

# **Pandemic and GST Revenue: An Assessment for Union and States**

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**Abstract**

Uncertainties surrounding GST collection in financial year 2020-21 have heightened due to ongoing COVID-19 pandemic. Given that economic activity is gradually returning to pre-pandemic levels, this paper projects overall as well as state-wise GST collection for 2020-21. The estimated GST collection of 2020-21 is the sum of realized GST collection during April to October 2020 and projected GST collection during November 2020 to March 2021. The study builds different scenarios based on monthly (year-on-year) growth experience with different assumptions about the likely base of GST collection for the remaining months of the current fiscal year. The revenue gap is estimated for states by taking the difference between the projected GST collection and revenue under protection in GST for 2020-21. The difference between the projected GST compensation cess collection in 2020-21 and sum of the revenue gaps of states provides the expected additional revenue requirement for full GST compensation payments to states. Acknowledging that a part of revenue loss is due to the pandemic, and that the compensation mechanism to fill the shortfall for 2020-21 and coming years is still evolving in the GST Council, present paper contributes to the ongoing debate on GST compensation requirements of states by projecting alternative set of numbers for the year 2020-21. As per our estimates, shortfall in GST compensation fund is expected to be Rs. 1.95 lakh in the best case scenario as against Rs. 2.35 lakh crore estimated by the GST Council. In the worst case scenario, the shortfall will be Rs. 2.45 lakh crore for the fiscal year 2020-21.

**Key Words:** Revenue Projection, Goods and Services Tax (GST), Revenue Under Protection (RUP), GST Compensation, Tax Effort, Tax Compliance, India.

**JEL Classification:** H25, H71, H68, C53

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## 1. Introduction

Revenue impact of COVID-19 pandemic would be different across different economies depending on duration and severity of the impact of pandemic in terms of mortality and morbidity, stringency; duration and spatial spread of confinement measures adopted, structure of the economy, exposure to international flows including trade and tourism, structure and composition of government revenues, and measures taken to cushion firms and households from the impact of the pandemic (OECD 2020). Since revenue realization of economies depends on tax and non-tax payment cycles, it is too early to present a comparative assessment of revenue impact of COVID-19 pandemic across countries. Moreover, realization of benefits of fiscal measures adopted by different economies to stimulate the economy may differ depending on speed of transmission. In addition, measures adopted by tax administrations to facilitate ease-of-tax compliance by allowing deferment of tax payments, extending deadlines of filing tax returns, etc. may delay in realization of revenue.

Some early signs of revenue impacts of the pandemic are available from Asian economies. Japan reports a revenue fall of 9.2 percent in the year ending March 2020 (Reuters 2020), and in Korea revenue for Q1 of 2020 has declined by KRW 8.5 trillion relative to Q1 of 2019 (a fall of approximately 11%) (Eun-joo 2020). Combined government deficit (as measured by net borrowing) of 27 countries of the European Union have increased from 0.3 percent of aggregate GDP in Q2 of 2019 to 11.4 percent of aggregate GDP in Q2 of 2020. Since a significant share of revenue of South Asian economies comes from trade taxes (on average 15% of total revenue during 2015-17, according to WTO as reported in OECD 2020), current slowdown in global trade is expected to impact severely than during global financial crisis (OECD 2020). It is also likely that all sources of government revenues will decrease due to fall in economic activities. Being most responsive to economy cycles, revenue from Corporate Income Tax (CIT) is likely to decrease more than the fall in economic activity. Any fall in employment and /or wages and salaries is likely to impact Personal Income Tax (PIT) collection. Tax from consumption like VAT/ GST is also likely to fall due to the impact of lockdowns and lower consumer confidence, as well as a potential shift towards the consumption of basic necessities, which are either exempted or taxed at lower rates (OECD 2020).

Though the spread of COVID-19 is on an apparent decline in India, the economic impact of the pandemic is still evolving, as new waves of COVID-19 infection are striking locally. Any estimate on revenue impact, thus, may not be free from shortcoming and constraints. However, as GDP data of last two quarters is now available, and as GST shows the brightest sign of recovery among all revenue streams, an attempt is made in this paper to project GST revenue for 2020-21. The paper further delves into the issue of compensation to states in the

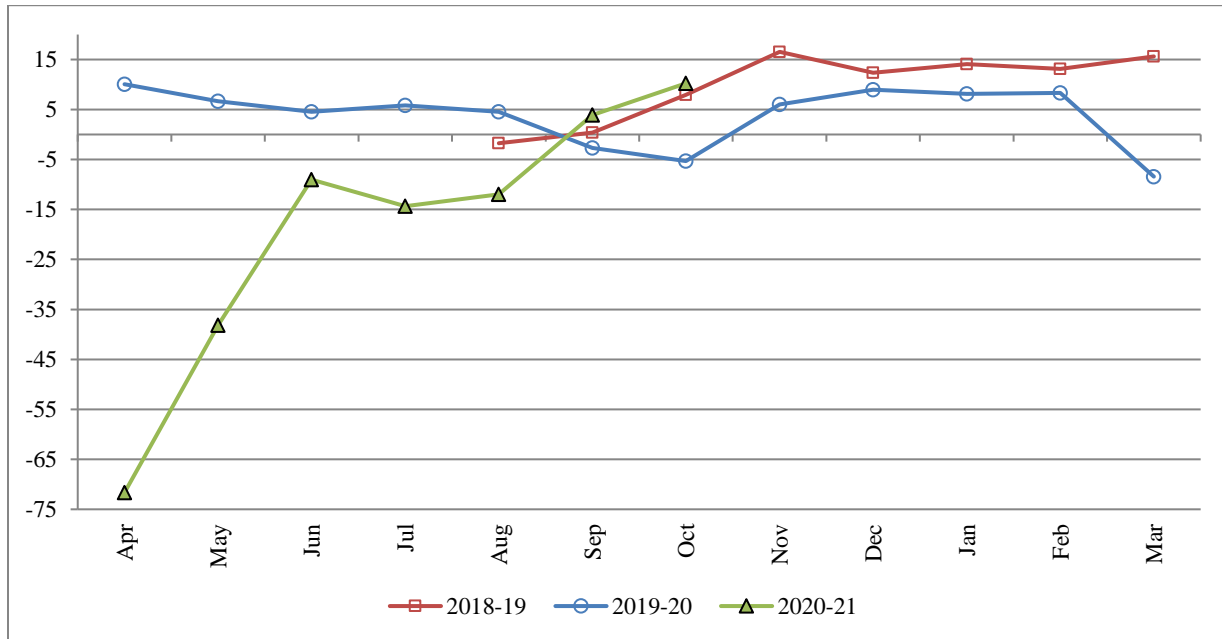
case of revenue shortfall enshrined in the prevailing law, and presents an estimate of GST revenue shortfall that Indian states may likely to face in 2020-21.

GST collection of October 2020 shows 10.2 percent Year-On-Year (YOY) growth. October 2020 is the second consecutive month (besides September 2020) of the current fiscal year which shows a positive growth (YOY) in GST collection (Figure 1). This is a positive sign of recovery of Indian economy from the ongoing COVID-19 pandemic. The growth in GST collection realized in the month of October 2020 is a combination of gradual unlocking of the economy, increase in economic activity, and increase in consumption demand due to festive season. However, the positive growth cannot be fully attributed to delayed submissions of GST returns (GSTR-3B) of previous months of the current fiscal year, as commented by many.

In 2019-20 growth rates in GST collection declined during September (-3%) and October (-5%) with respect to respective months of 2018-19. After maintaining an average monthly (YOY) growth rate of 6 percent during April to August 2019, the fall in growth rates in GST collection during festive months (September and October of 2019) and in March 2020 (-8%) resulted in fall in growth rate in overall GST collection of 2019-20 to 3.8 percent. Barring the three months, average monthly growth rate was 7 percent in 2019-20. Average monthly (YOY) growth rate in GST collection was 14.4 percent during November 2018 to March 2019. During November 2019 to March 2020 average monthly (YOY) growth rate fell down to 4.6 percent. The difference in growth path of 2019-20 with respect to 2018-19 may be attributed to several structural changes initiated by the GST Council in terms of increasing the threshold of GST registration from Rs. 20 lakh to Rs. 40 lakh with effective from 1 April 2019,<sup>1</sup> reducing tax rates of several commodities during 2019-20, besides fall in nominal growth rate in Gross Value Added (GVA at basic prices, 2011-12 series) from 10.5 percent in 2018-19 to 7 percent in 2019-20 (Appendix Table A1).

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<sup>1</sup> In the 32<sup>nd</sup> meeting on 10 January 2019, the GST council decided to increase GST registration threshold for sales of goods to Rs. 40 lakh from Rs. 20 lakh for general category states and from Rs. 10 lakh to Rs. 20 lakh for special category states with effective from 1 April 2019. There was no change in threshold limits for service providers. All general category states (except Telangana) and Himachal Pradesh, Delhi, Jammu & Kashmir, Ladakh, Assam opted for Rs. 40 lakh threshold. Puducherry, Meghalaya, Mizoram, Tripura, Manipur, Sikkim, Nagaland, Arunachal Pradesh and Uttarakhand opted for Rs. 20 lakh threshold. The threshold of annual turnover for composition scheme has also increased from Rs. 75 lakh to Rs. 1.5 crore with effective from 1 April 2019. The council also decreased composition rate from 2 percent to 1 percent for manufacturers. However, the limit remains unchanged at Rs. 75 lakh for North Eastern States and Uttarakhand. New scheme introduced with a fixed GST rate of 6 percent (3% CGST and 3% SGST) for independent service providers as well as mixed suppliers of goods and services with an annual turnover of up to Rs. 50 lakh in the preceding financial year.

**Figure 1: Monthly Year-on-Year Growth Rate in GST Collection (%)**


Source: Computed based on data available in the public domain

GST collection in October 2020 shows 17.12 percent growth from the average GST collection during Q2 (July to September) of 2020-21 (i.e., Rs. 89,784 crore). According to monthly press releases of the Department of Revenue (DoR), Ministry of Finance, 80 lakh GSTR-3B returns are submitted in the month of October 2020 as compared to 73.83 lakh in October 2019 and 67.45 lakh in October 2018.<sup>2</sup> According GSTN online database, till July 2020 cumulatively 262.15 lakh GSTR-3B returns are filed for 2020-21 (as on 31 August 2020). The corresponding figure for 2019-20 up to July 2019 was 383.60 lakh and it was 355.47 lakh for 2018-19 (as on 30 June 2020). This shows that pending GSTR-3B returns for 2020-21 are expected to be filed over the months of the current financial year and therefore corresponding revenues are expected to be realized. However, it is also expected by some commentators that cumulative GSTR-3B return submission in 2020-21 may not reach the level that is achieved in 2019-20, due to impacts of COVID-19 pandemic on economic activities. They argue that many businesses are still not operating to their full capacity/potential, therefore it is also expected that average GST collection per GSTR-3B return would be less in 2020-21 as compared to the previous years. Now the question is whether GST collection for the remaining months of the current fiscal year will follow a positive growth

<sup>2</sup> GSTR-3B returns are monthly consolidated statement of outward, inward supplies (turnovers) and tax liabilities of taxpayers. Taxpayers pay taxes after adjusting available input tax credits by submitting GSTR-3B returns. GSTR-1 returns are monthly detailed statements of outward supplies of taxpayers.

and if so what will be the likely GST revenue for the current fiscal year. This paper develops alternative GST revenue projections for 2020-21 based on certain assumptions.

