

Performance Assessment of Indian GST: State-level Analysis of Compliance Gap and Revenue Growth

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Abstract

Revenue from Goods and Services Tax (GST) is not meeting budgetary targets for last two financial years and therefore it is important to understand the reasons behind shortfall in GST collection. Any shortfall in GST collection will not only impact fiscal management of the union government but also it will spill over to state finances in terms of lower tax devolution. Structural changes made in the GST, in terms of increasing GST threshold and reducing tax rates for a large number of goods and services may have helped to moderate the impact of GST on Indian economy, but the revenue impact of the policy decisions cannot be negligible. In addition, revenue impacts of changes made in administrative provisions and procedures in GST require assessment for future policy directions. Moreover, tax compliance under GST is not improving over time and therefore it is further delaying stabilization of GST. There are many challenges that tax administrations (both union and state tax authorities) are facing today in terms of complexities of GST Rules and Regulations and getting access to information for effective tax administration. Given the revenue importance of GST in overall public finance management in India, in-depth understanding the reasons for revenue shortfall could help the government devise policies to overcome the challenges. The challenges before Indian GST can be classified into design and structural aspects of GST and tax administration and compliance related. In this paper we assess compliance and revenue performance of states in GST and estimate GST compliance gap.

Key Words: Goods and Services Tax (GST), GST Compliance, Revenue Assessment of GST, Compliance Gap Analysis, GST Evasion, Indian States.

1. Introduction

Indian Goods and Services Tax (GST) regime has crossed half way of the transition period (July 2017 to June 2022) in December 2019. So far performance assessment of GST covers only overall GST collection in India. There are various aspects of GST which are yet to be assessed with larger availability of GST data in the public domain. Until recently, there was no state-level information on GST available in the public domain to undertake performance assessment. With better understanding on various components of GST collection and input tax credit (ITC) adjustment mechanism, especially with reference to Integrated GST (IGST), present paper attempts to undertake an in-depth performance assessment of GST both at the union and state level and estimate compliance gap of GST.

Performance assessment of states in compliance and GST collection is important for understanding on fiscal trajectory of state finances. State finance in India is undergoing many structural changes which would impact inter-government fiscal relations as well as fiscal autonomy of states. Tax base of states subsumed under GST used to contribute a significant share in Own Tax Revenue (OTR) mobilization and therefore revenue importance of GST in state finances is very high. Unlike the union government, states have limited taxation power to cope with any shortfall in GST collection. Since continuation of GST compensation beyond the transition period is uncertain (Mukherjee 2020), it will be always important for states to protect their tax base and explore possibilities for additional revenue mobilization from existing sources of tax and non-tax revenues to meet ever increasing demands for public expenditures. Specific objective of this paper is to understand state-level compliance and collection in GST and estimate compliance gap.

In the next section we assess overall revenue performance of GST. In section 3, we discuss on overall as well as state level compliance in filing GSTR-3B and GSTR-1. State-level performance assessment in GST revenue mobilization is discussed in section 4. This is followed by estimation of compliance gap in GST in section 5. We draw some policy conclusions in section 6.

2. Overall Revenue Performance of GST

Gross Value Added (GVA) (at basic prices, current prices, 2011-12 series) for Q4 of 2019-20 is estimated residually by subtracting sum of GVA during Q1 to Q3 of 2019-20 from the 2nd Advance Estimate of GVA for 2019-20, which is brought out by National Accounts Division of the Central Statistical Office (CSO) on 28 February 2020. We have also estimated total GST collection (comprising of SGST, CGST, IGST and GST Compensation Cess) for 2019-20 by applying annual average of average quarterly GST collection (as % of GVA) of 2017-18 (i.e., 6.99%) and 2018-19 (i.e., 6.93%) on 2nd advance estimate of GVA for 2019-20. GST collection for Q4 of 2019-20 is estimated residually by subtracting sum of GST collection during Q1 to Q3 of 2019-20 (i.e., Rs. 905,313 Crore) from the estimated full year's GST collection of 2019-20 (i.e., Rs. 1,286,853 Crore). GST collection during Q4 of 2019-20 is

estimated to be Rs. 381,540 Crore. In the month of January 2020, Rs. 105,366 Crore of GST collection is reported. Therefore, the balance GST collection during Q4 of 2019-20 is estimated to be Rs. 276,174 Crore. Bunching of GST collection (or GST payment) is observed during Q4 of last two financial years (2017-18 and 2018-19). It is also expected that similar bunching will be experienced during Q4 of 2019-20. Since tax buoyancy of GST collection is volatile, we avoided projection of GST collection based on tax buoyancy.

Table 1 shows that after two consecutive quarters (Q1 and Q2 of 2019-20) of negative growth rate (quarter-to-quarter) in GST collection during 2019-20, positive growth rate is observed during Q3 of 2019-20. However, GST collection during Q3 of 2019-20 falls short of Rs. 185 crore of the GST collection reported during Q4 of 2018-19. In other words, GST collection observed during Q3 of 2019-20 somehow manages to revive the GST collection observed during Q4 of 2018-19. Revenue shortfall on account of GST collection is contingent upon nominal growth rate of GVA and therefore unless the nominal growth rate of GVA improves, it would be difficult to increase GST collection.

Table 1: Quarterly Assessment of GST Collection in India

Quarter	Total Goods and Services Tax (GST) Collection		Gross Value Added (GVA) at Basic Prices (Current Prices, 2011-12 Series)		Tax Buoyancy**	GST/GVA*100
	Collection (Rs. Crore)	Growth Rate (%)*	GVA in Rs. Crore	Growth Rate (%)*		
Q2:2017-18	283,030		3,785,096			7.48
Q3:2017-18	257,919	-8.87	3,984,050	5.26	-1.69	6.47
Q4:2017-18	281,588	9.18	4,020,407	0.91	10.06	7.00
Q1:2018-19	286,109	1.61	4,156,723	3.39	0.47	6.88
Q2:2018-19	289,112	1.05	4,203,786	1.13	0.93	6.88
Q3:2018-19	294,866	1.99	4,368,772	3.92	0.51	6.75
Q4:2018-19	317,689	7.74	4,402,243	0.77	10.10	7.22
Q1:2019-20	302,311	-4.84	4,514,290	2.55	-1.90	6.70
Q2:2019-20	285,498	-5.56	4,483,279	-0.69	8.10	6.37
Q3:2019-20	317,504	11.21	4,710,725	5.07	2.21	6.74
Q4:2019-20	381,540#	20.17	4,785,392#	1.59	12.72	7.97
2019-20 (2AE)	1,286,853#		18,493,686			6.96

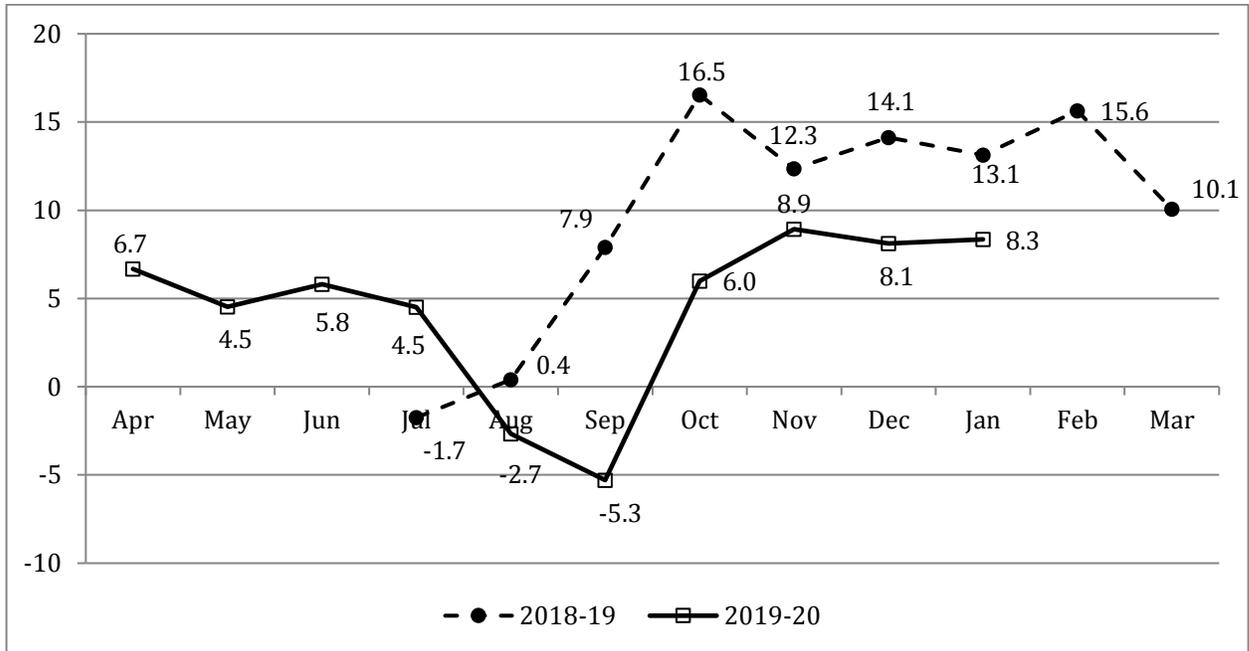
Notes: *-Quarter-to-Quarter Growth Rate, **- Tax Buoyancy = Growth Rate in GST Collection / Growth Rate in GVA, #- estimated

Data Source: Compiled from monthly Press Releases of PIB and EPWRF Time Series Database.

Monthly growth rate (year-on-year) in GST collection is presented in Figure 1. It shows that monthly growth rate in GST collection during 2019-20 is lower than the same observed during 2018-19. In 2018-19, monthly growth rates picked up during September and October, however in 2019-20, similar improvement could only be observed during October 2019.

Stagnation in growth rate of GST since November 2019 may be a cause for concern to realize budgetary target for GST collection sets for 2019-20.

Figure 1: Growth Rate in Monthly GST Collection (Year-On-Year, %)



Source: Estimated based on Monthly Press Releases of Press Information Bureau (PIB)

3. Compliance in GST Returns Submission

Under the current provision of GST, monthly filing of GSTR-3B and GSTR-1 is mandatory for all registered tax payers under GST, unless special provision has allowed them not to do so. Though, for a considerable section of taxpayers (other than composition taxpayers) quarterly filing of GSTR-1 has been allowed. However, these tax payers have to pay tax (through GSTR-3B) on monthly basis.¹

Tax payers who are eligible to file GSTR-3B are required to file GSTR-3B by 20th day of next month for the month of their economic activity. This implies that tax revenue corresponding to the month of the economic activity (say tth month) will be realized in the succeeding month (say t+1th month) with filing of GSTR-3B. However, tax collection will be booked against the month of economic activity. Simply, if GSTR-3B returns are received

¹ GSTR-1 is the return to be furnished for reporting details of all outward supplies of goods and services made, or in other words, sales transactions made during a tax period, and also for reporting debit and credit notes issued. Any amendments to sales invoices made, even pertaining to previous tax periods, should be reported in the GSTR-1 return. GSTR-3B is a monthly self-declaration to be filed, for furnishing summarized details of all outward supplies made, input tax credit claimed, tax liability ascertained and taxes paid.

during the month of January 2020, the corresponding tax revenue will be booked against the month of December 2019. Tax payers have provision to file GSTR-3B after the designated due date with payment of late fee and interest, as decided by the tax authorities time to time. Tax payers are required to file GSTR-1 by 11th day of next month (subject to changes by Notifications/ Orders) for the month of their economic activity and there is also provision of filing of GSTR-1 with late fee and interest.²

Since this paper is based on data released by the Goods and Services Tax Network (GSTN) it is important to highlight the difference in data reported by the Department of Revenue (DoR) and GSTN. Data released by DoR relates to the actual collection in any given month, irrespective of which filing period it refers to while the data from GSTN provides information based on the filing period it is related to (Mukherjee and Rao 2019). Therefore, monthly revenue profile of GST is dynamic as per as GSTN database and it depends on filing pattern of late filers and their tax liability thereof. In other words, if GSTR-3B is filed for the month of August-2017 (say month 't') in the month of December-2017 (t+3 month), the revenue corresponding to the return will be booked for the August-2017 as per as GSTN database is concerned. Therefore achieving stability in GSTR-3B filing is important to get an idea about monthly revenue collection under GST.

