remove currently imposed multiple taxes & unite the whole nation economically under one tax system.
5. Dr. R. Vasanthagopal, affirm in his investigation "GST in India: A Big Leap in the Indirect Taxation System", that positive result of GST charge system is to a great extent subject to objectivity of plan and adjusting of revenue of different partners. Further the exploration affirms, GST would be a major leaf in the roundabout assessment framework and would likewise give another stimulus to India's monetary change.
6. Lourdunathan F and Xavier P (2016) studied on "Implementation of Goods and Service Tax (GST) in India: Prospectus and Challenges". Analysis made in this study is that GST implementation requires concentrated efforts of all stakeholders especially trade and industry. It is therefore necessary on the part of the Government to educate, conduct proper training seminars and workshops to increase the compliance level of taxpayers.
7. Shetty Deepa Thangam Geeta, S. P. Mathiraj, M. Thivya Bharathi (July 2019). On their study titled "Impact of GST on MSMEs in Tamil Nadu" has focused on issues and challenges of experienced MSME enterprises on GST compliances. They concluded that less amount of preparedness in respect of GST compliance most of the SME s rate GST as a balance and there is potential scope in the process.
8. Manoranjan Kumar, Akhilesh Barve, Devendra K Yadav (14 January 2019) studied on "Barriers in implementation of GST in India". In this study, they have identified 12 barriers to GST implementation by developing a structural model. Further concluded that if a country like India is implementing GST, it needs to have strong political will power and proper functioning

of administration. Complexities in administration and lack of clarity of GST provisions will lead to lack of preparedness among clients.

9. Dr. Krishna Murari, Smirti Chetti in their study perceived “Impacts of Goods and Services Taxes in Sikkim”. Studied impact of GST whether positive or negative on MSMEs is significantly associated with the type of enterprise, i.e. manufacturing sector perceived adverse impact of GST on its business operations whereas Service sector do not impact significantly. The manufacturing sector significantly impact in terms of ease of doing business, compliance and procedural impact, business expansions and operational cost.
10. Sitraselvi Chandren, Ayoib Che Ahmad, Santhirasegaran Nadarajan (2018) in their study on “Operating Performance Analysis and GST implementation in Malaysia” concluded that after investigating 265 Malaysian firms post implementation of GST on the operating cost and suggested that implementation of GST has done no massive loss to the firms with respect to PAT and Sales Growth. The firms were able to sustain their operating performance during and after GST implementation.
11. Mohd Nor Hasyimi Bin Adam, Nor Ashikin Mohamad Yusof (2017) made a comparative study on the “Burden of Tax Compliance Costs amongst GST Registered Companies in Malaysia” and concluded that Business entities spend more time and resources on tax compliance and therefore it is necessary for the government and tax authorities to seek solution to lessen the burden of Tax compliance cost.
12. Milandeep Kour, Kajal Chaudhary, Surjan Singh, Baljinder Kaur (November 2016) in “A Study On Impact Of GST After Its Implementation” identified that GST plays a dynamic role in the growth and development of our country.
13. Anushuya, Narwal (2014) studied “Application of CGE Models in GST” and concluded that both GST & CGE are very popular all over the world but GST is a powerful concept in the field of indirect taxes.

Research Gap

Entire papers debates on the issues and challenges of implementation and on compliance issues, in which some of the studies are developed countries perspective and these studies that have reviewed indicate the periodical gap, hence our study considers the latest data on GDP and GST collections from the date of implementation of GST.

Research Questions

1. How does the GST implementation in India has affected GDP growth rate in the Indian Economy?
2. What is the extent of relationship between the contribution of GST revenue on the GDP of India?

Objectives

1. To study whether there is any kind of relationship between GDP and GST.

2. To study whether GDP and GST are positively correlated, negatively correlated or not at all related.
3. To study the extent of relationship between GDP and GST.

Hypothesis

- Null hypothesis: There is no relationship between GDP and GST.
- Alternate Hypothesis: There is a relationship between GDP and GST.

Research Methodology

Data Collection: Data of both parameters are collected from year 2016-2017 to 2020-2021. The data of GST for year 2016-2017 is not present due to its initiation was done on 1st July 2017.