Given the experience of GST collection during last 13 quarters, in this paper we project overall as well as state-wise GST collection for 2020-21. The study builds different scenarios based on historical monthly (year-on-year) revenue growth experience and also taking different base of GST collection. State-wise revenue gaps are estimated by taking the difference between the projected GST collection and revenue under protection (RUP) in GST for 2020-21.<sup>3</sup> Apart from collections from components of GST (i.e., CGST, SGST, IGST), we project revenue corresponding to GST compensation cess (GSTCC) collection, which was introduced to fill the gap between the RUP and actual collection. The difference between the projected GST compensation cess collection for 2020-21 and the sum of revenue gaps of states (RUP minus projected State GST collection including IGST settlement) gives us the expected additional revenue requirement to provide full GST compensation to states in 2020-21. This is the revenue which projected GSTCC collection for 2020-21 may not be able to generate. Present paper depends on online database of the GSTN and monthly press releases of the Department of Revenue (DoR) for data analysis.

In the next section, we briefly discuss methodology for projecting GST collection. We present our results in section 3 and it is followed by projection of demand for GST compensation in section 4. Since GST collection depends on compliance in filing GST returns, we discuss state of compliance in filing GST returns in section 5. We validate our projections in section 6 and draw our conclusions in section 7.

## 2. Methodology to Project GST Collection

Since stabilization of tax buoyancy in the GST regime may take some time (Figure 2) and uncertainties surrounding GST collection have heightened due to ongoing COVID-19 pandemic, we have avoided using methodologies discussed in literature to project GST collection for 2020-21 (Mukherjee and Rao 2019). Though some projections on economic growth rate of 2020-21 are available,<sup>4</sup> given the magnitude of disruptions and damages caused by the COVID-19 pandemic, any assumption on prospective tax buoyancy for 2020-21 may not be free from criticism. Given the constraints of the existing methodologies, we

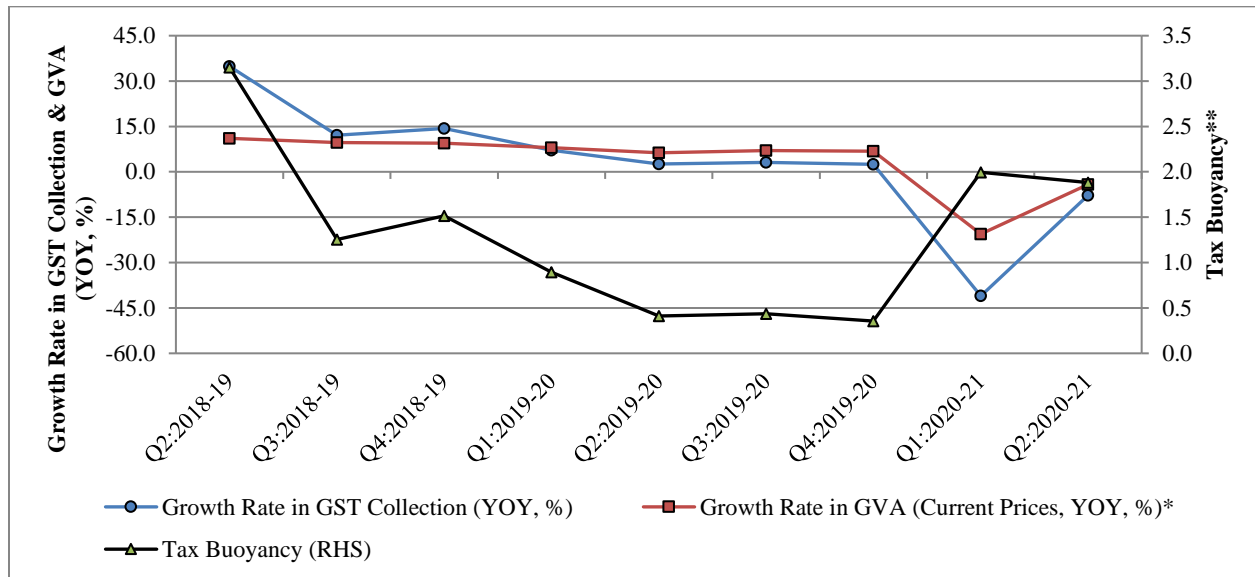
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<sup>3</sup> See section 4 of this paper for discussion on Revenue Under Protection (RUP) in GST. For a state, RUP is the revenue which is subsumed into GST with reference to the base year (i.e., 2015-16) and 14% annual growth rate admissible for revenue projection.

<sup>4</sup> In October 2020, Reserve Bank of India (RBI) projects 9.5% contraction of Indian economy in 2020-21. According to the World Bank, India's GDP growth is likely to contract 9.6% in FY21. In October 2020 issue of World Economic Outlook, the International Monetary Fund (IMF) projects 10.3 percent contraction of India's real GDP during 2020-21.

have explored an alternative method to project GST collection of 2020-21 and it is discussed below.

**Figure 2: Quarterly Growth Rate in GST Collection, Gross Value Added (GVA) and Tax Buoyancy**



Notes: \*-Gross Value Added (GVA) at Basic Prices (2011-12 Series, Current Prices)

\*\* -Tax Buoyancy = Growth Rate in GST Collection (YOY,%) / Growth rate in GVA (YOY,%)

Source: Estimated based on monthly press releases of PIB and EPWRF's India Times Series Database

Given the experience of GST collection during July 2017 to October 2020, we first try to understand the pattern of GST collection in India (Table 1). This shows that GST collection falls during Q2 as compared to Q1. An in-depth assessment of causes of falling GST collection during Q2 may be useful. During Q2 of 2018-19, GST collection on account of domestic economic activities (CGST, SGST, IGST- Domestic Component and GSTCC - Domestic Component) falls. Fall in domestic components of IGST and GSTCC collection to some extent compensated by higher growth in IGST and GSTCC collections from imports during Q2 of 2018-19. However, we have not observed similar growths in IGST and GSTCC collections from imports during Q2 of 2019-20; as a result overall IGST and GSTCC collections fall in Q2 of 2019-20. Fall in IGST collection from imports continued during Q3 and Q4 of 2019-20 which resulted in fall in overall GST collection. Since these components (IGST and GSTCC collections from imports) together contribute on average one-quarter share in total GST collection (Appendix Table A2), any volatility in GST collection from this basket of substantial revenue is expected to have impact on overall GST collection. Therefore, assuming average GST collection during Q2 of 2020-21 as a base for the remaining months

of the current fiscal year would be an alternative to assume GST collection in October 2020 as a base. Moreover, assuming average GST collection during Q2 of 2020-21 as a base will produce the lower bound estimate of full year projection, as compared to GST collection in October 2020 in our analysis. Growth in GST collection in October 2020 (10.2%) is outstanding as compared to growth observed in October 2019 (-5%) and October 2018 (7.9%).

**Table 1: Component-wise, Sequential Growth Rate in Quarterly GST Collection in India (QoQ, %)**

Component of GST	2017-18		2018-19			2019-20			2020-21
	Q2 to Q3	Q3 to Q4	Q1 to Q2	Q2 to Q3	Q3 to Q4	Q1 to Q2	Q2 to Q3	Q3 to Q4	Q1 to Q2
CGST	40.10	7.80	-7.90	6.93	12.11	-8.83	9.30	6.23	44.85
SGST	37.78	3.01	-7.07	5.96	11.97	-8.60	8.02	4.59	53.19
IGST	11.35	0.44	0.49	0.79	-1.64	-5.09	-0.69	1.66	42.25
<i>IGST – Domestic</i>	35.93	-0.04	-7.29	4.34	4.23	-10.67	8.81	4.74	44.81
<i>IGST – Imports</i>	-7.46	0.99	9.24	-2.60	-7.65	1.45	-10.50	-2.21	39.44
GST Compensation Cess (GSTCC)	46.18	3.16	-0.13	-0.27	6.41	-8.96	0.94	9.40	44.34
<i>GSTCC – Domestic</i>	50.07	3.16	-0.53	-1.33	6.88	-7.83	0.46	9.49	45.81
<i>GSTCC – Imports</i>	17.07	3.16	3.56	9.25	2.58	-17.90	5.24	8.63	32.91
<b>Total GST</b>	<b>23.74</b>	<b>2.50</b>	<b>-2.80</b>	<b>2.87</b>	<b>4.52</b>	<b>-6.97</b>	<b>3.37</b>	<b>3.88</b>	<b>45.43</b>
<i>GST without GSTCC</i>	21.93	2.43	-3.04	3.16	4.35	-6.79	3.58	3.41	45.52

Source: Computed based on monthly press releases of the Department of Revenue, Ministry of Finance, Government of India.