There is a gap in filing percentage between GSTR-1 (monthly returns on outward supplies) and GSTR-3B (summary self-assessed return). Short-filing of GSTR-1 vis-à-vis GSTR-3B has resulted in obstacles to launch full-fledged verification of ITC claims and other tax related information. A detailed discussion on problems associated with introduction of full-fledged invoice matching under the GST system is discussed by Mukherjee (2019a). There are various reasons behind differences in filing compliance between GSTR-1 and GSTR-3B and the most important among them is the administrative provisions of GST. It is also likely that some tax payers who are eligible to file both GSTR-1 and GSTR-3B are either filing GSTR-1 or GSTR-3B or not filing anyone.

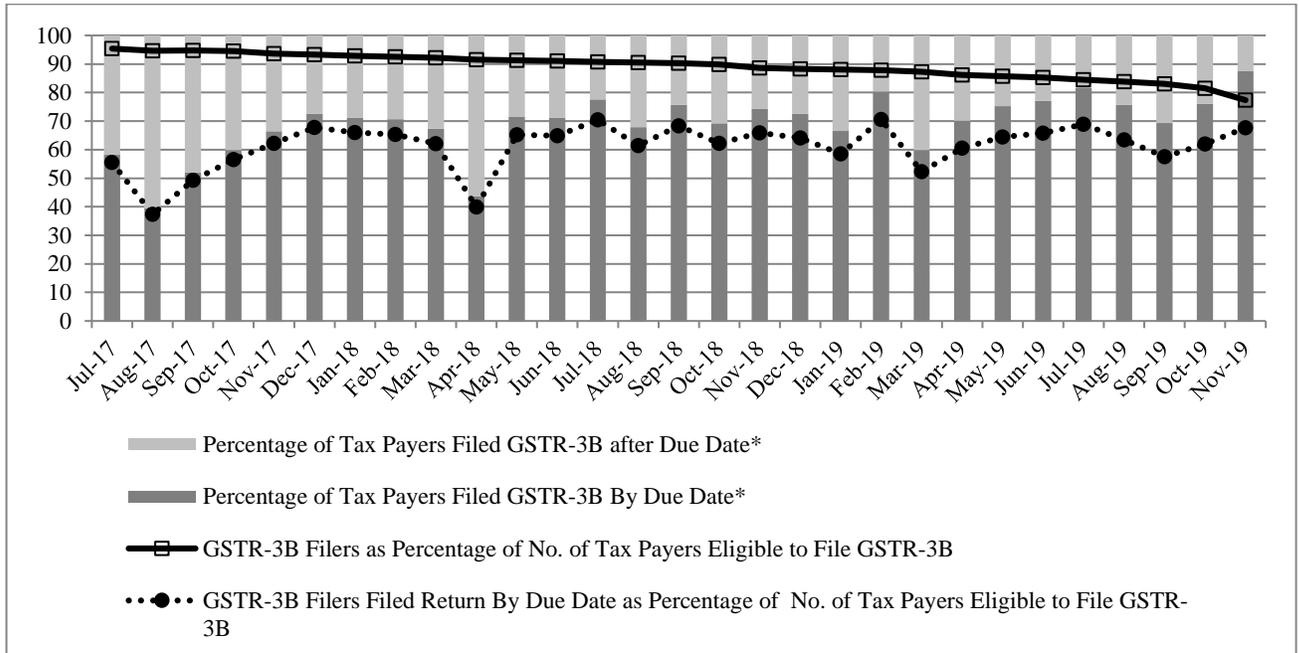
A detailed discussion on mismatch of data reported in GSTR-1 and GSTR-3B is carried out by Mukherjee and Rao (2019). Non-compliance in GST return submission and associated problems in effective tax administration is discussed by Mukherjee (2019a). In this paper, we will focus on overall as well as state level compliance in filing GST returns.

Figure 2 shows that on average 60 percent of eligible tax payers are filing GSTR-3B on time (by due date). Even after taking into account of late filers (eligible tax payers who are filing returns after due date), there is a gap in filing compliance. The gap is measured by taking all filers (by and after due date) as percentage of tax payers eligible to file GSTR-3B. The gap is large for recent months as compared to earlier months. Perhaps this shows that for earlier months return submission has been stabilized but for the recent months stabilization of GSTR-3B submission may take some more time. In other words, for earlier months maximum

² At present late fee is Rs. 50 per day of delay (for taxpayers having Nil tax liability for the month it is Rs. 20 per day of delay) and interest rate is 18% per annum and it is payable on the amount of outstanding tax to be paid.

achievable compliance has been achieved and but the same for the recent months yet to be achieved.

Figure 2: Status of GSTR-3B Compliance during July-2017 to November-2019 (as on 31 December 2019)

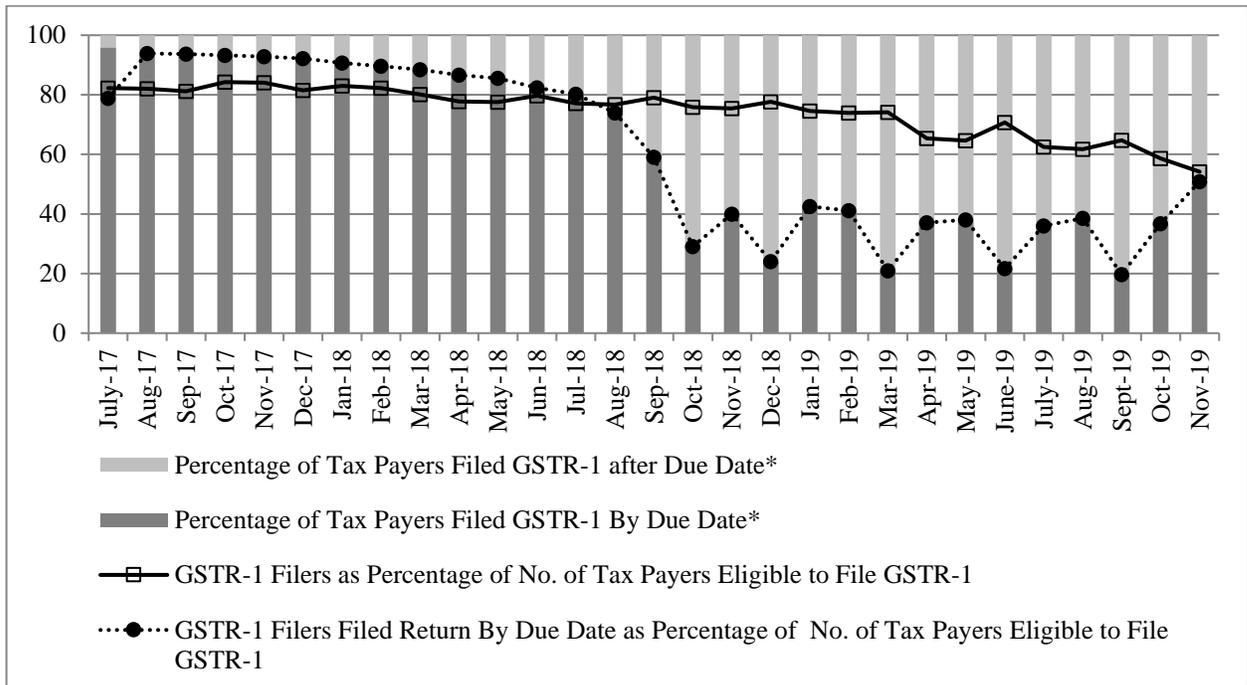


Note: *- Percentage of GSTR-3B Filers as Percentage of No. of Tax Payers Eligible to File GSTR-3B

Data Source: Goods and Services Tax Network

Figure 3 shows that on-time (by due date) filing of GSTR-1 has gone down drastically during October, 2018 to November, 2019. Cumulative GSTR-1 submission has also fallen during 2019-20 as compared earlier two years. An in-depth assessment is required to understand the reasons for such a fall in on-time GSTR-1 filing.

Figure 3: Status of GSTR-1 Compliance during July-2017 to November-2019 (as on 31 December 2019)

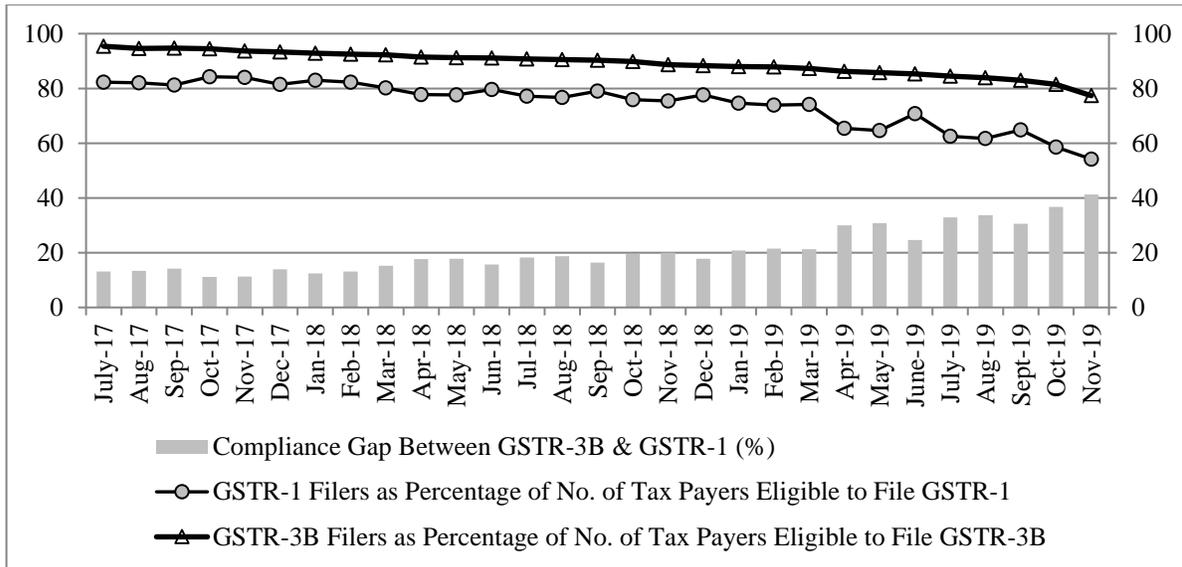


Note: *- Percentage of GSTR-1 Filers as Percentage of No. of Tax Payers Eligible to File GSTR-1

Data Source: Goods and Services Tax Network

Figure 4 shows that average difference (or gap) in compliance of filing GSTR-3B and GSTR-1 was 16.33 percent during July 2017 to March 2019 and it has gone up to 32.55 percent during April 2019 to November 2019. In the presence of differences in compliances in filing GSTR-3B and GSTR-1 possibility of differences in tax information reported in GSTR-1 and GSTR-3B cannot be ruled out. Lack of reconciliation of tax information reported across GST returns may pose a challenge before tax administrations to administer GST effectively. Efficiency of tax administration is dependent on effective tax information system. Therefore, for an effective enforcement of GST it will be important to provide quality tax information to all tax administrators. It is expected that lack of tax information for all tax payers may compel tax administrations to adopt selective tax enforcement. In the long run selective tax administration may discourage voluntary compliance and therefore may increase costs of tax administration. Moreover, selective tax enforcement violates the basic principle of equity in taxation.

