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Assessment of GST on Revenue Generation and Fiscal Policy

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Title: Assessment of GST Impact of Revenue Generation and Fiscal Policy

ABSTRACT

Goods and Services Tax (GST) and fiscal policy are both crucial for economic management, impacting how much money the government generates and how it allocates spending. GST streamlines taxation in India by merging various taxes into one coherent system, while fiscal policy aims to boost revenue through strategic imposition of levies. This study evaluates GST's effects on revenue (GDP) and important fiscal indicators such as fiscal deficit, findings include positive tax responsiveness following GST implementation—that is, tax proceeds growing in tandem with GDP. Regression examination uncovers that Indirect tax receipts prominently impact India's fiscal shortfall. Despite preliminary obstacles, GST has evolved into an efficient framework, stabilizing proceeds and propelling financial development over the long haul.

Keywords: Goods and Service Tax (GST), fiscal deficit, GDP

JEL Codes: H25,H62, E01

INTRODUCTION

Prior to the introduction of the Goods and Services Tax (GST), India's indirect tax structure was labyrinthine, riddled with overlapping levies imposed by both central and state authorities. These included excise duties, value-added taxes on goods and services, entertainment taxes, and more. Seeking to rationalize and harmonize this byzantine system, the GST was implemented nationwide in 2017. Enacted through the 101st Constitutional Amendment, the GST supplanted multiple other taxes, with rates ranging from nil to 28% - excluding a separate tariff for precious metals. Fiscal policy refers to the tactics deployed by governments to impact macroeconomic factors including demand, inflation, and unemployment through taxation, public spending, and the management of debt.

Economical governance requires the effectiveness of the fiscal policy, which is based on the status of the country's economy and the level of debt and operates in concert with monetary policy. A detailed investigation is necessary to measure the variations in the collection of revenues, assess the effects on the state of the budget, and direct subsequent legislative actions. The study paper's primary goals are to measure the difference in the amount of indirect tax revenues collected by the Government of India prior to and subsequent to the implementation of GST and to examine how the GST affected important fiscal metrics such as the fiscal deficit.

LITERATURE REVIEW

Abhilasha A C, GST: An Analysis of the Collection and Contribution of GST in FY 2022-23, (2023), In the budgetary year 2022–2023, a study explores at the effects and efficacy of India's Goods and Services Tax (GST). It looks at the ways in which different industry sectors contribute to GST revenue and its trends of collection. Through a thorough analysis, the report sheds light on the manner in which the GST has impacted the Indian economy and offers perspectives on how effective its roll-out has been.

UL Paliwal, NK Saxena, A Pandey (2019), Study employs a statistical model to examine the effects of India's recently implemented Goods and Services Tax (GST) on tax collection. As anticipated by the government, this analysis recommends a small reduction in the tax burden on firms and consumers. The study aims to provide guidance for future policy choices on efficient income generation.

P Kumar, (2018), Research shows that taxes have a big impact on consumer expenditure, investor decisions, and economic growth. Using data from the previous two years, this study examines any possible connections between the GST and India's economic expansion.

DM Naik, GB Haldankar (2021), Study looks at how the first wave of COVID-19 affected the income generated by the Goods and Services Tax (GST) in India. The authors discover a significant decrease in GST collection during the period of closure, particularly in smaller states like Goa and Manipur. Big states exhibited no discernible effects. The paper indicates that policymakers might better plan for future crises and put necessary measures in place by evaluating this income loss.

S Mukherjee (2020), Research show that by streamlining taxes, India's Goods and Services Tax (GST) sought to increase business and investment. Although it's too soon to assess its effectiveness, the first income collection isn't up to par. This study investigates the shortfall's possible origins and effects, although a thorough analysis is hampered by the paucity of accessible data.

H Tiwari, SN Singh (2018) The goal of India's recently implemented Goods and Services Tax (GST) is to streamline and harmonise indirect taxes throughout the country. It is anticipated that this transparent and efficient approach would reduce tax evasion, draw in investment, and remove obstacles for businesses. In the end, this expansion will spur India's economic development by attracting investors to the Indian stock market and supporting programmes like Made in India.

Y Garg, N Anand, B Singh, (2020), The recently imposed Goods and Services Tax (GST) in India aims to standardise and simplify indirect taxes across the nation. This transparent and efficient approach is expected to lower tax evasion, attract investment, and remove barriers for companies. Ultimately, by drawing investors to the Indian stock market and promoting initiatives like Made in India, this expansion will accelerate the economic growth of India.