Turning to year-on-year growth rates, analysis of quarterly GST collection shows a fall in growth rate of IGST collection since Q2 of 2019-20 (Table 2). Growth rate in IGST collection from imports continues to fall since Q1 of 2019-20. On average half of the overall GST collection comes from IGST (inter-state and international trade) and therefore continuous fall in growth rate in IGST collection may have caused fall in growth rate of overall GST collection. Except during Q4 of 2019-20, quarterly growth rate in GSTCC collection is also continuously falling since Q2 of 2019-20. This could be attributed in part to fall in sales of passenger cars in India. As compared to 2018-19, year-on-year growth (YOY) rates in



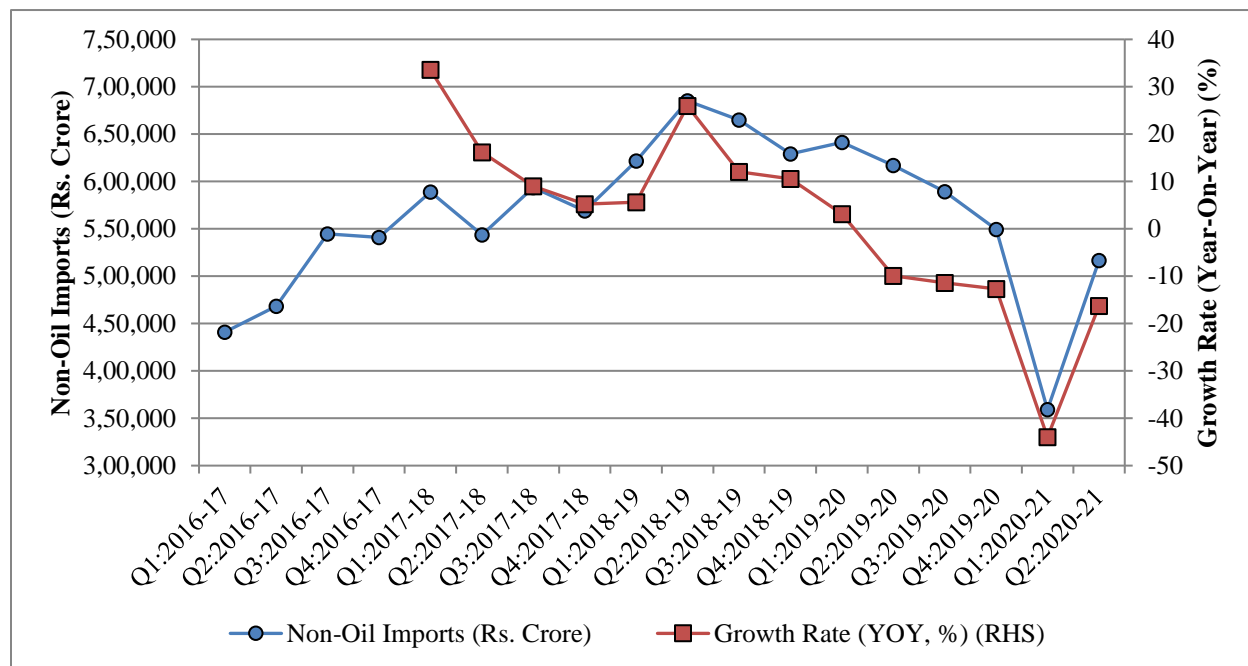
quarterly GST collection are lower in 2019-20. The ongoing pandemic has further reduced the GST collection in 2020-21.

**Table 2: Component-wise, Quarterly (Year-On-Year) Growth Rate in GST Collection in India (%)**

Component of GST	2018-19			2019-20				2020-21	
	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2
CGST	53.0	16.8	21.4	13.6	12.4	14.9	8.9	-40.0	-4.7
SGST	42.6	9.7	19.2	13.2	11.4	13.5	6.1	-45.5	-8.7
IGST	25.1	13.2	10.9	2.2	<b>-3.5</b>	<b>-4.9</b>	<b>-1.7</b>	<b>-39.0</b>	<b>-8.5</b>
<i>IGST - Domestic</i>	41.0	8.2	12.9	4.1	0.3	4.6	5.2	-40.9	-4.2
<i>IGST - Imports</i>	12.9	18.8	8.6	-0.1	<b>-7.2</b>	<b>-14.7</b>	<b>-9.7</b>	<b>-36.7</b>	<b>-13.0</b>
GST Compensation Cess (GSTCC)	52.1	3.7	7.0	7.2	-2.2	-1.1	1.7	-41.9	-7.8
<i>GSTCC - Domestic</i>	55.1	2.0	5.6	5.5	-2.3	-0.5	1.9	-42.0	-8.3
<i>GSTCC - Imports</i>	29.5	20.8	20.1	23.7	-1.9	-5.5	0.1	-40.8	-4.1
<b>Total GST</b>	34.8	12.1	14.3	7.2	2.6	3.1	2.4	-41.0	-7.8
<i>GST without GSTCC</i>	33.5	12.9	15.0	7.2	3.0	3.4	2.5	-41.0	-7.8

Source: Computed based on monthly press releases of the Department of Revenue, Ministry of Finance, Government of India.

Fall in IGST from imports is attributed to fall in growth rate in non-oil imports in India. Year-on-year growth rate of non-oil imports is in negative zone since Q2 of 2019-20 (Figure 3). Perhaps increasing basic customs duty for several items in the last two consecutive union budgets may have reduced demands for imports. Alternatively it may be due to reduction in cascading of taxes in the GST regime, domestic goods have become competitive; therefore demands for imports have declined. However, the rise in domestic GST collection is not adequate to compensate the fall in IGST collection from imports which may have resulted in overall fall in growth rate of GST collection. This shows that perhaps there is a need for revising tax rates on goods and services and / or improving tax compliance by increasing efficiency of GST administration to augment GST collection and compensate the loss of GST revenue due to falling imports in India.

**Figure 3: India's Non-Oil Imports and Growth Rate**


Source: Computed based on EPWRF's Indian Time Series Database

### 3. GST Revenue Projections

We have projected GST collection for the remaining months (November 2020 to March 2021) of the current fiscal year based on four alternative scenarios (Figure 4). We summarize the assumptions across scenarios and projected GST collections in Table 3.

#### 3.1 Projection of Overall GST Collection of 2020-21

In **Scenario I**, we assume GST collection of October 2020 as a base and project GST collection for November 2020 to March 2021 based on monthly growth (YOY) in GST collection during November 2019 to March 2020 with respect to corresponding months of 2018-19. For example, if  $B_j$  is the base of GST revenue in the  $j^{\text{th}}$  scenario and  $r_{tj}$  is the monthly growth (YOY) rate (in %) of GST collection of the  $t^{\text{th}}$  month in  $j^{\text{th}}$  scenario, the projected GST collection of the  $t^{\text{th}}$  month under the  $j^{\text{th}}$  scenario would be  $G_{tj} = B_j * (1 + (r_{tj}/100))$ . Similarly, the projected GST collection of the  $(t+1)^{\text{th}}$  month under the  $j^{\text{th}}$  scenario would be  $G_{(t+1)j} = B_j * (1 + (r_{(t+1)j}/100))$ . The estimated GST collection in Scenario I is Rs. 1,109,636 crore (sum of realized GST collection during April to October 2020 and projected GST collection during November 2020 to March 2021) and it is 9.2 percent lower than GST collection realized in 2019-20 (i.e., Rs. 1,222,131 crore).

In **Scenario II**, we assume GST collection of October 2020 as a base and project GST collection for November 2020 to March 2021 based on monthly growth (YOY) in GST collection during November 2018 to March 2019 with respect to corresponding months of 2017-18. The estimated GST collection in Scenario II is Rs. 1,160,957 crore and it is 5.01 percent lower than the GST collection realized in 2019-20.

In **Scenario III**, we assume average monthly GST collection during Q2 of 2020-21 (i.e., Rs. 89,784 crore) as a base and project GST collection during November 2020 to March 2021 based on monthly growth (YOY) in GST collection during November 2019 to March 2020 with respect to corresponding months of 2018-19. The estimated GST collection in Scenario III is Rs. 1,029,250 crore and it is 15.78 percent lower than the GST collection of 2019-20.

In **Scenario IV**, we assume average monthly GST collection during Q2 of 2020-21 (i.e., Rs. 89,784 crore) as a base and project GST collection during November 2020 to March 2021 based on monthly growth (YOY) in GST collection during November 2018 to March 2019 with respect to corresponding months of 2017-18. The estimated GST collection in Scenario IV is Rs. 1,073,069 crore and it is 12.2 percent lower than the GST collection of 2019-20.

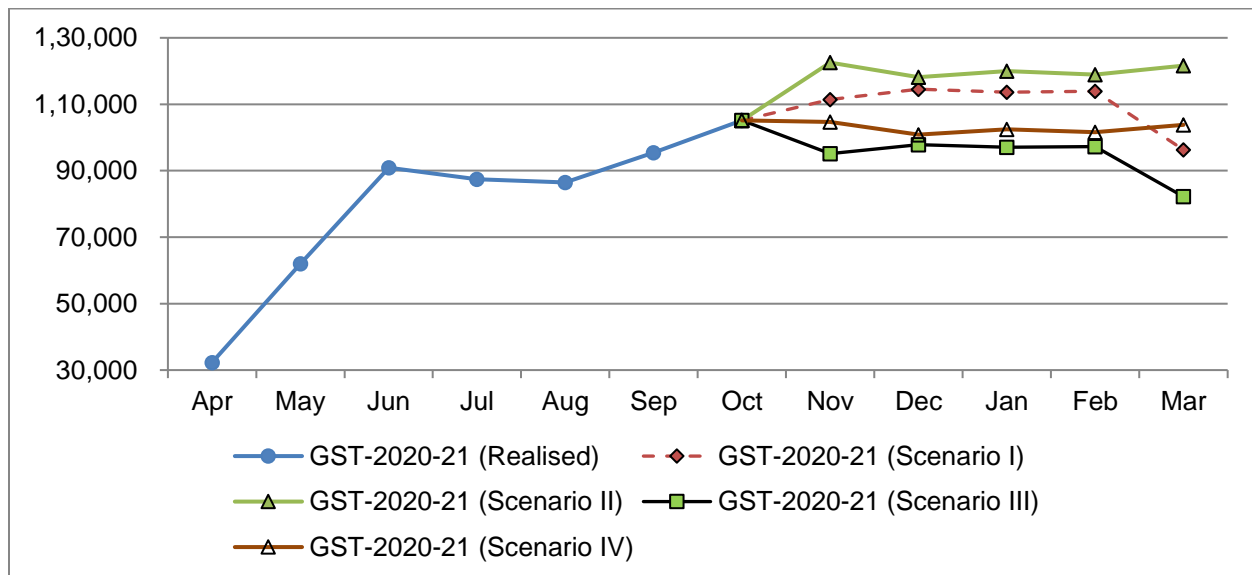
**Table 3: Scenarios, Assumptions and Projected GST Collection for 2020-21**

Scenario	Base GST Revenue	Monthly Growth during November 2020 to March 2021	Projected GST Collection for 2020-21 (Rs. crore)
Scenario I	GST collection of October 2020 (i.e., Rs. 105,155 crore)	November 2019 to March 2020 with respect to corresponding months of 2018-19	1,109,636
Scenario II	Same as Scenario I	November 2018 to March 2019 with respect to corresponding months of 2017-18	1,160,957
Scenario III	Average monthly GST collection during Q2 of 2020-21 (i.e., Rs. 89,784 crore)	Same as Scenario I	1,029,250
Scenario IV	Same as Scenario III	Same as Scenario II	1,073,069