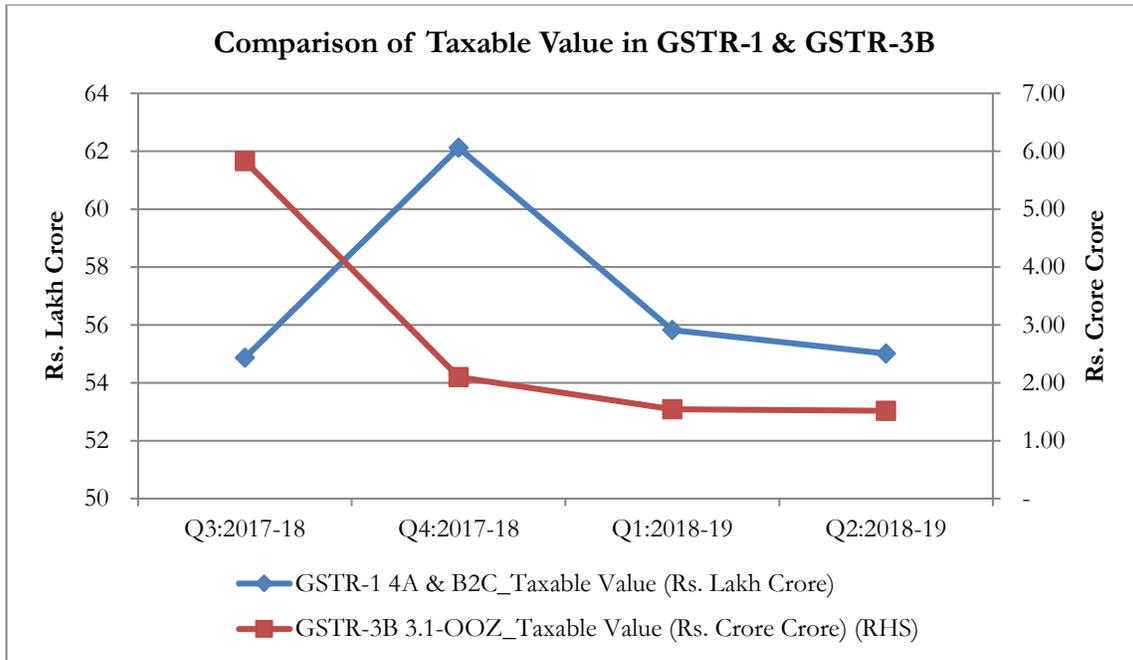
Figure 4: Compliance Gap in GSTR-1 and GSTR-3B Filing



Data Source: Goods and Services Tax Network

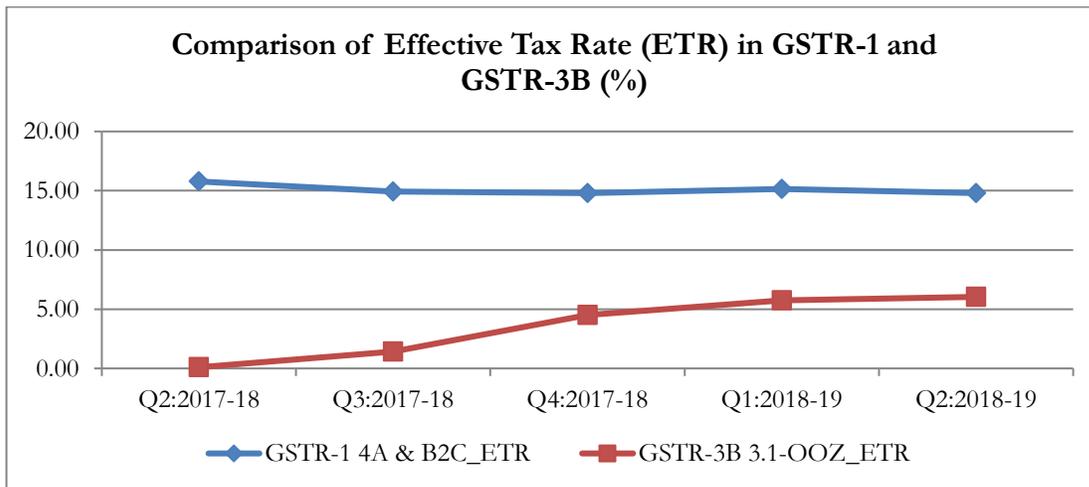
Mukherjee and Rao (2019) has raised the issue of mismatch of data reported in GSTR-1 and GSTR-3B in details. Lack of reconciliation of data across GST returns and across tables within the same return makes it difficult to assess revenue performance of GST. For example, there is huge difference in taxable value reported in GSTR-1 and GSTR-3B (Figure 5) and therefore the difference in Effective Tax Rate (Figure 6). Effective Tax Rate (ETR) is the ratio of tax liability and taxable value and presented as percentage of taxable value.

Figure 5: Comparison of Aggregate Taxable Value Reported in GSTR-1 and GSTR-3B



Source: Mukherjee and Rao (2019)

Figure 6: Comparison of Effective Tax Rate according to GSTR-1 and GSTR-3B



Source: Mukherjee and Rao (2019)

Lack of reconciliation of data across tax returns may also encourage tax evasion. For example, fraudulent claims of input tax credit (ITC) are the result of lack of reconciliation of

data across tax returns. In 2017-18, the difference between available ITC (as reported in GSTR-2A) and ITC claimed (as reported in GSTR-3B) was Rs. 249,521 crore, which is 39 percent of available ITC as reported in GSTR-2A. The difference has come down to 13 percent in 2018-19 (Table 2).³

Table 2: Differences in Input Tax Credit across Tax Returns

Year	Total Credit Claimed in GSTR-3B	Total Credit Available in GSTR-2A	Difference	Difference (% of Credit Available in GSTR-2A)
	(A)	(B)	(C=A-B)	(D=C/B*100)
2017-18	882,619.53	633,098.53	249,521.01	39%
2018-19	1478,118.21	1307,857.86	170,260.35	13%

Source: GST Newsletter, December 2019

To reduce difference in compliance of filing GSTR-1 and GSTR-3B and increase the proportion of matched credit in the system, restriction has placed from 26 December 2012 in utilization of provisional ITC to 10 percent from earlier 20 percent of the of the eligible credit available from total supplies received in GSTR- 2A from the suppliers. Several measures have also initiated to improve compliance in filing GSTR-1. For example, late fee has been waived for all tax payers if they file pending GSTR-1 for the period July 2017 to November 2019 by 10 January 2020. The provision of blocking e-way bill for non-compliance in filing GSTR-3B has also been extended for non-compliance of filing GSTR-1 for two tax periods from 26 December 2019. It is expected these steps would help to increase compliance in GSTR-1 filing and therefore reduce discrepancies of data reported in different tax returns.

3.1 GSTR Filing Compliance for Major States

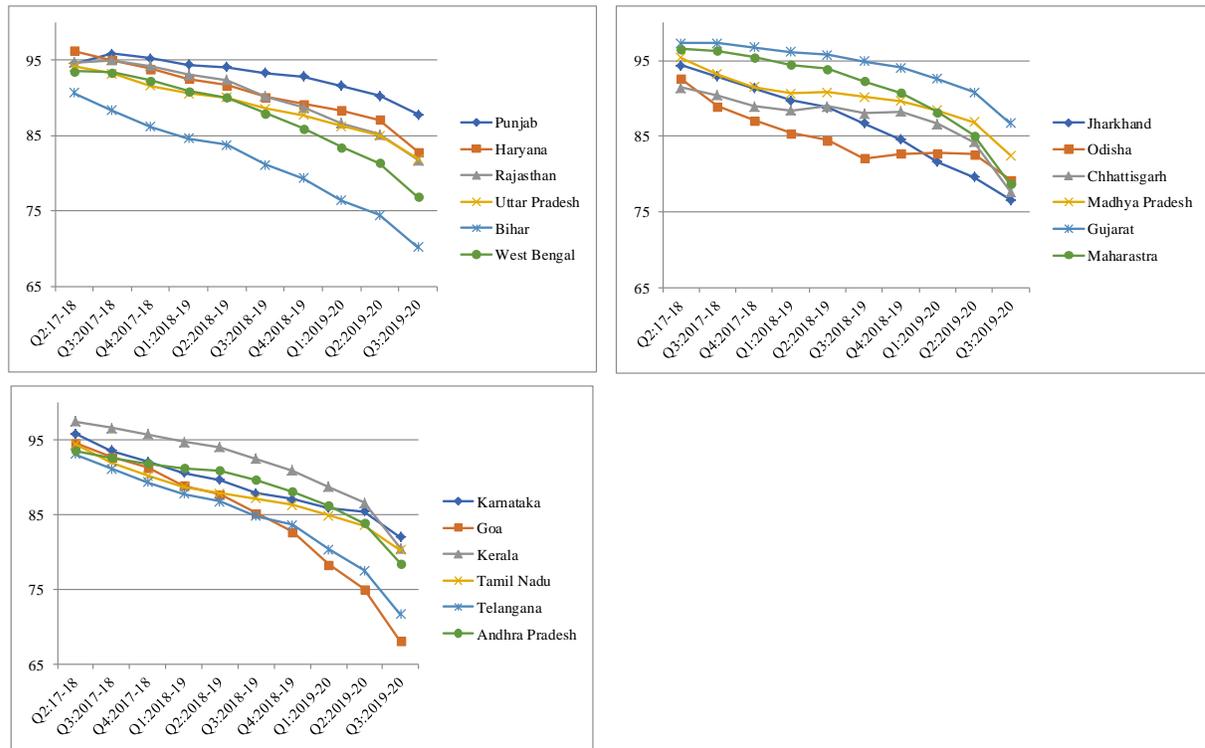
3.1.1 Compliance in GSTR-3B Filing for Major States

Figure 7 shows that among the major states, compliance in GSTR-3B filing is the lowest in Bihar and highest in Gujarat, except during Q3 of 2019-20. Similar to overall trend in compliance of GSTR-3B filing (as shown in Figure 2), compliance for major states also shows a declining trend with advancement of time. This means that though GSTR-3B filing

³ GSTR-2A is the return containing details of all inward supplies of goods and services i.e. purchases made from registered suppliers during a tax period. The data is auto-populated based on data filed by the suppliers in their GSTR-1 return. GSTR-2A is a read-only return and no action can be taken.

compliance has been stabilized for earlier months of GST introduction, achieving stability in GSTR-3B filing for recent months is yet to be achieved.

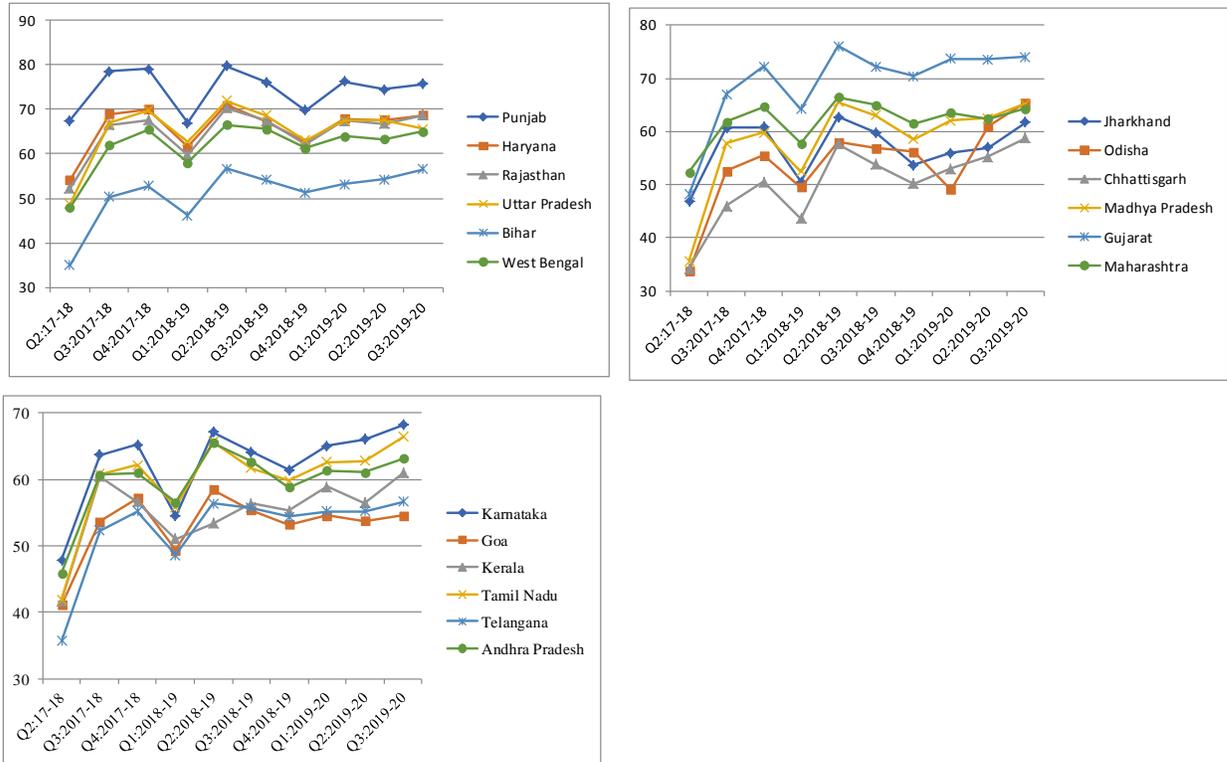
Figure 7: Major State-wise Compliance in GSTR-3B Filing by and after Due Date (as on 31 December 2019)



Data Source: Goods and Services Tax Network

With some exceptions, compliance in on-time filing is the highest in Punjab and lowest in Chhattisgarh. For all major states, there is an increasing trend in on-time filing of GSTR-3B over the period. However, fall in compliance in on-time GSTR-3B filing during Q1 of 2018-19 is observed for all major states. Bihar, Odisha, Chhattisgarh, Madhya Pradesh, Gujarat, Tamil Nadu and Telangana show higher volatility (as measured by coefficient of variation) in on-time compliance as compared to other major states.