B Shekhar, (2021), The study explores how the introduction of GST affected the state of Karnataka's revenue growth. It looks at the way the federal government compensates states to make up for any income losses brought on by the introduction of the Goods and Services Tax (GST). Data gathered from a variety of sources, such as official documents, publications, and government reports, forms the basis for the study.

R Gupta, S Sharma, (2021) The study looks at tax revenue collection in a variety of economic sectors, including industry, services, and agriculture. It identifies industries that make substantial contributions to tax revenue and investigates possible ways to improve the amount of money collected from underperforming sectors.

GB Haldankar, M Naik, S Patkar, (2022), The goal of the study is to give a general understanding of the structure, salient characteristics, and goals of the Indian GST law. They look at patterns in tax collections, including money from different parts of the Goods and Services Tax (GST), such the Central GST (CGST), State GST (SGST), and Integrated GST (IGST). To assess how well the GST has improved revenue generation, the analysis most likely involves comparisons with revenue collection under the prior tax regime.

Prof. Jadhav Babasaheb R., Prof. Shimpi Dipali, (2017) The study explores how the introduction of GST affected the state of Karnataka's revenue growth. It looks at the way the federal government compensates states to make up for any income losses brought on by the introduction of the Goods and Services Tax (GST). Data is gathered from a variety of secondary sources.

RESEARCH METHODOLOGY

- **Sample Design -** The analysis focuses on Finding out the impact of GST implementation on revenue and fiscal deficit of India
- **Sample size** – Analysis conducted for a period of 10 years.
- **Method of Data Collection –** The data for carrying out the research is collected from the secondary source for a time frame of 10 years. The source of data includes GSTN Website, Reserve Bank of India, World banks, Journals & Publication.
- **Data analysis Methods –** Comparative Analysis, Tax Buoyancy Test, Regression Analysis and Hypothesis Testin

DATA PRESENTATION AND ANALYSIS

- Comparative analysis among components of indirect tax receipts.
- Conducting the tax buoyancy test for the GST.
- In this research we have conducted Regression analysis and Hypothesis Testing

1.Comparative analysis among components of indirect tax receipts.

Tax Component	2012-13	2013-14	2014-15	2015-16	2016-17
Goods and Services Tax	-	-	-	-	-
Indirect tax other than GST	3,53,750.00	3,60,248.01	4,14,362.29	4,78,222.07	5,89,697.51
Total Indirect tax Receipts	**3,53,750.00**	**3,60,248.01**	**4,14,362.29**	**4,78,222.07**	**5,89,697.51**

Tax Component	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23
Goods and Services Tax	3,66,529.12	3,81,372.72	4,17,142.59	3,75,090.81	4,49,262.46	5,85,566.39
Indirect tax other than GST	2,57,726.93	2,61,991.06	2,87,914.37	4,75,639.51	4,84,395.12	4,88,461.80
Total Indirect tax Receipts	**6,24,256.05**	**6,43,363.78**	**7,05,056.96**	**8,50,730.32**	**9,33,657.58**	**10,74,028.19**