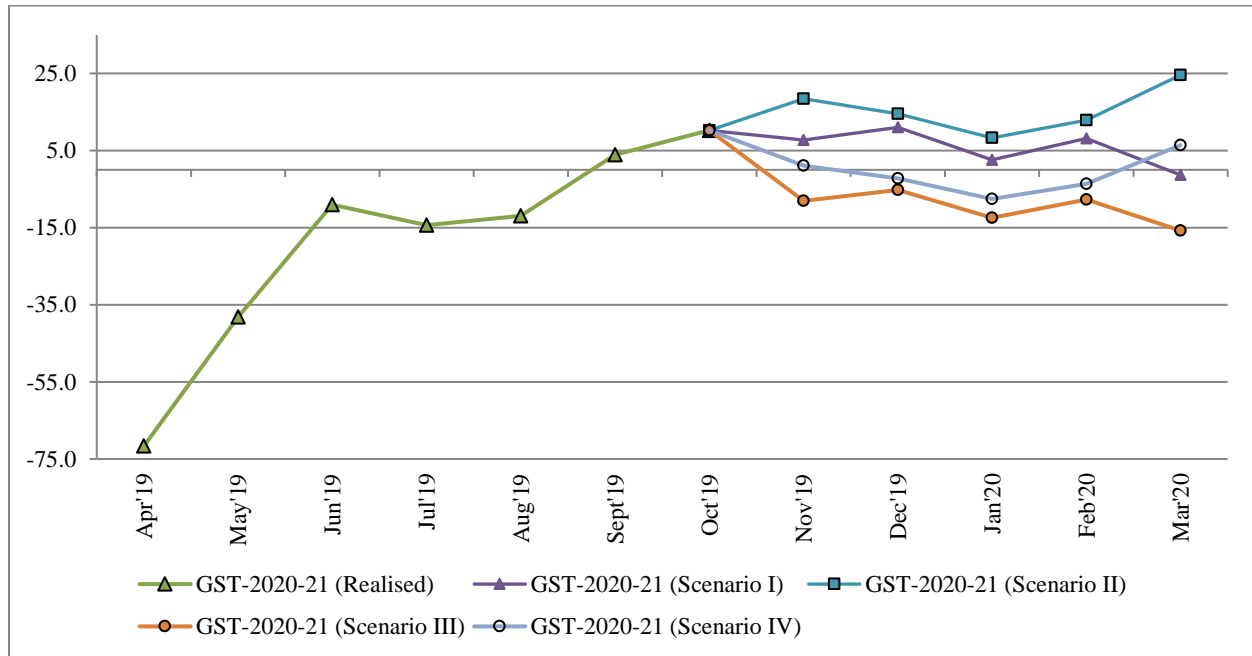
Source: Author

Figure 4 presents the realized and projected monthly GST collection of 2020-21. Among the four scenarios, Scenario III provides a lower bound estimate whereas the Scenario II provides an upper bound estimate. In Figure 5, we present the monthly (YOY) growth in realized and projected GST collection of 2020-21. A comparison of Figure 1 with Figure 5 will show that our projections are not outliers. Actual GST collection may fall between Rs. 1,029,250 crore to Rs. 1,160,957 crore, if we consider the broad band of our projection. If we consider the narrow band, actual GST collection in 2020-21 may fall between Rs. 1,073,069 crore to Rs. 1,109,636 crore and the shortfall in GST collection in 2020-21 with respect to GST collection of 2019-20 may be in the range of 12.2 percent to 9.2 percent.

**Figure 4: Projection of GST Collection during 2020-21 in Alternative Scenarios (Rs. Crore)**



Source: Compilation and projection based on monthly Press Releases of the Department of Revenue

**Figure 5: Monthly (Year-on-Year) Growth in Realized and Projected GST Collection of 2020-21**


Source: Compilation and projection based on monthly Press Releases of the Department of Revenue

### 3.2 Projection of State GST Collection

GST collection of states comprises of State GST (SGST) collection and IGST settlement on SGST account.<sup>5</sup> At the time of writing this paper, GSTN has released state-wise GST collection figures (on account of CGST, SGST, IGST and GST Compensation Cess) up to August 2020 of the current financial year. State-wise and component-wise GST collection data is yet to be released for September and October of 2020-21. However, monthly GST collection figures released by the Department of Revenue (DoR) show state-wise aggregate GST collection (sum of CGST, SGST, IGST and Cess collection) for September and October of 2020-21. We have estimated average share of SGST collection during July to August of 2020-21 in aggregate GST collection for the corresponding period by states based on GSTN database and applied it on state-wise aggregate GST collection figures to estimate state-wise SGST collection in September and October of 2020. Our estimated total SGST collection (before IGST settlement) for September 2020 is Rs. 23,097 Crore and the SGST collection figure released (in overall GST collection) by the DoR for September is Rs. 23,131 Crore. For October 2020, our estimated total SGST collection is Rs. 25,845 crore and the figure released by the DoR is Rs. 25,411 Crore. This shows that our estimate of SGST collection for September 2020 is 0.15 percent (Rs. 34 crore) lower than the figure released by the DoR and

<sup>5</sup> IGST Settlement on SGST Account = SGST paid by using IGST Credit – IGST paid by using SGST Credit.

for October 2020 it is 1.71 percent (Rs. 434 crore) higher than the figure released by the DoR. The differences between our estimates and the figures released by the DoR are not substantial to change revenue profiles of states.

GSTN has also released State-wise IGST settlement on SGST account for the period April to August 2020-21. To estimate state-wise IGST settlement corresponding to September and October of 2020-21, we first estimate the average percentage share of a state in total IGST settlement allocated to SGST account during July to August of 2020-21. In the next step, we apply the share in aggregate IGST settlement figures (on account of SGST) of September and October of 2020-21 as released by the DoR in monthly GST collection statements, to estimate the state-wise IGST settlement. We add up state-wise SGST collection and IGST settlement figures for the period April to October of 2020 and also estimate average state GST and IGST settlement figures for July to September of 2020-21 to use as base in revenue projections.

In Scenario I, we estimate monthly growth (YOY) in state-wise SGST collection (including IGST settlement) during November 2019 to March 2020 with respect to corresponding months of 2018-19. We apply the monthly growth rates to base revenue, which is the SGST collection (including IGST settlement) realized in the month of October 2020, to project GST collection during November 2020 to March 2021. The sum of realized SGST collection (including IGST settlement) during April to October 2020 and projected SGST collection (including IGST settlement) during November 2020 to March 2021 gives us the expected state GST collection of 2020-21.

In Scenario II, we estimate monthly growth (YOY) in state-wise SGST collection (including IGST settlement) during November 2018 to March 2019 with respect to corresponding months of 2017-18. We apply the monthly growth rates to base revenue, which is the SGST collection (including IGST settlement) realized in the month of October 2020, to project GST collection during November 2020 to March 2021. The sum of realized SGST collection (including IGST settlement) during April to October 2020 and projected SGST collection (including IGST settlement) during November 2020 to March 2021 gives us the expected state GST collection of 2020-21.

For projection under Scenario III, we estimate monthly growth in state-wise SGST collection (including IGST settlement) during November 2019 to March 2020 with respect to corresponding monthly figures of 2018-19. We apply monthly growth rates to base revenue, which is the average monthly SGST collection (including IGST settlement) during July to September of 2020, to project state GST collection during November 2020 to March 2021.

In Scenario IV, we estimate monthly growth in state-wise SGST collection (including IGST settlement) during November 2018 to March 2019 with respect to corresponding months of 2017-18. We apply the growth rates to base revenue, which is the average monthly SGST

collection (including IGST settlement) during July to September of 2020, to project state GST collection during November 2020 to March 2021.

For ease of presentation, we classify the states into two categories – major states comprising of erstwhile general category states and minor states comprising of North-Eastern and hilly states and United Territories with legislative assembly.

Major state-wise projections of GST collection in 2020-21 are presented in Table 4. This shows that all states do not follow the same growth path in GST collection, e.g., Andhra Pradesh, Bihar and Chhattisgarh are expected to do better in one scenario whereas Goa, Gujarat and Haryana are expected to do better in another scenario. Among all major states, only Bihar and Odisha are expected to have positive growth in State GST collection across all scenarios. Aggregate GST collection of major states in 2020-21 may fall short of 3.3 percent to 12.3 percent of GST collection of 2019-20. However, different states may have different shortfall depending on growth in GST collection that would be realized during November 2020 to March 2021.

Like major states, growth path in GST collection varies across minor states and some states are expected to do better in alternative scenarios (Table 5). Among all minor states, Himachal Pradesh and Nagaland are expected to have positive growth in state GST collection across all scenarios. Aggregate GST collection in 2020-21 of minor states may fall short of 4.6 percent to 16.5 percent of GST collection of 2019-20.

The wide range in projected GST collection of 2020-21 may be considered as the likely band in which actual GST collection may lie. Given the challenges involved in projection of GST and uncertainties created by the ongoing pandemic, this is an attempt to explore alternative methodology for GST revenue projection. We are hopeful that with stabilization of the GST system and better availability of long time series data of GST collection, better projections could be made. Availability of quarterly data of Gross State Value Addition (GSVA) and other high frequency indicators may help to refine the projections and also contain the range of the projected values.