Figure 8: Major State-wise Status of On-Time Filing of GSTR-3B (as on 31 December 2019)



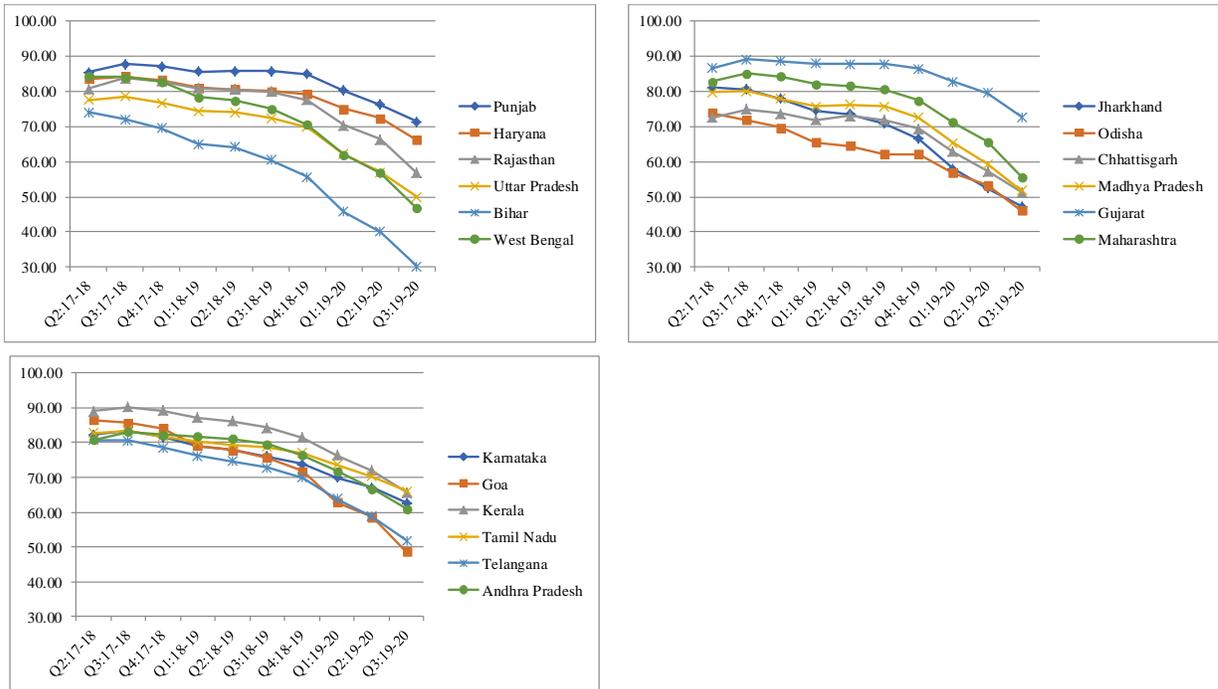
Data Source: Goods and Services Tax Network

3.1.2 Compliance in GSTR-1 Filing for Major States

Among major states, the highest compliance in GSTR-1 filing (both by and after due date) is reported for Gujarat and the lowest compliance reported in Bihar during Q1:2018-19 to Q3:2019-20 (Figure 9). During Q2:2017-18 to Q4:2017-18, the highest compliance reported in Kerala. Similar to GSTR-3B, compliance in filing GSTR-1 also is declining over time. This may be due to stabilization of return submission for earlier months of GST introduction.

On-time filing of GSTR-1 has fallen gradually for all major states since Q4 of 2017-18 (Figure 10). It was stagnant during Q3 of 2018-19 to Q2 of 2019-20. The reason for falling on-time filing compliance in GSTR-1 may be due to changes in administrative provisions and/or structural changes of GST. In Q3 of 2019-20, marginal improvement on-time filing compliance is observed.

Figure 9: Major State-wise Compliance in GSTR-1 Filing by and after Due Date (as on 31 December 2019)



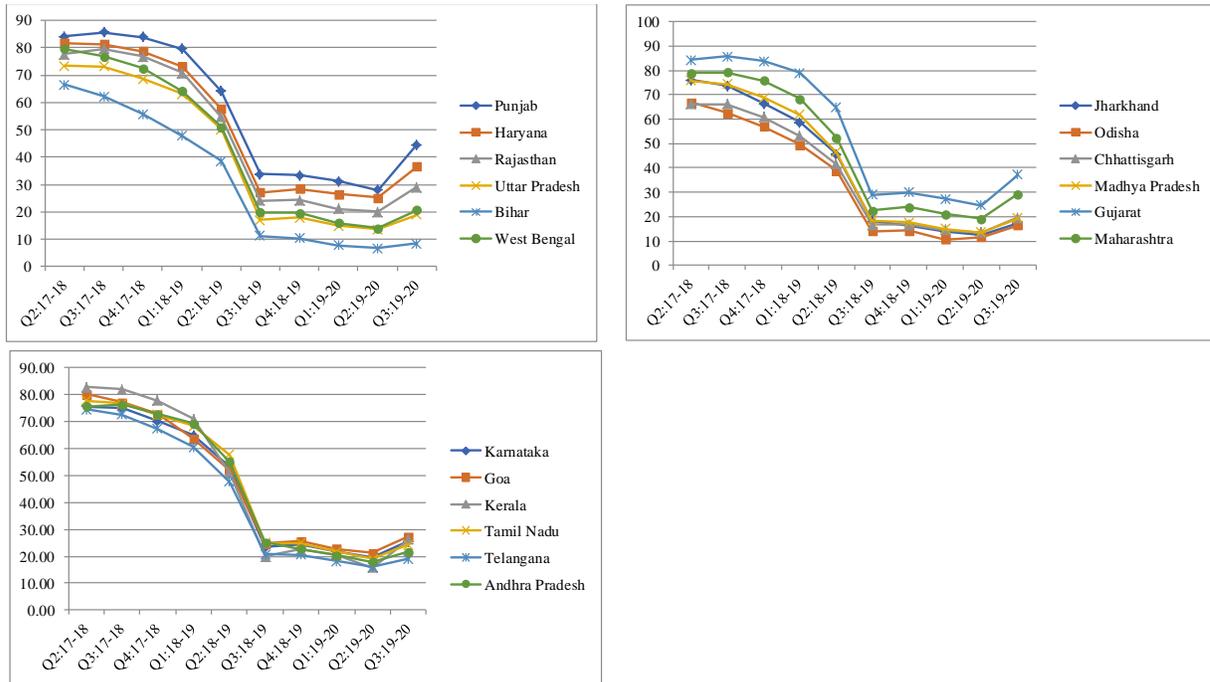
Data Source: Goods and Services Tax Network

3.2 GSTR Filing Compliance for Minor States / UTs with Legislative Assembly

3.2.1 Compliance in GSTR-3B Filing for Minor States

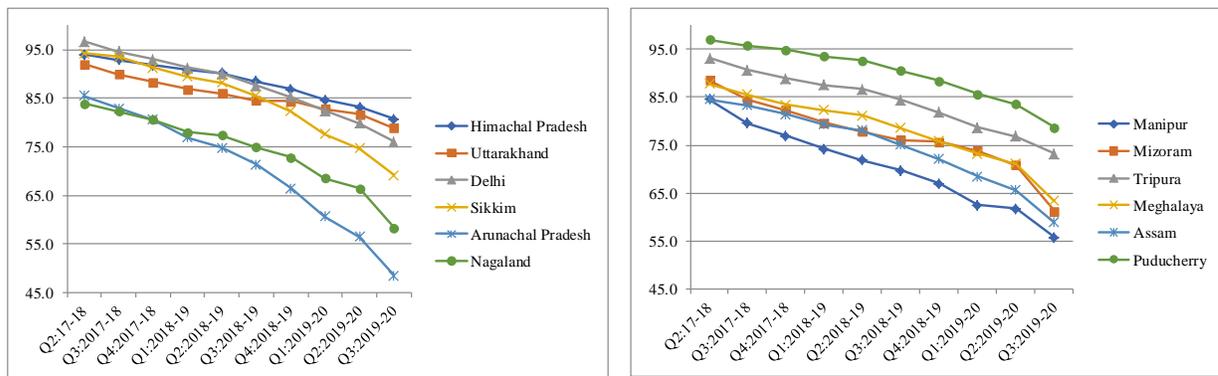
Among minor states, compliance in GSTR-3B filing (by and after due date) is the highest in Puducherry and the lowest during Q2:2017-18 in Nagaland, during Q3:2017-18 to Q3:2018-19 in Manipur, and during Q4:2018-19 to Q3:2019-20 in Arunachal Pradesh. For all states filing compliance of GSTR-3B has declined with advancement of time (Figure 11).

Figure 10: Major State-wise Status of On-Time Filing of GSTR-1 (as on 31 December 2019)



Data Source: Goods and Services Tax Network

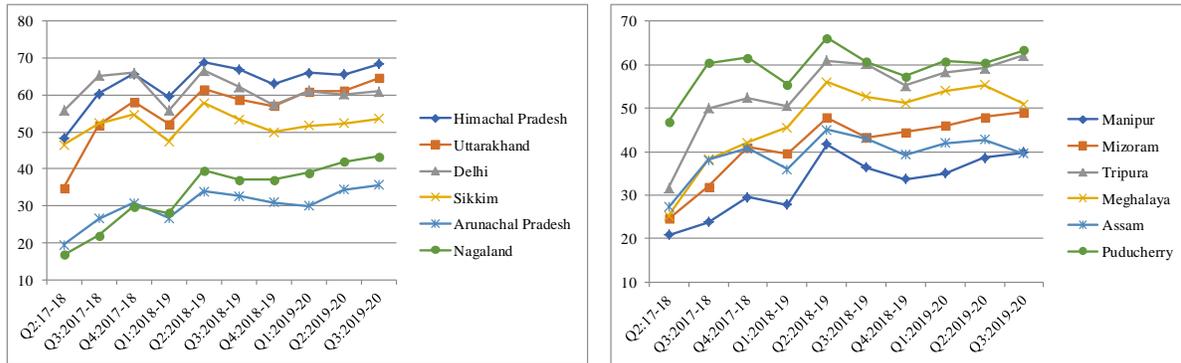
Figure 11: Minor State-wise Compliance in GSTR-3B Filing by and after Due Date (as on 31 December 2019)



Data Source: Goods and Services Tax Network

Except during initial three quarters, compliance in on-time filing of GSTR-3B is the highest in Himachal Pradesh and the lowest in Arunachal Pradesh. During Q2 to Q4 of 2017-18 Delhi reported the highest compliance and the lowest compliance reported in Nagaland (Q2 to Q3 of 2017-18) and Manipur (Q4:2017-18) (Figure 12). Except Himachal Pradesh, Delhi, Sikkim, Assam and Puducherry, all other minor states reported very high volatility in on-time compliance.

Figure 12: Minor State-wise Status of On-Time Filing of GSTR-3B (as on 31 December 2019)

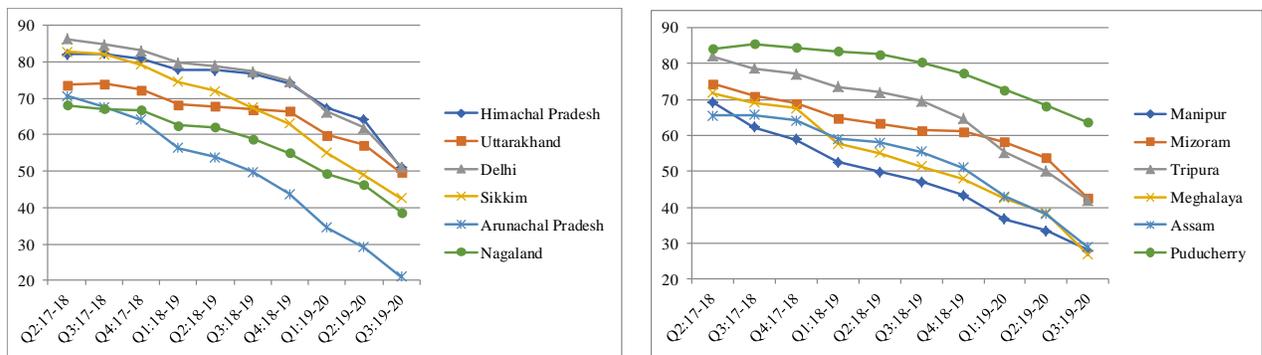


Data Source: Goods and Services Tax Network

3.2.2 Compliance in GSTR-1 Filing for Minor States

Among minor states the highest level of compliance in filing GSTR-1 is reported in Puducherry (except it was in Delhi during Q2 of 2017-18) and the lowest compliance is reported in Assam (during Q2:2017-18), Manipur (during Q3:17-18 to Q4:18-19) and Arunachal Pradesh (during Q1:19-20 to Q3:19-20) (Figure 13). Compliance over the period has declined for all minor states.