Source: cag.gov.in

Table No 1: Indirect Tax Receipts

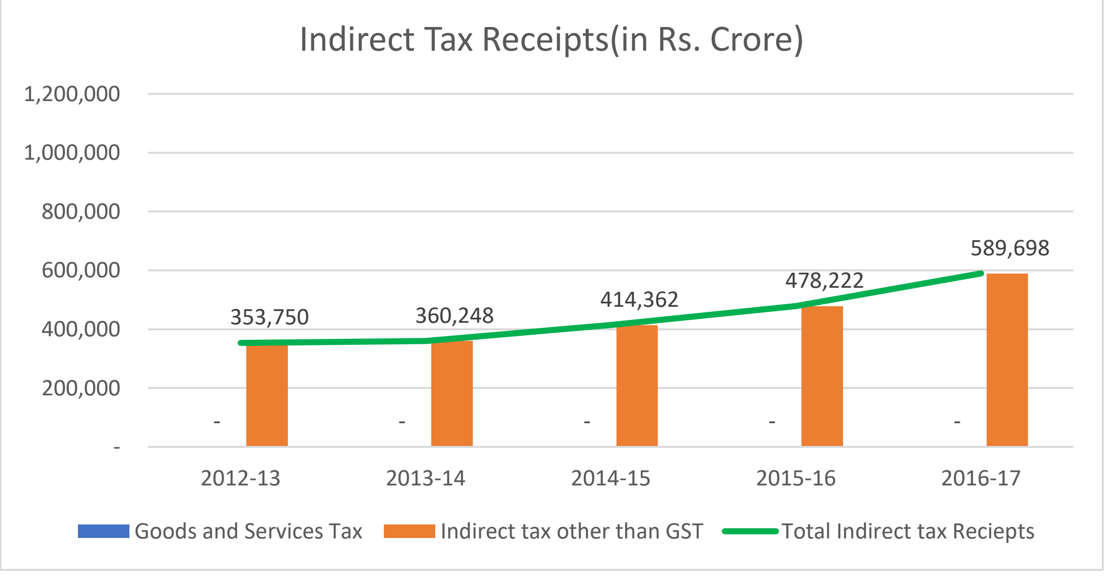


Figure No 1: Pre GST Indirect Tax Receipts

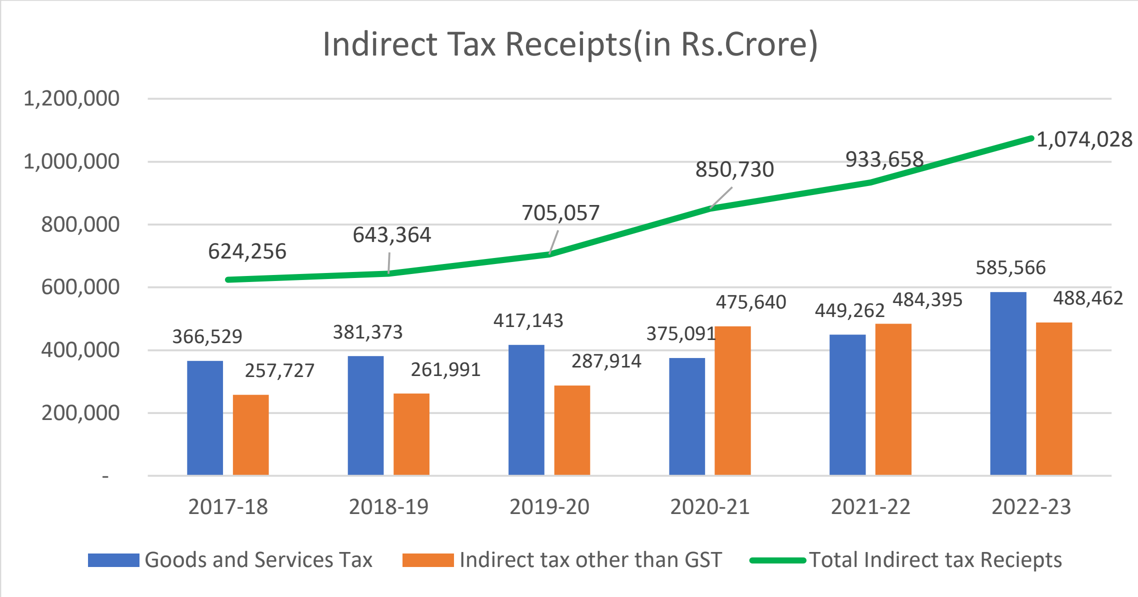
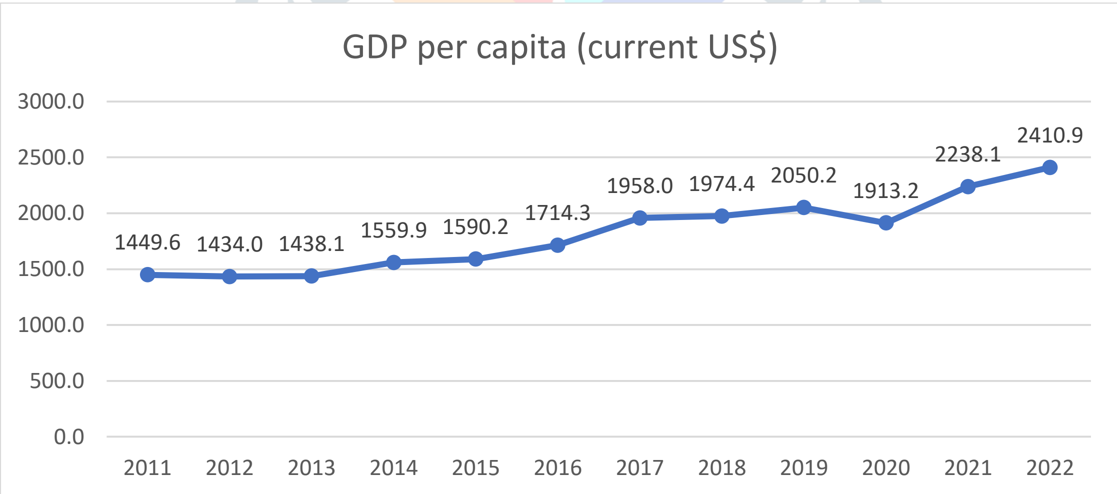