**Table 4: Projection of GST Collection on account of SGST and IGST Settlement in 2020-21 of Major States (Rs. Crore)**

State	Average of	Collection	Sum of	Collection	Projected GST Collection in 2020-21							
	July-Sept'20	in Oct'20	Apr-Oct'20	in 2019-20	Scenario I		Scenario II		Scenario III		Scenario IV	
Andhra Pradesh	1,657.07	1,941.30	9,408.93	19,780.50	19,627.46	(-0.8)	21,412.59	(8.3)	18,131.38	(-8.3)	19,655.14	(-0.6)
<b>Bihar</b>	<b>1,362.13</b>	<b>1,504.03</b>	<b>7,612.00</b>	<b>15,300.86</b>	<b>16,183.07</b>	<b>(5.8)</b>	<b>18,122.67</b>	<b>(18.4)</b>	<b>15,374.47</b>	<b>(0.5)</b>	<b>17,131.08</b>	<b>(12.0)</b>
Chhattisgarh	594.22	637.29	3,680.80	7,624.77	7,092.43	(-7.0)	7,279.86	(-4.5)	6,861.88	(-10.0)	7,036.64	(-7.7)
Goa	122.88	152.91	796.00	2,393.25	1,653.45	(-30.9)	1,649.87	(-31.1)	1,485.07	(-37.9)	1,482.20	(-38.1)
Gujarat	2,432.18	2,794.85	14,531.05	34,721.15	29,751.14	(-14.3)	29,101.00	(-16.2)	27,776.09	(-20.0)	27,210.32	(-21.6)
Haryana	1,524.27	1,892.32	8,993.25	18,855.25	20,102.97	(6.6)	19,189.73	(1.8)	17,942.14	(-4.8)	17,206.52	(-8.7)
Jharkhand	614.51	720.05	3,599.56	8,153.17	7,676.48	(-5.8)	8,145.22	(-0.1)	7,078.94	(-13.2)	7,478.97	(-8.3)
Karnataka	3,386.09	3,985.41	20,188.42	42,175.19	42,937.83	(1.8)	42,620.39	(1.1)	39,516.80	(-6.3)	39,247.10	(-6.9)
Kerala	1,483.35	1,755.70	8,365.52	19,390.06	17,204.15	(-11.3)	18,213.88	(-6.1)	15,833.08	(-18.3)	16,686.17	(-13.9)
Madhya Pradesh	1,601.84	1,797.34	8,827.60	18,767.59	18,483.38	(-1.5)	20,170.33	(7.5)	17,433.07	(-7.1)	18,936.53	(0.9)
Maharashtra	5,610.56	6,885.34	34,449.46	82,966.10	73,561.73	(-11.3)	71,833.09	(-13.4)	66,320.29	(-20.1)	64,911.70	(-21.8)
<b>Odisha</b>	<b>1,106.90</b>	<b>1,181.49</b>	<b>6,672.87</b>	<b>13,008.09</b>	<b>14,211.22</b>	<b>(9.2)</b>	<b>13,532.51</b>	<b>(4.0)</b>	<b>13,735.32</b>	<b>(5.6)</b>	<b>13,099.46</b>	<b>(0.7)</b>
Punjab	1,052.33	1,223.55	5,920.48	12,698.56	12,890.12	(1.5)	12,431.44	(-2.1)	11,914.81	(-6.2)	11,520.32	(-9.3)
Rajasthan	1,870.34	2,114.06	10,394.24	21,619.42	21,239.16	(-1.8)	23,475.17	(8.6)	19,988.88	(-7.5)	21,967.09	(1.6)
Tamil Nadu	2,944.05	3,620.54	17,477.56	40,141.73	36,348.51	(-9.4)	37,186.71	(-7.4)	32,822.54	(-18.2)	33,504.12	(-16.5)
Telangana	1,881.24	2,212.27	10,858.88	23,411.43	22,897.49	(-2.2)	23,988.04	(2.5)	21,096.13	(-9.9)	22,023.49	(-5.9)
Uttar Pradesh	3,810.02	4,261.34	21,316.77	46,406.62	44,746.72	(-3.6)	46,385.42	(0.0)	42,265.24	(-8.9)	43,730.38	(-5.8)
West Bengal	2,011.27	2,359.83	11,555.45	26,883.91	24,825.80	(-7.7)	24,637.14	(-8.4)	22,865.73	(-14.9)	22,704.93	(-15.5)
<b>Total - Major States</b>	<b>35,065.25</b>	<b>41,039.61</b>	<b>204,648.83</b>	<b>454,297.65</b>	<b>431,433.12</b>	<b>(-5.0)</b>	<b>439,375.04</b>	<b>(-3.3)</b>	<b>398,441.84</b>	<b>(-12.3)</b>	<b>405,532.16</b>	<b>(-10.7)</b>

Note: Figures in the parenthesis show the growth in State GST revenue with respect to 2019-20

Source: Estimated



**Table 5: Projection of GST Collection on account of SGST and IGST Settlement in 2020-21 of Minor States (Rs. Crore)**

State	Average of July-Sept'20	Collection in Oct'20	Sum of Apr-Oct'20	Collection in 2019- 20	Projected GST Collection in 2020-21							
					Scenario I		Scenario II		Scenario III		Scenario IV	
<b>Arunachal Pradesh</b>	<b>55.29</b>	<b>93.56</b>	<b>375.79</b>	<b>791.98</b>	<b>1,123.74</b>	<b>(41.9)</b>	<b>1,123.91</b>	<b>(41.9)</b>	<b>817.81</b>	<b>(3.3)</b>	<b>817.91</b>	<b>(3.3)</b>
Assam	596.95	732.62	3,620.25	8,521.45	7,809.87	(-8.4)	8,341.71	(-2.1)	7,034.02	(-17.5)	7,467.37	(-12.4)
Delhi	1,316.95	1,491.02	7,933.72	19,192.67	17,467.49	(-9.0)	14,552.09	(-24.2)	16,354.49	(-14.8)	13,779.44	(-28.2)
<b>Himachal Pradesh</b>	<b>311.02</b>	<b>353.60</b>	<b>1,682.10</b>	<b>3,483.34</b>	<b>3,830.46</b>	<b>(10.0)</b>	<b>3,764.77</b>	<b>(8.1)</b>	<b>3,571.76</b>	<b>(2.5)</b>	<b>3,513.98</b>	<b>(0.9)</b>
Jammu and Kashmir	392.91	451.74	2144.65	4564.78	4685.70	(2.6)	4805.25	(5.3)	4354.78	(-4.6)	4458.75	(-2.3)
Manipur	58.77	73.56	347.56	838.84	843.74	(0.6)	867.86	(3.5)	743.94	(-11.3)	763.21	(-9)
Meghalaya	61.21	68.80	337.88	883.31	780.28	(-11.7)	774.68	(-12.3)	731.45	(-17.2)	726.46	(-17.8)
Mizoram	42.28	57.00	251.85	524.41	615.73	(17.4)	725.85	(38.4)	521.75	(-0.5)	603.44	(15.1)
<b>Nagaland</b>	<b>47.73</b>	<b>53.65</b>	<b>283.97</b>	<b>602.66</b>	<b>698.99</b>	<b>(16.0)</b>	<b>701.32</b>	<b>(16.4)</b>	<b>653.19</b>	<b>(8.4)</b>	<b>655.26</b>	<b>(8.7)</b>
Puducherry	55.19	63.51	309.51	742.47	643.30	(-13.4)	638.56	(-14.0)	599.55	(-19.2)	595.43	(-19.8)
Sikkim	30.98	36.47	180.68	471.76	406.29	(-13.9)	423.20	(-10.3)	372.35	(-21.1)	386.72	(-18.0)
Tripura	83.19	97.43	497.91	994.38	1,048.92	(5.5)	1,106.62	(11.3)	968.36	(-2.6)	1,017.63	(2.3)
Uttarakhand	332.25	407.23	2,042.21	4,795.27	4,312.65	(-10.1)	4,373.97	(-8.8)	3,894.62	(-18.8)	3,944.65	(-17.7)
<b>Total - Minor States</b>	<b>3,384.72</b>	<b>3,980.20</b>	<b>20,008.09</b>	<b>46,407.33</b>	<b>44,267.17</b>	<b>(-4.6)</b>	<b>42,199.79</b>	<b>(-9.1)</b>	<b>40,618.07</b>	<b>(-12.5)</b>	<b>38,730.25</b>	<b>(-16.5)</b>

Note: Figures in the parenthesis show the growth in State GST revenue with respect to 2019-20

Source: Estimated

#### 4. Projection of Demand for GST Compensation

According to the Goods and Services Tax (Compensation to States) Act 2017, states will receive GST compensation during the transition period of GST (first five years of GST introduction), if State GST (SGST collection including receipts of Integrated GST settlement on account of SGST) revenue falls short of the projected revenue collection. The projection of state revenue in GST is based on revenue that is subsumed in GST (also known as revenue under protection in GST) in the base year 2015-16 and 14 percent annual growth rate (YOY) in the revenue under protection during the GST transition period. Therefore, if a state's revenue under protection is expressed as 'R' in the year 2015-16, the projected revenue would be 1.14R in 2016-17, and  $(1.14)^2R$  in 2017-18,  $(1.14)^3R$  in 2018-19 and so on.

Many commentators believe that 14 percent annual growth in GST revenue projection was too generous promise, as not many states had a growth rate of subsumed taxes higher than 14 percent during 2012-13 to 2016-17, with most of them falling in the 5 percent to 12 percent growth rate band (Gupta and Rajaraman 2020). Perhaps the basic premise of promising to give compensation at 14 percent growth was based on the expectation of improvement in tax compliance, as experienced in most countries where VAT/ GST was introduced and consequently termed VAT as "money machine" (Keen 2007). However, Indian GST system is yet to be stabilized and the ongoing pandemic may delay the stabilization.

Based on state-wise revenue subsumed in GST with reference to 2015-16,<sup>6</sup> we present revenue under protection for 2020-21 in Table 6 and Table 7 for major and minor states respectively. The difference between state-wise revenue under protection and projected GST collection in 2020-21 gives us the expected revenue gap for 2020-21.

Table 6 shows that maximum revenue gaps are expected for Goa, Punjab, Chhattisgarh, Kerala and Chhattisgarh. Overall revenue gap of major states will vary between Rs. 2.5 lakh crore to Rs. 2.9 lakh crore. Some minor states are expected to have revenue surplus across all scenarios, e.g., Arunachal Pradesh, Manipur, Mizoram and Nagaland (Table 7). Among minor states, highest revenue gaps are expected for Puducherry, Uttarakhand, Delhi and Jammu and Kashmir. Overall revenue gap of minor states (excluding revenue surplus states) will vary between Rs. 32,644 crore to Rs. 42,200 crore. In addition to generous promise of revenue protection in GST, the reason for high revenue gap in the current fiscal year is also attributed to economic hardship caused by the ongoing pandemic as well as falling year-on-year growth rate of GVA since Q3 of 2018-19 (Appendix Table A1).

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<sup>6</sup> [https://tutorial.gst.gov.in/offlineutilities/gst\\_statistics/Yearwise-Pre-GST-revenue.pdf](https://tutorial.gst.gov.in/offlineutilities/gst_statistics/Yearwise-Pre-GST-revenue.pdf) (last accessed on 12 December 2020).