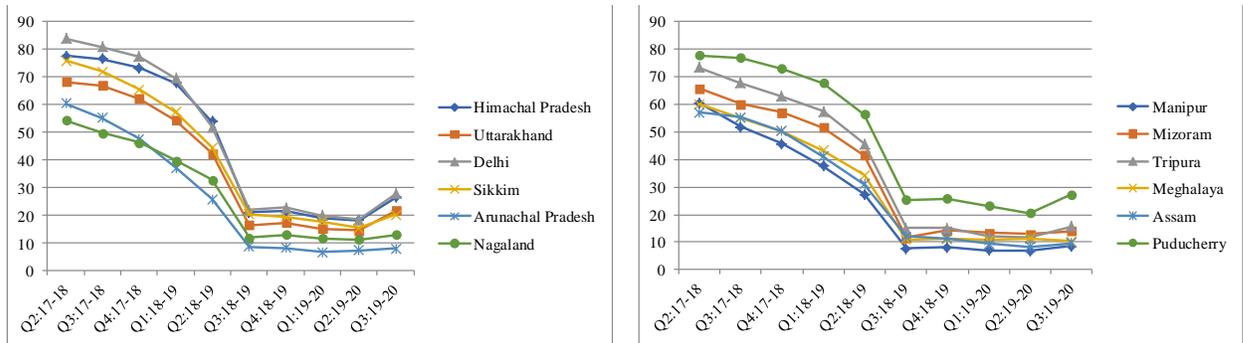
Figure 13: Minor State-wise Compliance in GSTR-1 Filing by and after Due Date (as on 31 December 2019)



Data Source: Goods and Services Tax Network

On-time filing of GSTR-1 has fallen drastically for all minor states since Q4 of 2017-18 (Figure 14). It was stagnant during Q3 of 2018-19 to Q2 of 2019-20. In Q3 of 2019-20, a marginal improvement is observed for some minor states.

Figure 14: Minor State-wise Status of On-Time Filing of GSTR-1 (as on 31 December 2019)



Data Source: Goods and Services Tax Network

4. Performance Assessment of States in GST Revenue Collection

State GST revenue comprises of sum of the revenue on account of SGST collection (net of adjustment of SGST and IGST credits) and receipts on account of IGST settlement and GST compensation from the union government. Taxpayers pay due SGST liability after adjusting available SGST and IGST credits. To assess the performance of states in GST collection we have taken SGST collection with IGST settlement and avoided adding GST compensation receipt. We have discussed on GST compensation receipts of states separately in this section.

We present monthly year-on-year growth rate in SGST collection in Figure 15 and 16 for major and minor states respectively. For major states there is a fall in monthly growth rate of SGST collection in June 2019 and October 2019 (Figure 15). Volatility in monthly growth rate in GST collection is higher during 2019-20 as compared to 2018-19. For minor states monthly growth rate in SGST collection falls in October 2019. Except in October 2019, average monthly growth rate in 2019-20 is higher than growth experienced during 2018-19 (Figure 16).

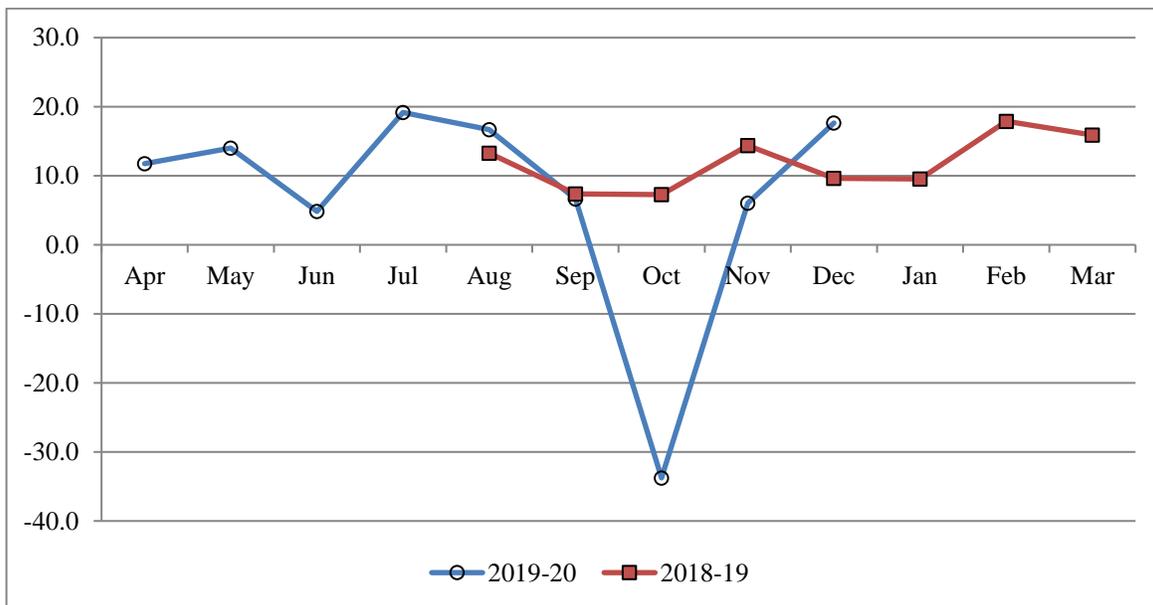
Table 3: Quarterly Collection of SGST for All States/ UTs

	State GST Collection (Rs. Crore)**				Percentage Share (%)		
	Total	Major States	Minor States	Others	Major States	Minor States	Others
Q2:2017-18*	63,826	57,715	5,339	773	90.4	8.4	1.2
Q3:2017-18	103,997	93,593	8,897	1,507	90.0	8.6	1.4
Q4:2017-18	106,190	95,705	8,823	1,661	90.1	8.3	1.6
FY2017-18	274,013	247,013	23,059	3,941	90.1	8.4	1.4
Q1:2018-19	110,929	100,247	9,048	1,634	90.4	8.2	1.5
Q2:2018-19	108,193	98,144	8,405	1,645	90.7	7.8	1.5
Q3:2018-19	113,959	103,291	8,909	1,758	90.6	7.8	1.5
Q4:2018-19	120,655	109,453	9,410	1,792	90.7	7.8	1.5
FY2018-19	453,736	411,135	35,772	6,829	90.6	7.9	1.5
Q1:2019-20	122,635	110,414	10,321	1,899	90.0	8.4	1.5
Q2:2019-20	123,987	112,186	9,912	1,889	90.5	8.0	1.5
Q3:2019-20	110,095	99,744	8,942	1,409	90.6	8.1	1.3

Notes: *-Q2:2017-18 includes revenue for only August and September of 2017.

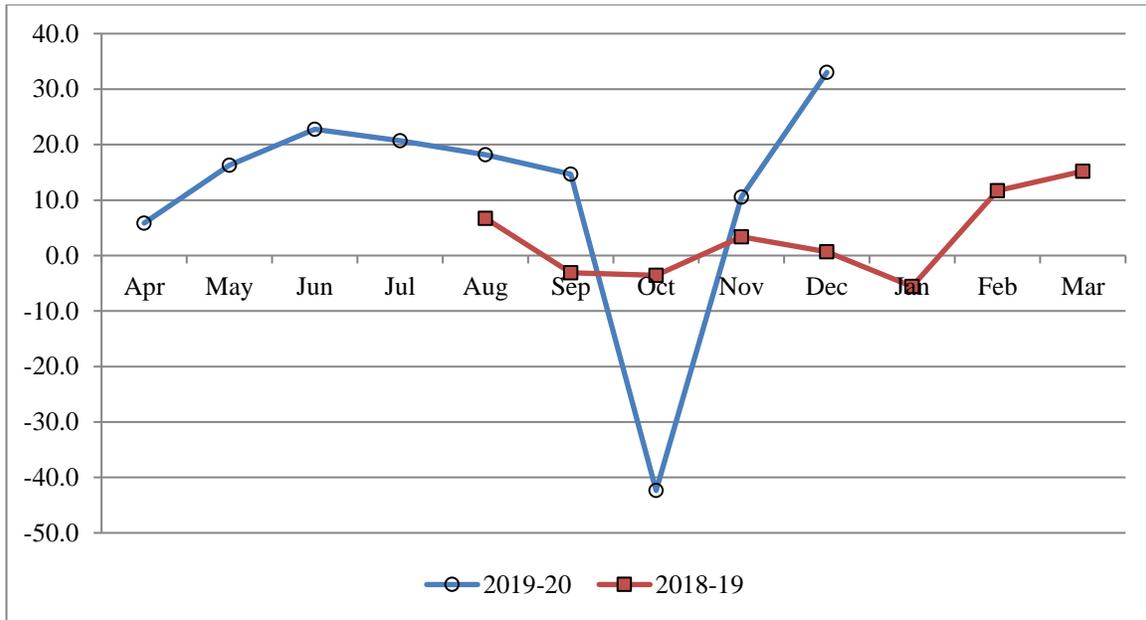
** - Includes IGST settlement

Data Source: Goods and Services Tax Network

Figure 15: Monthly Growth Rate (Year-On-Year) in SGST Collection of Major States


Note: *-Including IGST settlement

Data Source: Goods and Services Tax Network

Figure 16: Monthly Growth Rate (Year-On-Year) in SGST Collection of Minor States


Note: *-Including IGST settlement
Data Source: Goods and Services Tax Network

Major states hold the largest share in total GST collection and among major states four states (viz., Maharashtra, Uttar Pradesh, Karnataka, Tamil Nadu) hold more than 42 percent share in overall GST collection. It is to be noted that state's share in overall GST collection is changing over time and therefore understanding the dynamics of SGST collection across states is important in overall performance assessment of GST collection.

Table 4: Quarterly SGST Collection of Major States

Major States	State GST* Collection (Rs. Crore)			Percentage Share in Total SGST Collection (%)		
	2017-18	2018-19	2019-20	2017-18	2018-19	2019-20
Punjab	7,268	11,218	8,867	2.7	2.5	2.5
Haryana	10,183	16,567	13,625	3.7	3.7	3.8
Rajasthan	11,439	20,552	15,342	4.2	4.5	4.3
Uttar Pradesh	23,995	41,183	32,726	8.8	9.1	9.2
Bihar	6,194	13,240	10,565	2.3	2.9	3.0
West Bengal	14,300	24,104	19,190	5.2	5.3	5.4
Jharkhand	3,844	7,159	5,806	1.4	1.6	1.6
Odisha	6,146	10,588	9,055	2.2	2.3	2.5
Chhattisgarh	4,064	7,023	5,545	1.5	1.5	1.6
Madhya Pradesh	9,147	16,965	13,130	3.3	3.7	3.7

Gujarat	20,320	32,030	24,978	7.4	7.1	7.0
Maharashtra	48,238	76,004	58,881	17.6	16.8	16.5
Karnataka	22,733	37,017	29,832	8.3	8.2	8.4
Goa	1,369	2,202	1,601	0.5	0.5	0.4
Kerala	11,566	18,385	13,755	4.2	4.1	3.9
Tamil Nadu	23,604	36,925	29,348	8.6	8.1	8.2
Telangana	12,369	21,412	16,371	4.5	4.7	4.6
Andhra Pradesh	10,235	18,559	13,728	3.7	4.1	3.8

Note: *-includes IGST settlement

Data Source: Goods and Services Tax Network

Among minor states, the largest share holds by Delhi (Table 5). Fall in share of Delhi in overall GST collection 2018-19 as compared to 2017-18 demands an in-depth assessment.

Table 5: Quarterly SGST Collection of Minor States

Minor States	State GST* Collection (Rs. Crore)			Percentage Share in Total SGST Collection (%)		
	2017-18	2018-19	2019-20	2017-18	2018-19	2019-20
Himachal Pradesh	1,674	2,844	2,484	0.6	0.6	0.7
Uttarakhand	2,394	4,074	3,566	0.9	0.9	1.0
Delhi	12,891	16,718	13,170	4.7	3.7	3.7
Sikkim	182	367	341	0.1	0.1	0.1
Arunachal Pradesh	213	559	500	0.1	0.1	0.1
Nagaland	177	428	381	0.1	0.1	0.1
Manipur	287	638	560	0.1	0.1	0.2
Mizoram	162	424	341	0.1	0.1	0.1
Tripura	445	849	685	0.2	0.2	0.2
Meghalaya	348	702	609	0.1	0.2	0.2
Assam	3,816	7,428	6,030	1.4	1.6	1.7
Puducherry	471	742	510	0.2	0.2	0.1

Note: *-includes IGST settlement

Data Source: Goods and Services Tax Network

Any discussion on revenue performance of states in the GST regime is incomplete without discussion on GST compensation. The Goods and Services (Compensation to States) Act 2017 assures protection of states' revenue from uncertainties associated with GST collection during the transition period of GST (during the first five years of GST introduction). States will receive GST compensation if their SGST collection (including IGST settlement) falls short of projected SGST revenue. State-wise projection of SGST collection is based on 14 percent annual nominal growth rate of net revenue (net of refunds) collected from taxes

subsumed under GST (excluding tax collection from out-of-GST items) in 2015-16 (base year), which is also known as Revenue Under Protection (RUP) in GST. Therefore, states will receive GST compensation if SGST collection falls short of projected SGST collection. Therefore, states where GST compensation receipt constitutes significant percentage of SGST collection (including IGST settlement but excluding GST compensation) are not performing well to meet the desired revenue growth in SGST collection (i.e., 14%).