Sources of Data

GDP: <https://statisticstimes.com/economy/country/india-gdp.php>

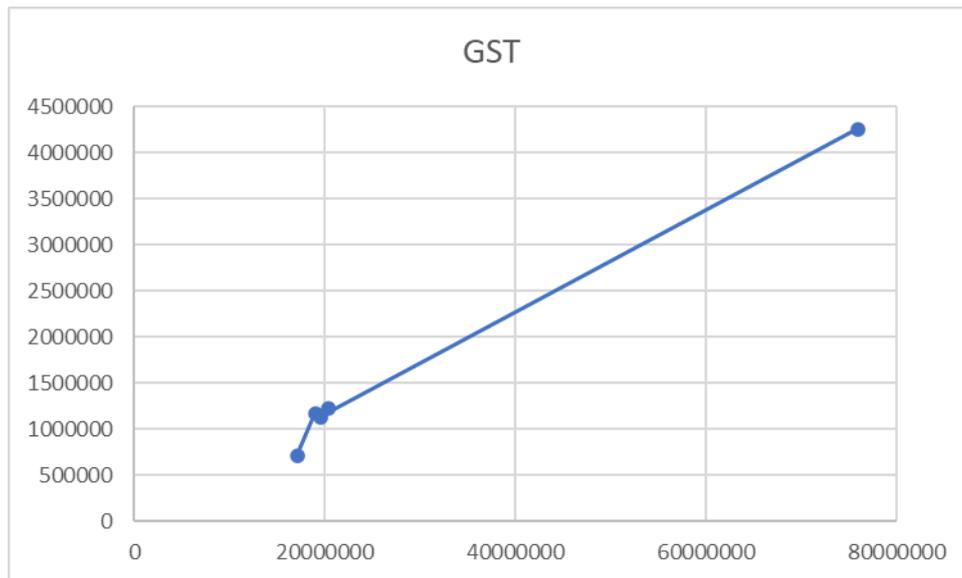
GST: <https://taxguru.in/goods-and-service-tax/gst-collections-fy-2017-18-fy-2020-21.html>

| Year | GDP (Rs. Crores) Y | GST Collection (Rs. Crore) X |
|-----------|--------------------|------------------------------|
| 2016-2017 | 15391669 | |
| 2017-2018 | 17098304 | 719078 |
| 2018-2019 | 18971237 | 1177370 |
| 2019-2020 | 20339849 | 1222117 |
| 2020-2021 | 19481975 | 1136803 |

Data Analysis

| Y | X |
|----------|---------|
| 17098304 | 719078 |
| 18971237 | 1177370 |
| 20339849 | 1222117 |
| 19481975 | 1136803 |
| 75891365 | 4255368 |

Scatter Diagram



Correlation Analysis

| Y | X | Y ² | X ² | XY |
|----------|---------|----------------|----------------|------------|
| 17098304 | 719078 | 2.92352E+14 | 5.17073E+11 | 1.2295E+13 |
| 18971237 | 1177370 | 3.59908E+14 | 1.3862E+12 | 2.2336E+13 |
| 20339849 | 1222117 | 4.13709E+14 | 1.49357E+12 | 2.4858E+13 |
| 19481975 | 1136803 | 3.79547E+14 | 1.29232E+12 | 2.2147E+13 |
| 75891365 | 4255368 | 1.44552E+15 | 4.68916E+12 | 8.1636E+13 |

Correlation Coefficient Formula

$$r = \frac{n(\sum XY) - (\sum X)(\sum Y)}{\sqrt{[n\sum X^2 - (\sum X)^2][n\sum Y^2 - (\sum Y)^2]}}$$

The values of the parameters in the above formula are substituted according to the values as follows:

- n = 4
- ΣXY = 8.1636E+13
- ΣX = 4255368
- ΣY = 1.44552E+15
- ΣX² = 4.68916E+12
- (ΣX)² = 1.810816E+13
- ΣY² = 1.44552E+15
- (ΣY)² = 1.44552E+15 * 1.44552E+15

After substituting all the values in the formula, the following answer is arrived at:
 Correlation Coefficient = 0.940622