Figure 2: Post GST Indirect Tax Receipts

India's indirect tax revenue increased dramatically between 2012–13 and 2022–23, from ₹3.54 lakh crore to ₹10.74 lakh crore. This suggests a broader tax base or a more vibrant economy. The significant rise in GST collection is probably due to its effectiveness in reducing tax evasion and simplifying the way taxes are collected. In comparison with GST, other indirect taxes have grown more slowly, such as gasoline excise taxes and import customs duties.

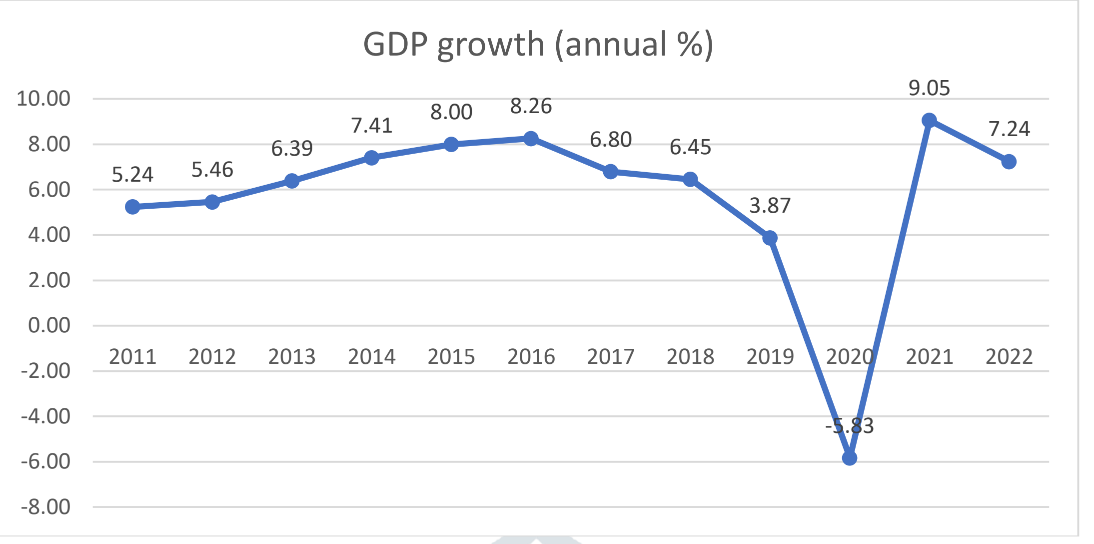
Given below is the data pertaining to GDP and Fiscal Deficit