A large number of states are not able to meet the projected growth target of SGST collection and therefore receiving GST compensation. In other words, states having higher GST compensation receipt as percentage share of SGST collection (including IGST settlement) are those who are not able to meet the desired growth target of 14 percent set in the GST Compensation Act. Among major states revenue performance is the lowest for Punjab and it is followed by Bihar, Chhattisgarh, Odisha, Jharkhand, Madhya Pradesh and Karnataka (Table 6).

Table 6: Major State-wise GST Compensation Received as Percentage of SGST Collection

	2017-18	2018-19	2019-20*
Punjab	63.5	73.4	90.3
Haryana	14.3	23.6	38.4
Rajasthan	25.3	11.1	31.8
Uttar Pradesh	10.1	0.0	17.6
Bihar	50.7	21.1	33.5
West Bengal	11.2	10.8	23.4
Jharkhand	35.6	15.3	28.1
Odisha	38.2	35.7	41.2
Chhattisgarh	39.1	36.9	58.5
Madhya Pradesh	29.2	19.5	34.0
Gujarat	21.0	22.6	39.9
Maharashtra	6.4	12.3	25.5
Karnataka	33.7	33.7	45.7
Goa	20.5	22.8	59.1
Kerala	18.2	19.2	38.4
Tamil Nadu	4.3	13.1	24.5
Telangana	1.4	0.0	17.0
Andhra Pradesh	3.7	0.0	15.0

Note: *-till September 2019

Data Source: Goods and Services Tax Network & Lok Sabha Unstarred Questions

Among minor states the lowest revenue performance is observed for Puducherry, and it is followed by Himachal Pradesh, Uttarakhand, Meghalaya, Tripura and Assam. Surprisingly performance of Delhi has deteriorated after 2017-18.

Table 7: Minor State-wise GST Compensation Received as Percentage of SGST Collection

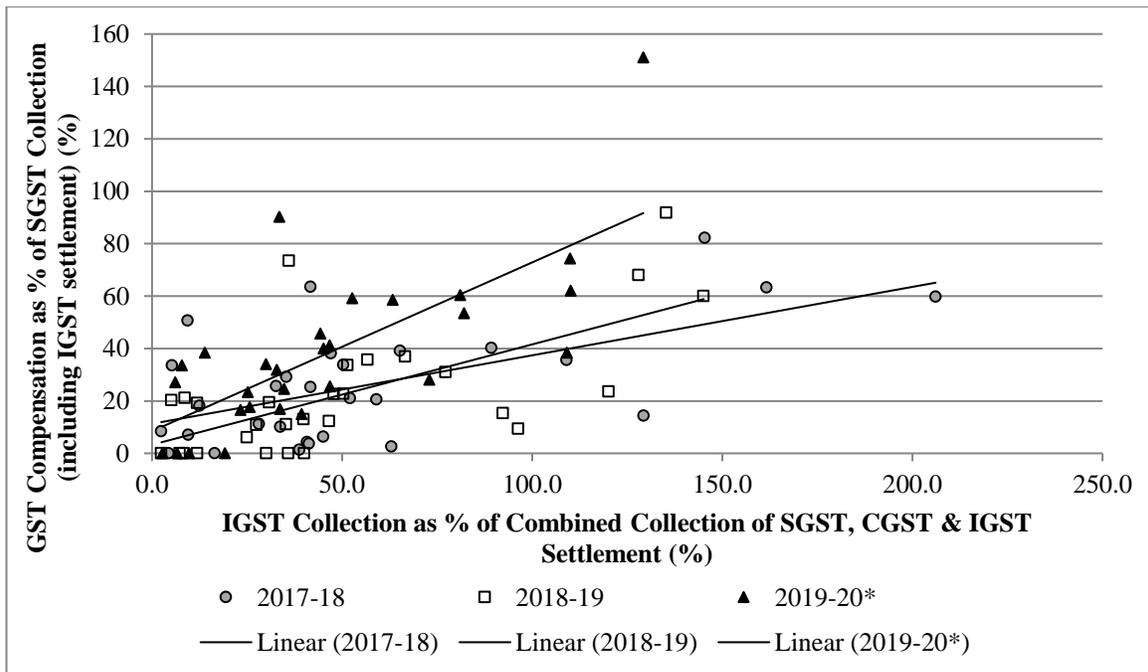
Minor States	2017-18	2018-19	2019-20*
Himachal Pradesh	63.3	68.0	74.3
Uttarakhand	59.8	59.9	62.1
<i>Delhi</i>	<i>2.5</i>	<i>31.0</i>	<i>53.4</i>
Sikkim	3.3	0.0	0.0
Arunachal Pradesh	7.0	0.0	0.0
Nagaland	0.0	0.0	0.0
Manipur	8.4	0.0	0.0
Mizoram	0.0	0.0	0.0
Tripura	33.5	20.2	27.1
Meghalaya	40.2	9.4	60.4
Assam	25.7	6.1	16.6
Puducherry	82.2	91.8	151.0

Note: *-till September 2019

Data Source: Goods and Services Tax Network & Lok Sabha Unstarred Questions

Achieving 14 percent expected growth rate in SGST collection depends on size of the domestic consumption base of the states and tax efforts (Mukherjee 2019b). Since the design of GST is based on destination principle of taxation, it is expected that states having larger share of inter-state sales (or export) vis-à-vis domestic sales may find difficult to meet the desired growth target (Mukherjee 2019c). States having larger share of GST compensation receipt as percentage of SGST collection are those who are not meeting the desired growth rate of 14 percent in SGST collection. To measure inter-state sales (or export) vis-à-vis domestic sales of a state, we have taken state-wise IGST collection as percentage of combined revenue from SGST, CGST and IGST settlement. Figure 17 shows that as inter-state sales (or export) increases as percentage of domestic sales (as measured by combined collection of SGST, CGST and IGST settlement) of a state, dependence on GST compensation increases. In other words, states having larger share of inter-state sales (or export) vis-à-vis domestic sales are not meeting the desired growth target in SGST collection. Prior to introduction of GST, inter-state sales used to attract origin based Central Sales Tax (CST) and states were collecting revenue from inter-state sales as well. However, in the GST regime, inter-state sales attract IGST and due IGST credits are adjusted against SGST, CGST and IGST liabilities in the destination state. Therefore, in the GST regime origin state is not getting any revenue from inter-state sales or export. This provision of GST is resulting in revenue loss especially for natural resources (e.g., minerals, fossil fuels) rich states like Jharkhand, Odisha, Chhattisgarh and Madhya Pradesh and states where value addition from manufacturing activities are not fully appropriated within the state's boundary (e.g., Himachal Pradesh, Uttarakhand). This is a design problem of GST and unless addressed appropriately in our inter-governmental fiscal transfer framework, these states will face severe fiscal stress post GST compensation period (Mukherjee 2020).

Figure 17: Factor Influencing States' Growth Rate in SGST Collection



Note: *-till September 2019

Data Source: Goods and Services Tax Network & Lok Sabha Unstarred Questions

5. Estimation of Compliance Gap in GST

5.1 GST Compliance Gap on Account of Non-Filing of GSTR-3B

Annual estimation of VAT/ GST gap is a standard practice for many countries/ economic regions, e.g., EU countries, UK and Australia. In principle VAT / GST Gap comprises of Compliance Gap (CG) and Policy Gap (PG) (Nerudova and Dobranschi 2019). According to Nerudova and Dobranschi (2019), Compliance Gap measures the difference between actual VAT revenues and the potential VAT revenues that could have been collected had no taxpayer been involved in any tax evasion or tax avoidance and Policy Gap represents the uncollected VAT revenues due to differences in VAT rates across commodities, exemptions, thresholds, abatements etc. Therefore, the policy gap is the difference between the actual VAT revenues and the theoretical VAT revenues that would have been collected if a standard VAT rate on all goods and services is imposed.

In this exercise we will first estimate the compliance gap of GST arising due to non-filing of GSTR-3B returns. We also attempt to estimate compliance gap arising due to tax evasion given the information available in the public domain on GST evasion. To estimate policy gap of GST, we need tax rate-wise turnover, tax (GST) collection and estimates on erosion of tax base due to threshold, exemptions, abatements etc. Moreover, in the presence of unaccounted income from informal economic activities, any estimate on policy gap based

on only information of formal economic activities may not reflect ground reality. Official statistics do not capture economic indicators (e.g., sales / turnover) of unaccounted (or informal) activities (Mukherjee and Rao 2017).

To estimate compliance gap of GST due to non-filing of GSTR-3B by those taxpayers who are eligible to file the same, we have followed the following methodology:

$$TGSTPF_{it} = TGST_{it}/F_{it} \quad (1)$$

$$CGF_{it} = NF_{it} = EF_{it} - F_{it} \quad (2)$$

$$CGR_{it} = NF_{it} * TGSTPF_{it} \quad (3)$$

$$CGTGST_{it} = \left(\frac{CGR_{it}}{TGST_{it}} \right) * 100 \quad (4)$$

Where,

$TGST_{it}$ – Total GST Collection from CGST, SGST, IGST and GST Compensation Cess for the i th state for the t th month (Rs. Crore)

$TGSTPF_{it}$ – Total GST collection Per GSTR-3B Filer by and after due date for the i th state for the t th month (Rs. Crore)

EF_{it} - No. of tax payers eligible to file GSTR-3B (Eligible Filers) for the i th state in the t th month (Number)

F_{it} - No. of tax payers filed GSTR-3B (Filers) by and after due date for the i th state for the t th month (Number)

NF_{it} - No. of Tax Payers who have not filed GSTR-3B (Non-Filers) as on 31 December 2019 for the i th state for the t th month (Number)

CGF_{it} – Compliance Gap in terms of Number of Filers for the i th state for the t th month (Number)

CGR_{it} – Compliance Gap in terms of Revenue for the i th state for the t th month (Rs. Crore)

$CGTGST_{it}$ – Compliance Gap in terms of Total GST Revenue for the i th state for the t th month (%)

In this exercise, we assume that taxpayers who are eligible to file GSTR-3B but not filing have similar economic activities as those who are filing GSTR-3B. In other words, we are assuming that there is no difference between filers and non-filers in terms of their economic activities and tax related parameters, e.g., taxable turnover, available input tax credit, tax liabilities. In simple terms we assume that average tax collection per tax return is same across filers and non-filers. Though this is a strong assumption, in absence information on distribution of tax payers by taxable turnover, tax liabilities and adjustment of input tax credit available in the public domain, it is difficult to estimate compliance gap for Indian GST. We

also assume that taxpayers who are not filing GSTR-3B are currently engaged in economic activities.

Please note that compliance gap estimate presented in this paper is a preliminary estimate and aims to initiate debate and discussion on this issue. It is also expected that with more data available in the public domain, more robust estimates could be made.

Table 8 shows that average compliance gap for major states is 7 percent of total GST collection in 2017-18. It has gone up to 11.5 percent in 2018-19 and 19.5 percent in 2019-20. It is to be noted that for 2017-18 GSTR-3B filing has stabilized whereas for 2018-19 and 2019-20 filing of GSTR-3B is yet to stabilize. With rising compliance in GSTR-3B filing, it is expected that compliance gap will reduce.

Among major states the highest compliance gap is observed for Bihar (14.45%) and it is followed by Odisha (13.48%), Chhattisgarh (11.61%) and Telangana (10.75%) in 2017-18. For 2018-19 and 2019-20, except a few states, majority of states have reported compliance gap higher than average of major states.