**Table 6: Projection of GST Collection on account of SGST and IGST Settlement and Comparison with Revenue Under Protection (RUP) in GST of Major States in 2020-21 (Rs. Crore)**

State	RUP	Proj. Rev.	Revenue	Proj. Rev.	Revenue	Proj. Rev.	Revenue	Proj. Rev.	Revenue
	2020-21 (A)	Scenario I (B)	Gap (A-B)	Scenario II (C)	Gap (A-C)	Scenario III (D)	Gap (A-D)	Scenario IV (E)	Gap (A-E)
Andhra Pradesh	26,712	19,627	7,084 (36.1)	21,413	5,299 (24.7)	18,131	8,580 (47.3)	19,655	7,057 (35.9)
Bihar	24,300	16,183	8,117 (50.2)	18,123	6,177 (34.1)	15,374	8,925 (58.1)	17,131	7,169 (41.8)
Chhattisgarh	14,165	7,092	7,073 (99.7)	7,280	6,885 (94.6)	6,862	7,303 (106.4)	7,037	7,129 (101.3)
Goa	4,200	1,653	2,547 (154.0)	1,650	2,550 (154.6)	1,485	2,715 (182.8)	1,482	2,718 (183.4)
Gujarat	55,561	29,751	25,809 (86.8)	29,101	26,460 (90.9)	27,776	27,784 (100)	27,210	28,350 (104.2)
Haryana	29,325	20,103	9,222 (45.9)	19,190	10,135 (52.8)	17,942	11,383 (63.4)	17,207	12,119 (70.4)
Jharkhand	12,343	7,676	4,666 (60.8)	8,145	4,198 (51.5)	7,079	5,264 (74.4)	7,479	4,864 (65.0)
Karnataka	69,592	42,938	26,655 (62.1)	42,620	26,972 (63.3)	39,517	30,076 (76.1)	39,247	30,345 (77.3)
Kerala	32,388	17,204	15,184 (88.3)	18,214	14,174 (77.8)	15,833	16,555 (104.6)	16,686	15,702 (94.1)
Madhya Pradesh	29,515	18,483	11,032 (59.7)	20,170	9,345 (46.3)	17,433	12,082 (69.3)	18,937	10,579 (55.9)
Maharashtra	116,496	73,562	42,935 (58.4)	71,833	44,663 (62.2)	66,320	50,176 (75.7)	64,912	51,585 (79.5)
Odisha	21,275	14,211	7,063 (49.7)	13,533	7,742 (57.2)	13,735	7,539 (54.9)	13,099	8,175 (62.4)
Punjab	27,864	12,890	14,974 (116.2)	12,431	15,433 (124.1)	11,915	15,949 (133.9)	11,520	16,344 (141.9)
Rajasthan	33,037	21,239	11,798 (55.5)	23,475	9,562 (40.7)	19,989	13,049 (65.3)	21,967	11,070 (50.4)
Tamil Nadu	57,351	36,349	21,003 (57.8)	37,187	20,164 (54.2)	32,823	24,529 (74.7)	33,504	23,847 (71.2)
Telangana	31,016	22,897	8,118 (35.5)	23,988	7,028 (29.3)	21,096	9,920 (47.0)	22,023	8,992 (40.8)
Uttar Pradesh	64,285	44,747	19,539 (43.7)	46,385	17,900 (38.6)	42,265	22,020 (52.1)	43,730	20,555 (47.0)
West Bengal	38,696	24,826	13,871 (55.9)	24,637	14,059 (57.1)	22,866	15,831 (69.2)	22,705	15,992 (70.4)
<b>Total - Major States</b>	<b>688,123</b>	<b>431,433</b>	<b>256,690 (59.5)</b>	<b>439,375</b>	<b>248,748 (56.6)</b>	<b>398,442</b>	<b>289,681 (72.7)</b>	<b>405,532</b>	<b>282,591 (69.7)</b>

Note: Figures in the parenthesis show the Revenue Gap as percentage of Projected GST Collection in 2020-21 of the respective scenario.  
Source: Estimated

**Table 7: Projection of GST Collection on account of SGST and IGST Settlement and Comparison with Revenue Under Protection (RUP) in GST of Minor States in 2020-21 (Rs. Crore)**

State	RUP	Proj. Rev.	Revenue		Proj. Rev.	Revenue		Proj. Rev.	Revenue		Proj. Rev.	Revenue	
	2020-21 (A)	Scenario I (B)	Gap (A-B)		Scenario II (C)	Gap (A-C)		Scenario III (D)	Gap (A-D)		Scenario IV (E)	Gap (A-E)	
<b>Arunachal Pradesh</b>	<b>493</b>	<b>1,124</b>	<b>-631</b>	<b>(-56.1)</b>	<b>1124</b>	<b>-631</b>	<b>(-56.1)</b>	<b>818</b>	<b>-325</b>	<b>(-39.7)</b>	<b>818</b>	<b>-325</b>	<b>(-39.7)</b>
Assam	11,525	7,810	3,715	(47.6)	8,342	3,183	(38.2)	7,034	4,491	(63.8)	7,467	4,057	(54.3)
Delhi	32,316	17,467	14,849	(85.0)	14,552	17,764	(122.1)	16,354	15,962	(97.6)	13,779	18,537	(134.5)
Himachal Pradesh	6,998	3,830	3,167	(82.7)	3,765	3,233	(85.9)	3,572	3,426	(95.9)	3,514	3,484	(99.1)
Jammu and Kashmir	9,177	4,686	4,491	(95.9)	4,805	4,372	(91.0)	4,355	4,822	(110.7)	4,459	4,718	(105.8)
<b>Manipur</b>	<b>668</b>	<b>844</b>	<b>-176</b>	<b>(-20.8)</b>	<b>868</b>	<b>-200</b>	<b>(-23.0)</b>	<b>744</b>	<b>-76</b>	<b>(-10.2)</b>	<b>763</b>	<b>-95</b>	<b>(-12.4)</b>
Meghalaya	1,225	780	445	(57.0)	775	450	(58.1)	731	493	(67.5)	726	498	(68.6)
<b>Mizoram</b>	<b>364</b>	<b>616</b>	<b>-252</b>	<b>(-40.9)</b>	<b>726</b>	<b>-362</b>	<b>(-49.9)</b>	<b>522</b>	<b>-158</b>	<b>(-30.3)</b>	<b>603</b>	<b>-240</b>	<b>(-39.7)</b>
<b>Nagaland</b>	<b>493</b>	<b>699</b>	<b>-206</b>	<b>(-29.5)</b>	<b>701</b>	<b>-208</b>	<b>(-29.7)</b>	<b>653</b>	<b>-160</b>	<b>(-24.5)</b>	<b>655</b>	<b>-162</b>	<b>(-24.7)</b>
Puducherry	2,109	643	1,466	(227.8)	639	1,470	(230.3)	600	1,509	(251.8)	595	1,514	(254.2)
Sikkim	473	406	66	(16.3)	423	49	(11.7)	372	100	(26.9)	387	86	(22.2)
Tripura	1,519	1,049	470	(44.8)	1,107	412	(37.2)	968	550	(56.8)	1,018	501	(49.2)
Uttarakhand	9,552	4,313	5,240	(121.5)	4,374	5,178	(118.4)	3,895	5,658	(145.3)	3,945	5,608	(142.2)
<b>Total - Minor States</b>	<b>76,911</b>	<b>44,267</b>	<b>33,908*</b>		<b>42,200</b>	<b>36,113*</b>		<b>40,618</b>	<b>37,012*</b>		<b>38,730</b>	<b>39,003*</b>	

Note: Figures in the parenthesis show the Revenue Gap as percentage of Projected GST Collection in 2020-21 of the respective scenario. \*-

Excluding states with Revenue Surplus

Source: Estimated

We have projected GST compensation cess collection of 2020-21 following the same methodology as developed to project overall GST collection. Since GST compensation cess is also collected from imports, we have avoided state-wise projection of GSTCC collection. The difference between estimated total revenue gap and projected cess collection gives us expected additional revenue requirement to meet the revenue under protection of 2020-21.

Table 8 shows that revenue gap in state GST collection is expected to vary between 2.85 lakh crore to Rs. 3.27 lakh crore. GST compensation cess collection in 2020-21 is expected vary between Rs. 82,242 crore to Rs. 90,386 crore. Therefore, revenue to the tune of Rs. 1.95 lakh to Rs. 2.45 lakh crore may require in providing full GST compensation to states in 2020-21. In other words, shortfall in GST compensation fund is expected to vary between Rs. 1.95 lakh crore to Rs. 2.45 lakh crore in 2020-21.

Table 8: Projected GST Collection, Revenue Under Protection and Shortfall in GST Compensation Cess Collection in 2020-21 (Rs. Crore)

Revenue Source	Scenario I	Scenario II	Scenario III	Scenario IV
Projected GST Collection - Major States (a)	431,433	439,375	398,442	405,532
Projected GST Collection - Minor States (b)	44,267	42,200	40,618	38,730
<b>Projected GST Collection - Total (A) (a+b)</b>	475,700	481,575	439,060	444,262
Revenue Under Protection - Major States (c)	688,123	688,123	688,123	688,123
Revenue Under Protection - Minor States (d)	76,911	76,911	76,911	76,911
<b>Revenue Under Protection - Total (B) (c+d)</b>	765,034	765,034	765,034	765,034
Revenue Gap – Major States (e)	256,690	248,748	289,681	282,591
Revenue Gap – Minor States (f)	33,908	36,113	37,012	38,730
<b>Revenue Gap - Total (C) (e+f)</b>	290,598	284,860	326,693	321,321
<b>Projected GST Compensation Cess Collection (D)</b>	86,477	90,386	82,242	85,757
Shortfall in GST Compensation (E = C-D)	204,122	194,474	244,451	235,564