Regression Analysis

| | Y | X | Y- \bar{Y} | X- \bar{X} | (X- \bar{X}) ² | $\frac{\sum (X - \bar{X})(Y - \bar{Y})}{\sum (X - \bar{X})}$ |
|---------|----------|---------|--------------|--------------|------------------------------|--|
| | 17098304 | 719078 | -1874537.3 | -344764 | 1.18862E+11 | 5.437160637 |
| | 18971237 | 1177370 | -1604.25 | 113528 | 12888606784 | -0.014130875 |
| | 20339849 | 1222117 | 1367007.8 | 158275 | 25050975625 | 8.636915179 |
| | 19481975 | 1136803 | 509133.75 | 72961 | 5323307521 | 6.978162991 |
| Average | 18972841 | 1063842 | | | | Sum = 21.03810793 |

The formula of regression coefficient is: $\frac{\sum (X - \bar{X})(Y - \bar{Y})}{\sum (X - \bar{X})}$

By substituting the values of parameters present in regression coefficient formula, the number is recorded as

Regression coefficient = 21.03810793

The equation of regression is:

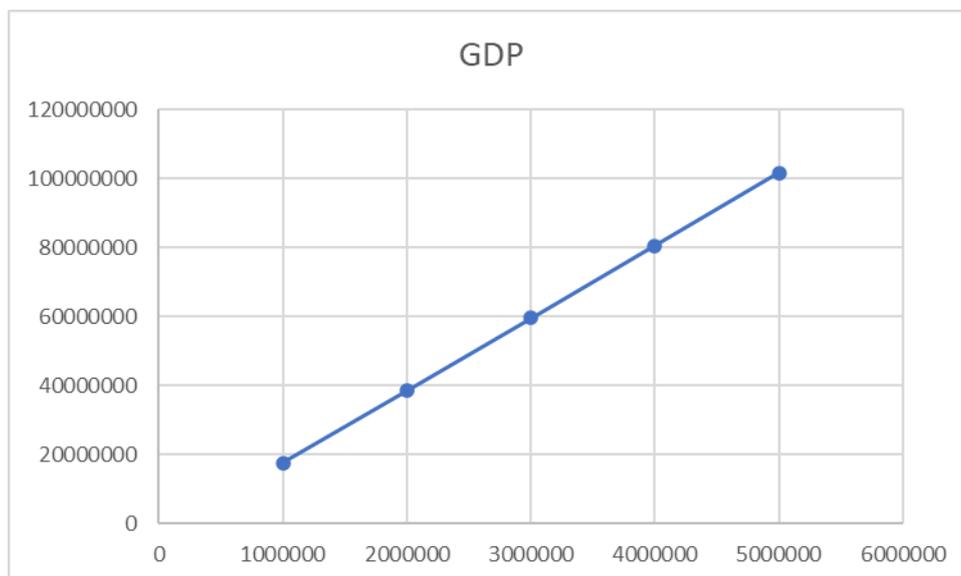
$$(Y - \bar{Y}) = b(X - \bar{X})$$

$$Y - 18972841.3 = 21.03810793 (X - 1063842)$$

$$Y = 21X - 3408381.51$$

Findings and Suggestions

1. Scatter diagram shows that the graph between GDP and GST is linear in nature.
2. The correlation coefficient between GDP and GST is 0.94. This implies that both the parameters are positively correlated to each other.
3. Null hypothesis is rejected. Alternate hypothesis is accepted.
4. The regression coefficient is 21.03. This is the slope of linear line existing between GDP and GST.
5. The constant value is -3408381.51. This implies that for every value of x, y will decrease by 3408381.51
6. The graphs between GDP and GST is drawn by using the equation generated using the equation: $Y = 21X - 3408381.51$



Conclusion

By this research, it can be confirmed that GST contributes to the growth of economy. The GST System is basically structured to simplify current Indirect Tax system in India. GST will face many challenges after its implementation and will result to give many benefits. In overall, through this study, we conclude that GST plays a dynamic role in the growth and development of our country.

The Government has implemented GST with a view of long-term better prospect for the country by various aspects. The Goods and Services Tax (GST) makes the tax system easy and thus contributing in the growth of the country. The Government applied GST by summing up of various taxes under CGST & SGST, transparent taxation, reduced raw material cost, to bring down the cost of goods and services and the ease of doing business in India. Initially, there was huge chaos regarding the enactment of GST, but many successful businesspersons supported it and considered it as a boon for the long-term development of the nation.

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