Table 8: Major State-wise GST Compliance Gap on Account of Non-Filers of GSTR-3B

Major States	Compliance Gap (Rs. Crore)			Compliance Gap (% of TGST)		
	2017-18	2018-19	2019-20*	2017-18	2018-19	2019-20*
Punjab	459	980	986	4.76	7.01	11.18
Haryana	2,140	5,790	5,208	5.81	10.48	15.94
Rajasthan	1,071	3,250	3,313	5.80	10.58	18.15
Uttar Pradesh	3,043	7,646	6,858	8.25	12.48	18.36
Bihar	799	2,480	2,569	14.45	23.06	35.59
West Bengal	1,797	5,422	5,964	7.70	13.63	23.95
Jharkhand	1,228	3,674	3,364	8.67	15.36	25.80
Odisha	2,002	5,387	3,774	13.48	19.99	22.18
Chhattisgarh	1,510	3,037	2,676	11.61	13.24	20.08
Madhya Pradesh	1,278	2,823	2,551	8.22	10.99	16.18
Gujarat	1,433	3,954	4,828	3.12	5.38	10.94
Maharashtra	4,640	14,204	19,927	4.41	8.34	19.05
Karnataka	3,673	10,358	8,671	7.63	13.15	18.30
Goa	243	725	851	8.75	17.67	35.30
Kerala	424	1,348	1,864	3.90	8.25	17.25
Tamil Nadu	4,337	10,391	8,727	9.57	14.73	20.65
Telangana	2,296	6,457	6,781	10.75	17.74	30.78
Andhra Pradesh	1,189	2,978	3,101	8.30	11.76	20.47
Total – Major States	33,562	90,907	92,014	6.96	11.56	19.29

Notes: *-Till October 2019

Data Source: Goods and Services Tax Network

Average compliance gap is higher for minor states as compared to major states. Except a few states, all minor states have reported higher than average compliance gap. Average compliance gap is 9.66 percent of total GST collection during 2017-18. It has gone up 17.5 percent in 2018-19 and 29.8 percent in 2019-20.

Table 9: Minor State-wise GST Compliance Gap on Account of Non-Filers of GSTR-3B

Minor States	Compliance Gap (Rs. Crore)			Compliance Gap (% of TGST)		
	2017-18	2018-19	2019-20*	2017-18	2018-19	2019-20*
Himachal Pradesh	436	987	971	8.20	12.99	20.81
Uttarakhand	1,321	2,660	1,959	12.04	17.56	23.06
Delhi	1,745	5,591	6,580	6.60	14.03	25.91
Sikkim	99	328	474	8.31	17.09	36.14
Arunachal Pradesh	29	177	261	23.96	44.51	81.59
Nagaland	24	80	93	23.17	35.15	55.65
Manipur	35	138	168	28.26	44.58	68.05
Mizoram	14	66	80	20.29	30.85	45.27
Tripura	35	105	120	11.33	18.94	31.34
Meghalaya	122	370	380	18.76	27.07	43.99
Assam	1,062	3,013	3,258	21.36	33.52	56.18
Puducherry	63	203	222	4.78	10.52	21.11
Total – Minor States	4,982	13,717	14,566	9.66	17.47	29.80

Notes: *-Till October 2019

Data Source: Goods and Services Tax Network

Monthly and average of monthly compliance gap is presented in Figure 18 and 19 for major and minor states respectively. It shows that stabilization of monthly return submission is important to reduce compliance gap.

Figure 18: Monthly and Average of Monthly Compliance Gap of Major States (as % of Total GST Collection)

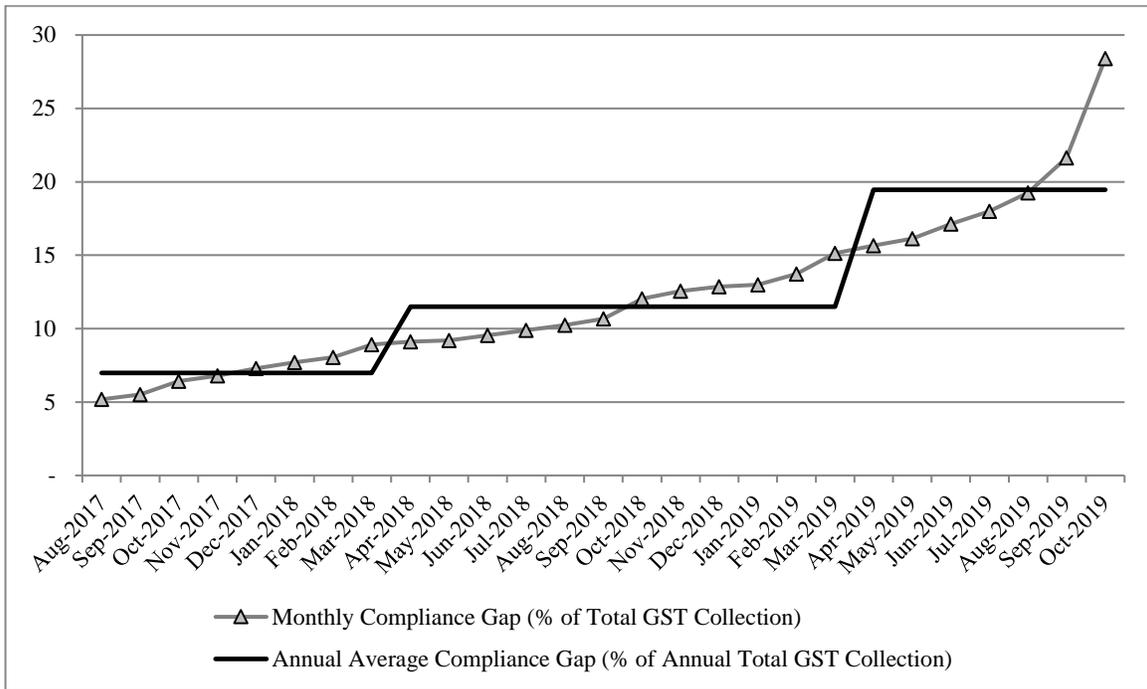
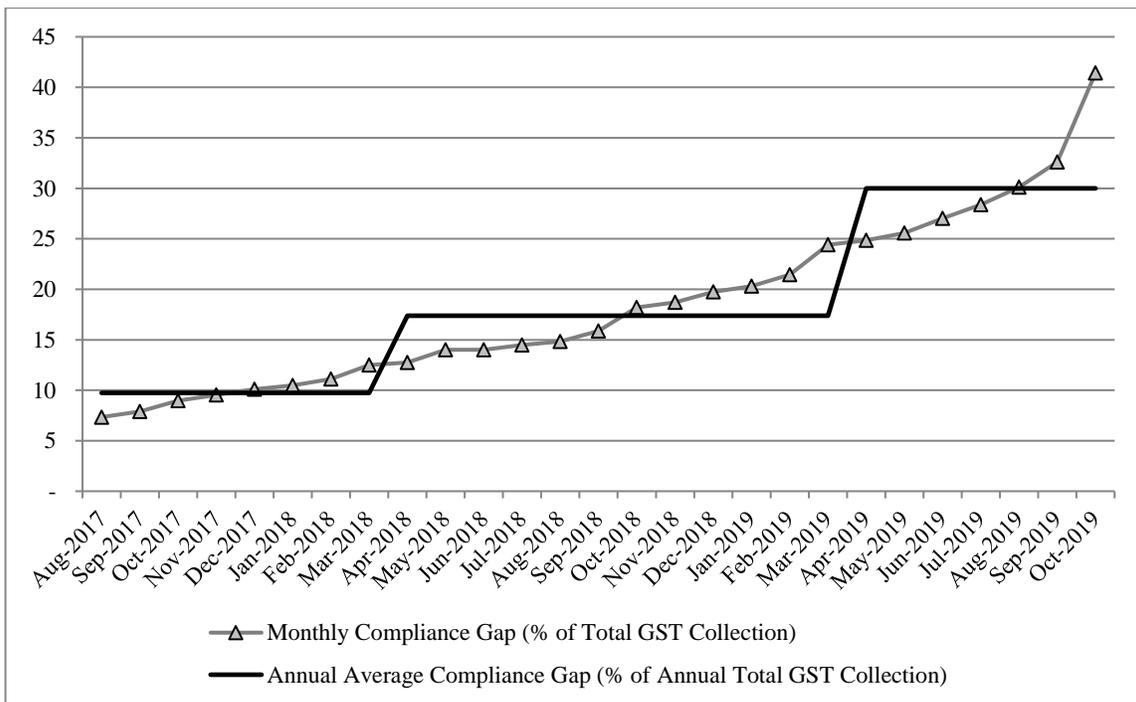


Figure 19: Monthly and Average of Monthly Compliance Gap of Minor States (as % of Total GST Collection)



5.2 GST Compliance Gap on Account of Tax Evasion

Information available on GST evasion in the public domain is sparse and there is no systematic reporting (publishing) of identified cases of GST evasion and amounts involved therein. Information revealed against Parliamentary questions are compiled and presented in Table 10. Table 10 shows that there are various modes of GST evasion, e.g., fraudulent ITC claims against fake invoices, violations in respect of E-way bills and GST refund fraud. In addition to identified modes of GST frauds/ evasions, it is expected that there many other modes which are yet to detected and placed in the public domain. Total GST evasion based on identified cases (as presented in Table 10) is Rs. 85,975.83 Crore which is 4.07 percent of total GST collection during August 2017 to December 2019.

Table 10: GST Evasion Detected by Central GST Authorities

Mode of Evasion	No. of Cases Identified			Amount Involved (Rs. Crore)		
	2017-18	2018-19	2019-20*	2017-18	2018-19	2019-20
Fake Invoices involving Fraudulent Input Tax Credit	5	1,620	535	12.67	11,251.23	2,565.00
Violations in respect of E-Way Bills (upto Nov 2018)		1,100			27.64	
GST Refund Frauds**		634			1,912.33	
GST Evasion**		16,393			70,206.96	

Note: *-till 25 June 2019, **-during July 2017 to January 2020

Source: Compiled from Lok Sabha Unstarred Questions

Central GST Authorities have detected 16,393 cases of GST evasion across 36 states and UTs during July 2017 to January 2020 and it involves an amount of Rs. 70,206.96 crore (Table 10). Since we are interested in state-level compliance gap estimation we have used state-wise information on number of detected cases of GST evasion, amount involved and recovery as presented before the Parliament. Since information on GST evasion is not available in a consolidated form and in a single place, we cannot confirm mutual exclusivity of detected cases presented in Table 10. Therefore, our estimate on compliance gap due to GST evasion is a lower bound estimate.

Table 11 shows that the highest GST evasion (in terms of total GST collection from the state) is reported in Goa. Bihar, Maharashtra, Madhya Pradesh and Chhattisgarh have relatively higher GST evasion as compared to other major states. On average 3.13 percent of total GST collection during August 2017 to December 2019 is evaded for major states.

Table 11: Major State-wise GST Evasion during July 2017 to January 2020

Major States	GST Evasion (Rs. Crore)*	Recovery (Rs. Crore)	GST Evasion % of TGST**	Recovery as % of GST Evasion
Punjab	456.29	362.70	1.30	79.5
Haryana	2,296.54	766.69	1.69	33.4
Rajasthan	2,051.62	972.84	2.80	47.4
Uttar Pradesh	2,899.82	1,566.81	1.98	54.0
Bihar	1,335.06	1,058.04	5.21	79.3
West Bengal	2,623.96	1,092.51	2.76	41.6
Jharkhand	955.05	395.41	1.74	41.4
Odisha	1,580.45	632.24	2.49	40.0
Chhattisgarh	2,002.93	1,023.02	3.74	51.1
Madhya Pradesh	2,329.05	1,728.06	3.76	74.2
Gujarat	3,329.48	1,600.04	1.88	48.1
Maharashtra	17,003.47	11,260.19	4.12	66.2
Karnataka	5,119.05	2,735.60	2.72	53.4
Goa	7,556.63	87.46	75.64	1.2
Kerala	951.77	665.99	2.30	70.0
Tamil Nadu	3,223.54	1,513.83	1.89	47.0
Telangana	1,874.13	805.17	2.17	43.0
Andhra Pradesh	1,654.76	888.67	2.79	53.7
Total – Major States	59,244	29,155	3.13	49.2

Notes: *-GST evasions booked by Central GST Authorities during July 2017 to January 2020
 **-Total GST (SGST, CGST, IGST and GST Compensation Cess) Collection during August 2017 to December 2019.

Among minor states, Mizoram is reported the highest GST evasion and it is followed by Delhi. On average 5.41 percent of total GST collection during August 2017 to December 2019 is evaded.