Source: worldbank.org

Figure No 3: GDP Per Capita

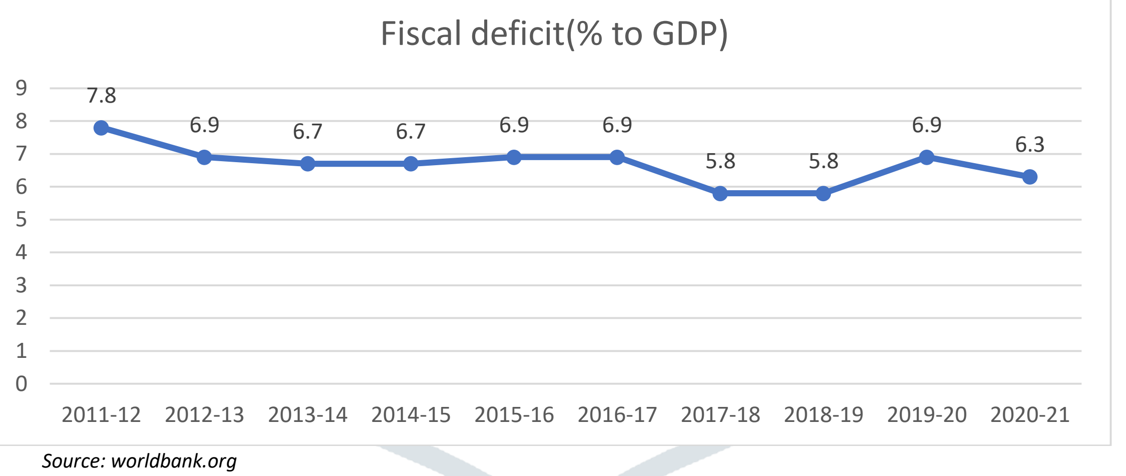
India's GDP per capita has been rising over the time. This raises the possibility that Indian residents' average income or standard of life may increase. The gain in GDP per capita, however, may be mostly due to India's overall economic development, as seen by an increase in GDP. Despite the general upward trend, there are yearly fluctuations in GDP per capita. This implies that there hasn't been a complete consistency in economic growth. A greater standard of life isn't always implied by a higher GDP per capita because living expenses might differ.



Source: worldbank.org

Figure No 4: GDP Growth (% annual)

The figure displays India's estimated GDP growth rate from 2011 to 2024. Between 2014 and 2017, the GDP growth rate before the Goods and Services Tax appears to have been varying between 5% and 8%. Neither an upward nor a downward trend is evident. But starting in 2020, the growth rate appears to be more than 6%.



Source: worldbank.org

Figure No 5: Fiscal Deficit (% to GDP)

The GDP ratio seems to be positive for every year, suggesting that there was a fiscal deficit all through the time. Most years varies in the ratio between 6.7% and 7.9%, indicating an ongoing deficit. When comparing the latter years (2018–21) to the early years (2011–14), there appears to be a little rise in the deficit. One possible reason for the fiscal imbalance is that the government may be spending more on defence, infrastructure, and social programmes than it is bringing in. Alternatively, the government may not be making enough money from taxes or other sources to pay for its outlays. A weak economy may result in reduced tax receipts and increase the national debt.

2.Computation of Tax Buoyancy Test for GST

Tax Buoyancy is the actual or observed change in tax revenue relative GDP.

Tax Buoyancy = Percentage change in tax revenue / Percentage change in change in GDP

Table No 2: Tax Buoyancy

Year	GDP growth%	Indirect Tax Revenue Growth %	Buoyancy
2012	5.46	21.21	3.89
2013	6.39	1.84	0.29
2014	7.41	15.02	2.03
2015	8.00	13.35	1.67
2016	8.26	23.31	2.82
2017	6.80	5.86	0.86
2018	6.45	3.06	0.47
2019	3.87	9.59	2.48
2020	-5.83	20.66	3.54
2021	9.05	9.75	1.08
2022	7.24	15.03	2.08

Source: worldbank.org, cag.gov.in

A stable tax system is demonstrated by the fact that the increase of indirect tax income has generally surpassed GDP growth. Tax buoyancy, however, varies greatly. The average buoyancy between pre-GST (2012–2016) and post–GST (2017–2022) is 1.926, showing negligible difference . Although there is buoyancy in both eras, a little increase after the GST indicates the new system may have improved the effectiveness of tax collection.

3.Regression Analysis and Hypothesis Testing

Table No 3: Fiscal Deficit and Indirect Tax Receipts (In US Dollars)

Year	Fiscal Deficit	Indirect Tax Receipts
2012-13	98.94724112	6496.64676
2013-14	96.34981934	6615.983229
2014-15	104.5108732	7609.796266
2015-16	109.7220289	8782.586182
2016-17	118.2852881	10829.84146
2017-18	113.5622492	11464.51179
2018-19	114.5139084	11815.42676
2019-20	141.4613022	12948.4269
2020-21	120.5328432	15623.72969
2021-22	152.1926457	17146.69538

Source: worldbank.org, cag.gov.in

Regression Analysis

To Analyse the Relationship Between Fiscal Deficit and Indirect tax Receipts

X - Indirect Tax Receipts
Y - Fiscal Deficit

Hypothesis Testing:

Null Hypothesis (H0): There is no significant relationship between Fiscal Deficit and Indirect tax receipts.