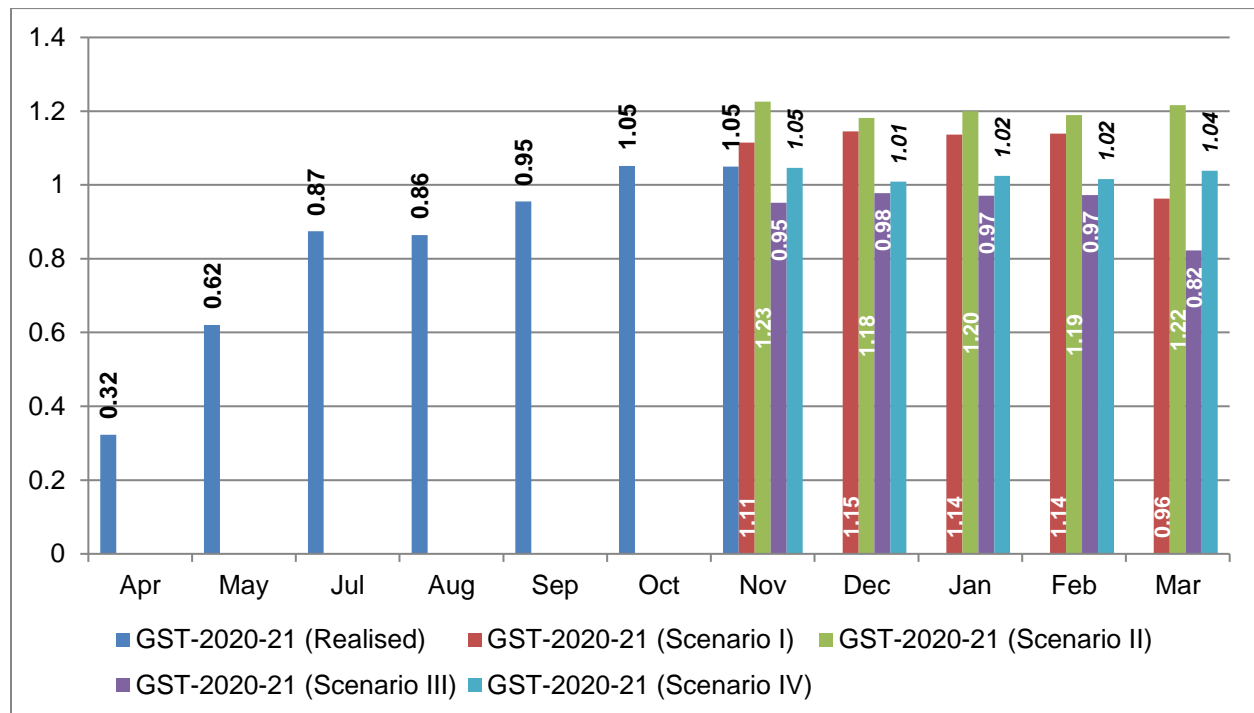
Source: Estimated

## 5. Validation of Projections

According to recent monthly statement released by the Department of Revenue, GST collection for the month of November 2020 is Rs. 104,963. This figure coincides with our monthly projection of GST revenue of Rs. 104,634 crore for the month of November 2020 (Figure 6 and 7). Moreover, monthly growth (YOY) realized in GST collection for the month of November 2020 is 1.4 percent whereas according to our projection it is 1.10 percent (Figure 8). This validates our projections.

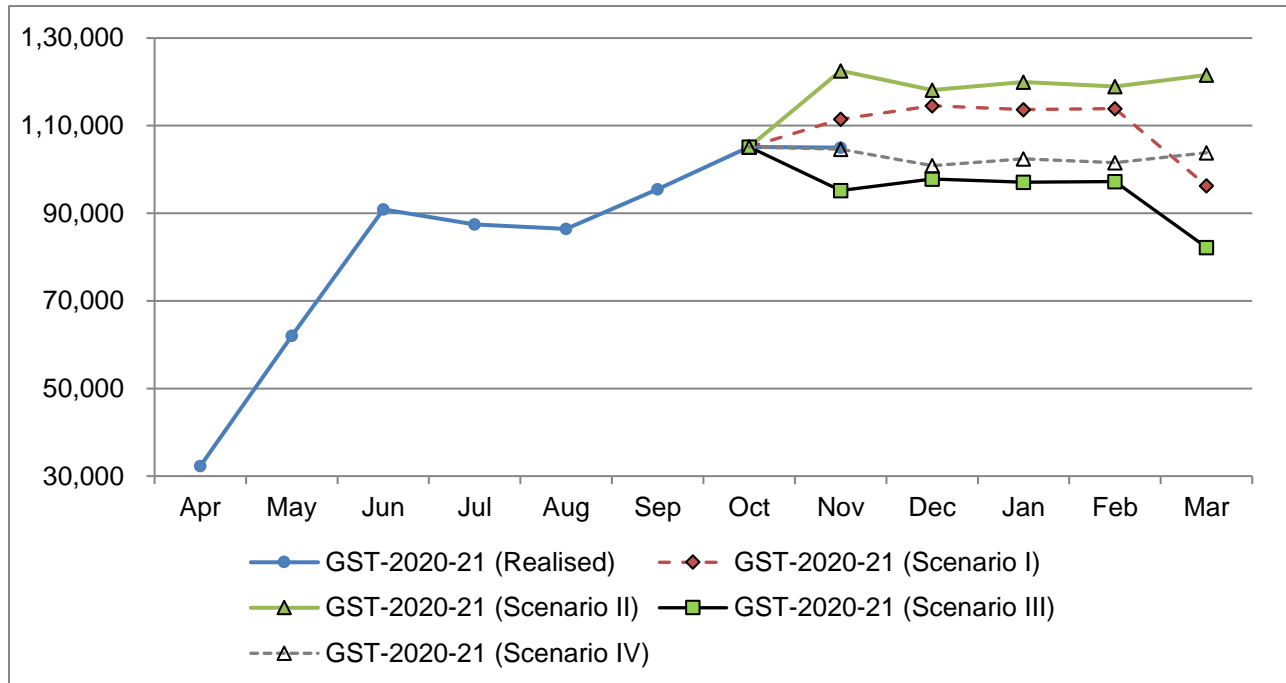
In the 41<sup>st</sup> meeting of the GST Council held on 27 August 2020, the demand for GST compensation by states is projected to be Rs. 3 lakh crore in 2020-21. Against the projected GST compensation cess collection of Rs. 65,000 crore, the shortfall in GST compensation fund is expected to be Rs. 2.35 lakh crore in 2020-21. According to our estimate the shortfall would be Rs. 2.36 lakh crore in one of the scenarios (Table 9). This further validates our projections.

**Figure 6: Monthly GST Collection in 2020-21 – Realized and Projected (Rs. lakh crore)**



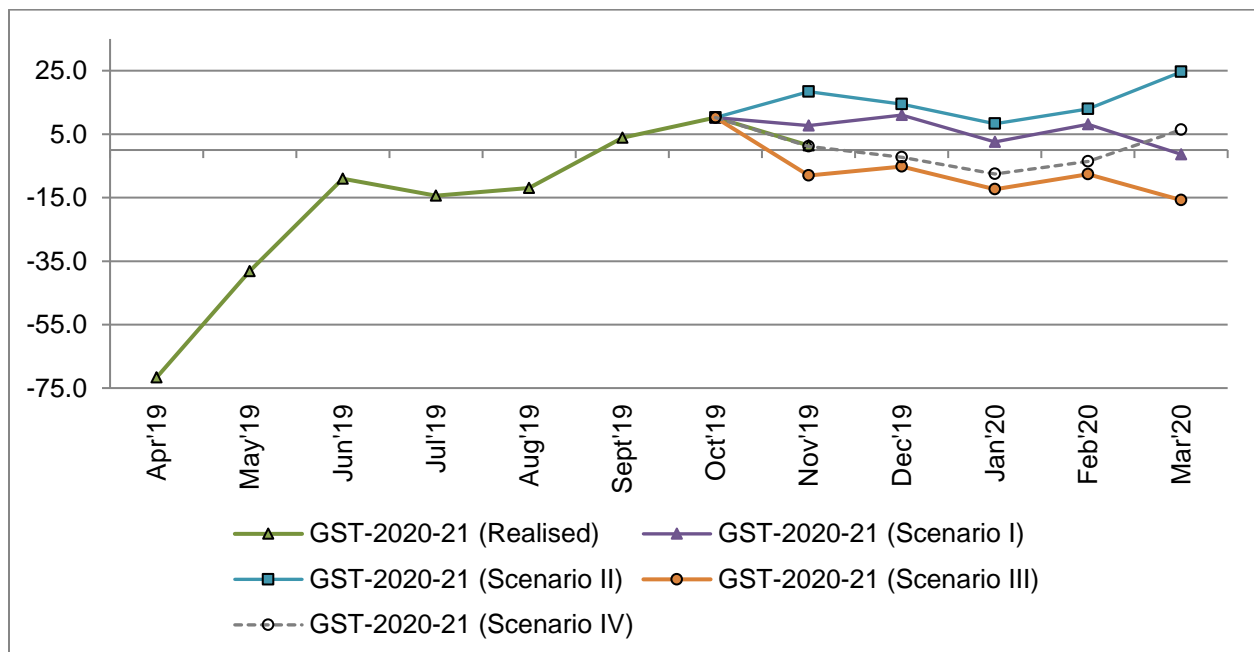
Source: Author

**Figure 7: Monthly GST Collection in 2020-21 - Realized and Projected (Rs. crore)**



Source: Author

**Figure 8: Monthly Growth (Year-on-Year) in Realized and Projected GST Collection (%)**



Source: Author

The Reserve Bank of India (RBI), the World Bank and the International Monetary Fund (IMF) have projected India's growth rate of GDP for 2020-21.<sup>7</sup> Since GST collection depends on nominal GDP, we have taken nominal growth rates (real growth rate + inflation) in projecting GST collection in 2020-21 across alternative assumptions of tax buoyancy (Table 9). Since nominal growth rate of the current financial year is projected to vary between -4.9 to -5.4 percent, as an alternative we have considered 3 percent contraction of nominal GDP and projected corresponding GST collection.

We present projections of GST collections across alternative projections of GDP growth rates across alternative assumptions of tax buoyancy and compare with our projected GST collection in Table 9. It shows that though our projections are conservative, they are in line with some of the alternative projections of GST collection based on projection of GDP growth and tax buoyancy. This further validates our projections.

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<sup>7</sup> RBI's Monetary Policy Report - October 2020 (<https://www.rbi.org.in/Scripts/PublicationsView.aspx?id=19980>), IMF Country News (<https://www.imf.org/en/Countries/IND>) and World Bank Overview (<https://www.worldbank.org/en/country/india/overview>) last accessed on 2 December 2020.



**Table 9: Projections of GST Collection in 2020-21 based on GDP Growth Projections**

	Tax Buoyancy	2019-20	2020-21 (Projections)			
			RBI	World Bank (WB)	IMF	Alternative Projection
Gross Value Added (GVA at Basic Prices, Current Prices, 2011-12 Series) (Rs. Crore)		18,343,238	16,600,630	16,582,287	16,453,884	17,059,211
Growth Rate in GVA (%) - <b>Real</b>			-9.5	-9.6	-10.3	-7.5
Inflation (%)			4.5	4.7	4.9	4.5
Growth Rate in GVA (%) - <b>Nominal</b>		7.02	-5.0	-4.9	-5.4	-3.0
GST Collection (Rs. Crore)		1,222,131				
Projection of GST Collection (Rs. Crore) (According to Growth Projections)*	2.00		1,099,918	1,102,362	1,090,141	1,148,803
	1.50		1,130,471	1,132,304	1,123,138	1,167,135
	1.25		1,145,748	1,147,275	1,139,637	1,176,301
	1.00		1,161,024	1,162,247	1,156,136	1,185,467
	0.75		1,176,301	1,177,218	1,172,635	1,194,633
	0.50		1,191,578	1,192,189	1,189,133	1,206,799
Projected GST Collection in the present Study (Rs. Crore)	Scenario I	1,109,636		WB, TB: 2.00		
	Scenario II	1,160,957	RBI, TB: 1.00	WB, TB: 1.00	IMF, TB: 1.00	Alt. Proj., TB: 1.50
	Scenario III	1,029,250				
	Scenario IV	1,073,069			IMF, TB: 2.00	

Note: \*-GST Collection in 2019-20\*(1+(Tax Buoyancy\*Nominal Growth Rate in GVA)/100)

Source: Estimated

## 6. Compliance in Filing GST Returns

Stabilization of GST revenue is likely to be achieved with stabilization in filing GST returns. A large segment of taxpayers are not filing GST returns. Several initiatives have taken by the GST council to improve compliance in filing GST returns, e.g., cancellation of GST registration

for not filing GSTR-3B returns for six or more than six return periods, blocking of E-Way Bill generation facility for not filing two or more consecutive GSTR-3B returns, in the coming months compliance is expected to improve.