Table 12: Minor State-wise GST Evasion during July 2017 to January 2020

Minor States	GST Evasion (Rs. Crore)*	Recovery (Rs. Crore)	GST Evasion % of TGST**	Recovery as % of GST Evasion
Himachal Pradesh	201.15	154.22	1.06	76.7
Uttarakhand	167.97	160.17	0.45	95.4
Delhi	9,364.62	4,424.78	9.42	47.2
Sikkim	179.73	3.48	3.76	1.9
Arunachal Pradesh	29.2	9.06	3.13	31.0
Nagaland	21.32	20.98	3.86	98.4
Manipur	0.03	0.03	0.00	100.0
Mizoram	50.02	48.42	10.14	96.8

Tripura	26.91	1.42	1.99	5.3
Meghalaya	46.89	42.68	1.50	91.0
Assam	343.24	289.44	1.58	84.3
Puducherry	62.71	36.31	1.36	57.9
Total – Minor States	10,494	5,191	5.41	49.5

Notes: *-GST evasions booked by Central GST Authorities during July 2017 to January 2020
 **-Total GST (SGST, CGST, IGST and GST Compensation Cess) Collection during August 2017 to December 2019.

Estimated average compliance gap on account of non-filers in 2017-18 is 7.2 percent of total GST collection. It has gone up to 12.1 percent in 2018-19 and 20.4 percent in 2019-20 (till October 2019). Though information on annual GST evasion is not available, estimated compliance gap due to evasion is 3.33 percent for the period July 2017 to January 2020.

Table 13: State Category-wise GST Compliance Gap during 2017-18 to 2019-20

State Category	GST Compliance Gap (Rs. Crore)			GST Compliance Gap (% of TGST)			GST Evasion (Rs. Crore)*	Recovery (Rs. Crore)	GST Evasion % of TGST**	Recovery as % of GST Evasion
	2017-18	2018-19	2019-20#	2017-18	2018-19	2019-20#				
Major States	33,562	90,907	92,014	7.0	11.6	19.3	59,244	29,155	3.13	49.2
Minor States	4,982	13,717	14,566	9.7	17.5	29.8	10,494	5,191	5.41	49.5
Others \$	511	1,526	1,842	8.0	13.6	28.9	470	245	1.82	52.2
Total	39,056	106,151	108,422	7.2	12.1	20.4	70,207	34,591	3.33	49.3

Notes: *-GST evasions booked by Central GST Authorities during July 2017 to January 2020
 **-Total GST (SGST, CGST, IGST and GST Compensation Cess) Collection during August 2017 to December 2019. #-till October 2019. \$- Others include UTs and other territories.

Source: Goods and Services Tax Network and Lok Sabha Unstarred Questions

6. Conclusions

Indian Goods and Services Tax (GST) regime has crossed half way of the transition period (July 2017 to June 2022) in December 2019. So far performance assessment of GST covers only overall GST collection in India. Until recently, there was no state-level information on GST available in the public domain to undertake performance assessment. With better understanding on various components of GST collection and input tax credit (ITC) adjustment mechanism, especially with reference to Integrated GST (IGST), present paper attempts to undertake an in-depth performance assessment of GST both at the union and state level and estimate compliance gap of GST.

Overall GST Collection

Monthly growth rate in GST collection during 2019-20 is lower than the same observed during 2018-19. In 2018-19, monthly growth rates picked up during September and October, however in 2019-20, similar improvement could only be observed during October 2019. Stagnation in growth rate of GST since November 2019 may be a cause for concern to realize budgetary target for GST collection sets for 2019-20. Revenue shortfall on account of GST collection is contingent upon nominal growth rate of GVA and therefore unless the nominal growth rate of GVA improves, it would be difficult to increase GST collection.

Compliance in Filing GST Returns

There is a gap in filing percentage between GSTR-1 (monthly returns on outward supplies) and GSTR-3B (summary self-assessed return). Short-filing of GSTR-1 vis-à-vis GSTR-3B has resulted in obstacles to launch full-fledged verification of ITC claims and other tax related information.

On average 60 percent of eligible tax payers are filing GSTR-3B on time (by due date). Even after taking into account of late filers (eligible tax payers who are filing returns after due date), there is a gap in filing compliance. The gap is large for recent months as compared to earlier months. Perhaps this shows that for earlier months return submission has been stabilized but for the recent months stabilization of GSTR-3B submission may take some more time.

On-time (by due date) filing of GSTR-1 has gone down drastically during October, 2018 to November, 2019. Cumulative GSTR-1 submission has also fallen during 2019-20 as compared earlier two years. An in-depth assessment is required to understand the reasons for such a fall in on-time GSTR-1 filing.

In the presence of differences in compliances in filing GSTR-3B and GSTR-1 possibility of differences in tax information reported in GSTR-1 and GSTR-3B cannot be ruled out. Lack of reconciliation of tax information reported across GST returns may pose a challenge before tax administrations to administer GST effectively. Efficiency of tax administration is dependent on effective tax information system. Therefore, for an effective enforcement of GST it will be important to provide quality tax information to all tax administrators. It is expected that lack of tax information for all tax payers may compel tax administrations to adopt selective tax enforcement. In the long run selective tax administration may discourage voluntary compliance and therefore may increase costs of tax administration. Moreover, selective tax enforcement violates the basic principle of equity in taxation.

Lack of reconciliation of data across GST returns and across tables within the same return makes it difficult to assess revenue performance of GST. For example, there is huge difference in taxable value reported in GSTR-1 and GSTR-3B and therefore the difference in Effective Tax Rate. Lack of reconciliation of data across tax returns may also encourage tax evasion. For example, fraudulent claims of input tax credit (ITC) are the result of lack of reconciliation of data across tax returns. In 2017-18, the difference between available ITC (as reported in GSTR-2A) and ITC claimed (as reported in GSTR-3B) was Rs. 249,521 crore, which

is 39 percent of available ITC as reported in GSTR-2A. The difference has come down to 13 percent in 2018-19.

Among the major states, compliance in GSTR-3B filing is the lowest in Bihar and highest in Gujarat, except during Q3 of 2019-20. Similar to overall trend in compliance of GSTR-3B filing, compliance for major states also shows a declining trend with advancement of time. This means that though GSTR-3B filing compliance has been stabilized for earlier months of GST introduction, achieving stability in GSTR-3B filing for recent months is yet to be achieved.

With some exceptions, compliance in on-time filing of GSTR-3B is the highest in Punjab and lowest in Chhattisgarh. For all major states, there is an increasing trend in on-time filing of GSTR-3B over the period. However, fall in compliance in on-time GSTR-3B filing during Q1 of 2018-19 is observed for all major states. Bihar, Odisha, Chhattisgarh, Madhya Pradesh, Gujarat, Tamil Nadu and Telangana show higher volatility (as measured by coefficient of variation) in on-time filing compliance as compared to other major states.

Among major states, the highest compliance in GSTR-1 filing (both by and after due date) is reported for Gujarat and the lowest compliance reported in Bihar during Q1:2018-19 to Q3:2019-20. During Q2:2017-18 to Q4:2017-18, the highest compliance reported in Kerala. Similar to GSTR-3B, compliance in filing GSTR-1 also is declining over time. This may be due to stabilization of return submission for earlier months of GST introduction.

On-time filing of GSTR-1 has fallen gradually for all major states since Q4 of 2017-18. It was stagnant during Q3 of 2018-19 to Q2 of 2019-20. The reason for falling on-time filing compliance in GSTR-1 may be due to changes in administrative provisions and/or structural changes of GST. In Q3 of 2019-20, marginal improvement on-time filing compliance is observed.

Among minor states, compliance in GSTR-3B filing (by and after due date) is the highest in Puducherry and the lowest during Q2:2017-18 in Nagaland, during Q3:2017-18 to Q3:2018-19 in Manipur, and during Q4:2018-19 to Q3:2019-20 in Arunachal Pradesh. For all states filing compliance of GSTR-3B has declined with advancement of time.

Except during initial three quarters, compliance in on-time filing of GSTR-3B is the highest in Himachal Pradesh and the lowest in Arunachal Pradesh. During Q2 to Q4 of 2017-18 Delhi reported the highest compliance and the lowest compliance reported in Nagaland (Q2 to Q3 of 2017-18) and Manipur (Q4:2017-18) (Figure 12). Except Himachal Pradesh, Delhi, Sikkim, Assam and Puducherry, all other minor states reported very high volatility in on-time compliance.

Among minor states the highest level of compliance in filing GSTR-1 is reported in Puducherry (except it was in Delhi during Q2 of 2017-18) and the lowest compliance is reported in Assam (during Q2:2017-18), Manipur (during Q3:17-18 to Q4:18-19) and Arunachal Pradesh (during Q1:19-20 to Q3:19-20). Compliance over the period has declined for all minor states.

On-time filing of GSTR-1 has fallen drastically for all minor states since Q4 of 2017-18. It was stagnant during Q3 of 2018-19 to Q2 of 2019-20. In Q3 of 2019-20, a marginal improvement is observed for some minor states.

State GST Collection

For major states there is a fall in monthly growth rate of SGST collection in June 2019 and October 2019. Volatility in monthly growth rate in SGST collection is higher during 2019-20 as compared to 2018-19. For minor states monthly growth rate in SGST collection falls in October 2019. Except in October 2019, average monthly growth rate in 2019-20 is higher than growth experienced during 2018-19 (Figure 16).

Major states hold the largest share in total GST collection and among major states four states (viz., Maharashtra, Uttar Pradesh, Karnataka, Tamil Nadu) hold more than 42 percent share in overall GST collection. It is to be noted that state's share in overall GST collection is changing over time and therefore understanding the dynamics of SGST collection across states is important in overall performance assessment of GST collection.

Among minor states, the largest share holds by Delhi. Fall in share of Delhi in overall GST collection 2018-19 as compared to 2017-18 demands an in-depth assessment.

A large number of states are not able to meet the projected growth target of SGST collection and therefore receiving GST compensation. In other words, states having higher GST compensation receipt as percentage share of SGST collection (including IGST settlement) are those who are not able to meet the desired growth target of 14 percent set in the GST Compensation Act. Among major states revenue performance is the lowest for Punjab and it is followed by Bihar, Chhattisgarh, Odisha, Jharkhand, Madhya Pradesh and Karnataka.

Among minor states the lowest revenue performance is observed for Puducherry, and it is followed by Himachal Pradesh, Uttarakhand, Meghalaya, Tripura and Assam. Surprisingly performance of Delhi has deteriorated after 2017-18.

Our analysis shows that as inter-state sale (or export) increases as percentage of domestic sales (as measured by combined collection of SGST, CGST and IGST settlement) of a state, dependence on GST compensation increases. In other words, states having larger share of inter-state sales (or export) vis-à-vis domestic sales are not meeting the desired growth target in SGST collection. Prior to introduction of GST, inter-state sales used to attract origin based Central Sales Tax (CST) and states were collecting revenue from inter-state sales as well. However, in the GST regime, inter-state sales attract IGST and due IGST credits are adjusted against SGST, CGST and IGST liabilities in the destination state. Therefore, in the GST regime origin state is not getting any revenue from inter-state sales or export. This provision of GST is resulting in revenue loss especially for natural resources (e.g., minerals, fossil fuels) rich states like Jharkhand, Odisha, Chhattisgarh and Madhya Pradesh and states where value addition from manufacturing activities are not fully appropriated within the state's boundary (e.g., Himachal Pradesh, Uttarakhand). This is a design problem of GST and unless addressed

appropriately in our inter-governmental fiscal transfer framework, these states will face severe fiscal stress post GST compensation period.

GST Compliance Gap

Among major states the highest compliance gap is observed for Bihar (14.45% of SGST collection including IGST settlement) and it is followed by Odisha (13.48%), Chhattisgarh (11.61%) and Telangana (10.75%) in 2017-18. For 2018-19 and 2019-20, except a few states, majority of states have reported compliance gap higher than average of major states.

Average compliance gap is higher for minor states as compared to major states. Except a few states, all minor states have reported higher than average compliance gap. Average compliance gap is 9.66 percent of total GST collection during 2017-18. It has gone up 17.5 percent in 2018-19 and 29.8 percent in 2019-20.

The highest GST evasion (in terms of total GST collection from the state) is reported in Goa. Bihar, Maharashtra, Madhya Pradesh and Chhattisgarh have relatively higher GST evasion as compared to other major states. On average 3.13 percent of total GST collection during August 2017 to December 2019 is evaded for major states.

Among minor states, Mizoram is reported the highest GST evasion and it is followed by Delhi. On average 5.41 percent of total GST collection during August 2017 to December 2019 is evaded.

Estimated average compliance gap on account of non-filers in 2017-18 is 7.2 percent of total GST collection. It has gone up to 12.1 percent in 2018-19 and 20.4 percent in 2019-20 (till October 2019). Though information on annual GST evasion is not available, estimated compliance gap due to evasion is 3.33 percent for the period July 2017 to January 2020.

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