Alternative Hypothesis (H1): There is a significant relationship between Fiscal Deficit and Indirect tax receipts.

SUMMARY OUTPUT

Regression Statistics	
Multiple R	0.870566387
R Square	0.757885834
Adjusted R Square	0.727621563
Standard Error	9.255085134
Observations	10

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	2145.035143	2145.035143	25.0422632	0.001047286
Residual	8	685.2528067	85.65660083		
Total	9	2830.287949			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.0%*	*Upper 95.0%*
ntercept	70.73084995	9.699660196	7.29209565	0.00008453	48.3633934	93.0983065	48.3633934	93.098306
ndirect ax eceipts	0.004232638	0.000845813	5.00422454	0.001047286	0.00228219	0.00618309	0.00228219	0.0061830

Interpretation:

The regression equation for the volume of UPI transactions is given by (Y = 70.73 + 0.0042X).

The coefficient of 0.0042 suggests that for every unit increase in Indirect Tax Receipts, the Fiscal Deficit increases by approximately 0.0042 units.

The R^2 value (0.76) suggests that approximately 76% of the variation in Fiscal Deficit can be explained by changes in Indirect Tax Receipts.

The t-statistic of 5.00 is significant with a p-value of 0.001, indicating that Indirect Tax Receipts have a statistically significant impact on Fiscal Deficit.

- Therefore, we reject the null hypothesis (H0) and accept the alternative hypothesis (H1), concluding that there is a significant relationship between Fiscal Deficit and Indirect tax receipts.

FINDINGS

Prior to the enactment of the GST, GDP growth was erratic; nevertheless, after a brief decline, it began to exceed 6% in 2020. The first decline might have been caused by companies adjusting for GST. The GDP per capita has been gradually increasing, which suggests that average income has improved. But the growth isn't constant all the time. India's government consistently spends in excess of what it brings in, a situation known as a fiscal imbalance. Inadequate revenue or excessive spending could be the cause of the deficit. Since its introduction in 2017, GST collection has increased dramatically, demonstrating its effectiveness in bringing in money. The economic reasons may have contributed to the recent decline. Compared to indirect tax payments, direct tax receipts have increased more steadily. The establishment of the GST is likely to have increased indirect taxes because it broadened the tax base and increased efficiency. Notwithstanding volatility, positive tax buoyancy is seen in both the pre- and post-GST eras, indicating an effective tax structure. A possible benefit for tax collection is suggested by the marginal increase in buoyancy following the introduction of the GST. Fiscal deficit and receipts from direct taxes, indirect taxes, non-tax revenue, grants-in-aid, and contributions are positively correlated, according to regression analysis. Fiscal Deficit is statistically significantly impacted by indirect tax receipts, as indicated by the P Value of 0.001. It is decided to accept the alternative hypothesis and reject the null hypothesis (H0).

CONCLUSION

In conclusion, The Assessment Of GST's Impact On Revenue Generation And Fiscal Policy emphasizes how revolutionary it is for India's tax system. Despite initial difficulties, the Goods and Services Tax (GST) has developed into a more effective and efficient tax system that has helped to stabilize revenue, enhance compliance, and create an atmosphere that is favourable to economic growth. Realizing the full potential of GST as an integral part of India's fiscal system would need ongoing efforts to alleviate implementation obstacles and improve policy effectiveness.

RECOMMENDATIONS

- Overall tax collection can be improved by using information from e-invoices and other sources to pinpoint audit targets more precisely and detect possible tax evaders.
- Focused education campaigns and simplified processes for submitting GST filings can help small businesses feel more comfortable with the system and reduce economic turbulence.
- Regular analysis of how tax rates and bands affect certain sectors and the country's economy in its entirety may identify areas where changes may be made to promote development without compromising revenue.
- Increased stringency scrutiny procedures and enforcing penalties for default in adhering can reduce loopholes in interstate commerce and boost IGST receipt.

LIMITATIONS OF THE STUDY

- Examining statistics from strictly five years after implementation may not provide a complete picture of the enduring impacts of GST. Complex budgetary adjustments, such as the GST, may provide varying outcomes over the course of time.
- It could be challenging to draw a clear link between changes in budgetary or economic indicators and the implementation of the GST. Other variables could also be involved, such as changes in tax adherence or the spread of the COVID-19 pandemic.

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