Based on data available from the GSTN database, we have estimated the gap in filing GST returns as follows:

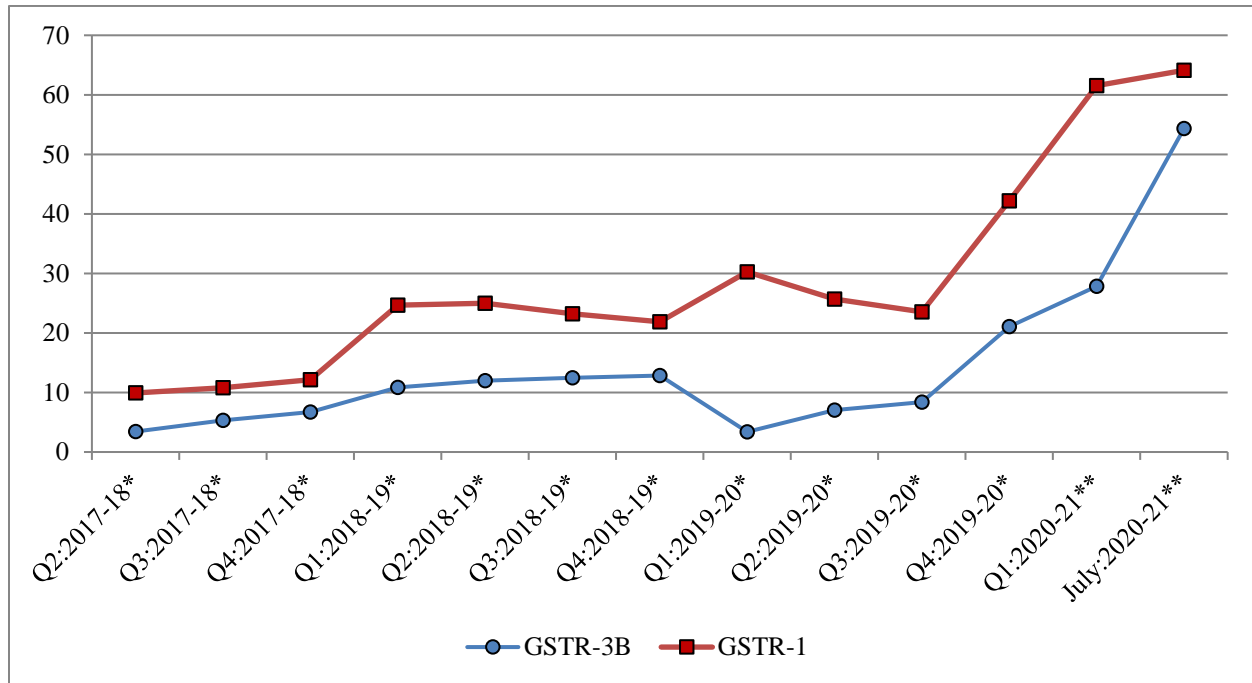
Gap in Filing GSTR-3B =  $(\text{Number of Taxpayers Eligible to File GSTR-3B} - \text{Number of Taxpayers Filed GSTR-3B}) / \text{Number of Taxpayers Eligible to File GSTR-3B} * 100$

Gap in Filing GSTR-1 =  $(\text{Number of Taxpayers Eligible to File GSTR-1} - \text{Number of Taxpayers Filed GSTR-1}) / \text{Number of Taxpayers Eligible to File GSTR-1} * 100$

Figure 5 shows that gap in filing GSTR-3B is lower as compared to GSTR-1. Non-filers of GSTR-1 are higher than non-filers of GSTR-3B. For effective tax enforcement, filing both the GST returns (GSTR-1 and GSTR-3B) are required to assess possible instances of tax evasion. Gaps in filing GST returns have gone up since Q4 of 2019-20. Lockdown due to COVID-19 outbreak may have caused difficulties for taxpayers to file GST returns in Q1 of 2020-21. It is expected that compliance in filing GST returns will improve with gradual unlocking of the economy.

It is likely that only a small percentage of taxpayers, who are eligible to file both GSTR-1 and GSTR-3B, are filing both the GST returns. With increasing compliance in filing GST returns, identification of mismatches of information reported across GST returns (GSTR-1, GSTR-2A and GSTR-3B) will improve.

**Figure 5: Comparative Compliance Gap in Filing in GSTR-3B and GSTR-1 (as % of eligible taxpayers to file respective tax returns)**



Notes: \*-as on 30 June 2020. \*\*-as on 31 August 2020.  
Source: Computed based on GSTN online database

## 7. Conclusions

Given the experience of GST collection in India during the last 13 quarters and also by factoring in the pandemic induced economic contraction during the current fiscal year, present paper projects overall as well as state-wise GST collections for 2020-21. The study builds four different scenarios. Projected overall GST collection of 2020-21 of Union and States is expected to vary between Rs. 10.3 lakh crore to Rs. 11.6 lakh crore compared to last fiscal year’s collection of Rs. 12.2 lakh crore. Our estimates show that combined GST collection of major states (excluding north-eastern and hilly states and UTs with legislative assembly) is expected to contract, though the estimates vary between -3.3 and -12.3 percent.

The state-wise GST revenue estimated by us for the year 2020-21 and the revenue under protection as per the compensation principle adopted by the GST Council, gives the estimated revenue gap of states for 2020-21.

We have compared the estimated revenue gaps with projected GST compensation cess collection to understand revenue compensation requirement of states. GST compensation

cess collection estimated by us is deduced from the revenue gap to get the estimate of revenue shortfall in the GST Compensation Fund. The compensation as per our estimates may vary between Rs. 1.95 lakh crore to Rs. 2.45 lakh crore.

We observed that there is a large difference in filing GST returns when we compare GSTR-1 and GSTR-3B. Reduction in mismatch between the two will result in significant increase in compliance and revenue. Lockdown due to COVID-19 outbreak may have caused difficulties for taxpayers to file GST returns in Q1 of 2020-21 but it has started improving thereafter.

**Appendix Table A1: GVA at Basic Prices (at Current Prices, 2011-12 Series) (Rs. Crore)**

Year	GVA at Basic Prices (at Current Prices, 2011-12 Series) (Rs. Crore)					Quarterly Growth Rate (QoQ, %)		
	Q1	Q2	Q3	Q4	All	Q1 to Q2	Q2 to Q3	Q3 to Q4
2014-15	2,807,899	2,870,607	2,940,364	2,885,410	11,504,280	2.23	2.43	-1.87
2015-16	3,072,867	3,091,942	3,204,670	3,205,019	12,574,498	0.62	3.65	0.01
2016-17	3,400,202	3,426,442	3,538,125	3,600,431	13,965,200	0.77	3.26	1.76
2017-18	3,713,978	3,785,096	3,984,050	4,029,998	15,513,122	1.91	5.26	1.15
2018-19	4,156,723	4,203,786	4,368,772	4,410,682	17,139,963	1.13	3.92	0.96
2019-20	4,489,292	4,465,838	4,675,351	4,712,757	18,343,238	-0.52	4.69	0.80
2020-21	3,566,006	4,280,075				20.02		
	Growth (Year-On-Year) Rate (%)							
	Q1	Q2	Q3	Q4	All			
2015-16	9.44	7.71	8.99	11.08	9.3			
2016-17	10.65	10.82	10.41	12.34	11.1			
2017-18	9.23	10.47	12.60	11.93	11.1			
2018-19	11.92	11.06	9.66	9.45	10.5			
2019-20	8.00	6.23	7.02	6.85	7.0			
2020-21	-20.57	-4.16						

Source: Computed based on EPWRF India Time Series Database

**Appendix Table A2: Component-wise Share in Overall GST Collection in India (%)**

Component of GST	2017-18			Average of	2018-19				Average of	2019-20				Average of	2020-21	
	Q2	Q3	Q4	2017-18	Q1	Q2	Q3	Q4	2018-19	Q1	Q2	Q3	Q4	2019-20	Q1	Q2
CGST	14.4	16.3	17.1	16.1	17.2	16.3	17.0	18.2	17.2	18.3	17.9	18.9	19.3	18.6	18.6	18.5
SGST	21.4	23.8	24.0	23.2	23.7	22.6	23.3	25.0	23.7	25.0	24.6	25.7	25.9	25.3	23.1	24.4
IGST	56.7	51.0	50.0	52.3	50.9	52.6	51.6	48.5	50.9	48.5	49.5	47.6	46.5	48.0	50.2	49.1
<i>IGST - Domestic</i>	24.6	27.0	26.3	26.1	26.9	25.7	26.1	26.0	26.2	26.2	25.1	26.5	26.7	26.1	26.2	26.1
<i>IGST - Imports</i>	32.2	24.0	23.7	26.2	23.9	26.9	25.5	22.5	24.7	22.3	24.4	21.1	19.8	21.9	24.0	23.0
GST Compensation Cess (GSTCC)	7.5	8.8	8.9	8.5	8.2	8.4	8.2	8.3	8.3	8.2	8.0	7.8	8.3	8.1	8.1	8.0
<i>GSTCC - Domestic</i>	6.6	8.0	8.0	7.6	7.4	7.6	7.3	7.4	7.4	7.3	7.2	7.0	7.4	7.2	7.2	7.2
<i>GSTCC - Imports</i>	0.9	0.8	0.8	0.8	0.8	0.8	0.9	0.9	0.9	0.9	0.8	0.8	0.9	0.9	0.9	0.8
<b>Total GST]</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>
<i>GST without GSTCC</i>	92.5	91.2	91.1	91.5	91.8	91.6	91.8	91.7	91.7	91.8	92.0	92.2	91.7	91.9	91.9	92.0

Source: Computed based on monthly Press Release of the Department of Revenue, Ministry of Finance, Government of India.

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