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How the Pennies Drop
What GST revenue data tells us, and what it doesn't

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Abstract

The introduction of a Goods and Services Tax (GST) in India in 2017 not only impacted the economy, but also altered the contours of fiscal federalism in India. Amongst other indicators, the steady growth of GST revenue has been a robust barometer of the success of the reform. This paper delves into the trends of GST collections to evaluate the efficacy of the reform to generate revenue. Subsequently, an attempt is made to answer the questions – what drives revenue growth, and are the collections, collection efficiencies, and buoyancy of collections better under GST as compared to the pre-GST period? This is done by examining GST collections while controlling for extraneous factors, such as inflation. Further, a novel mechanism for computing the collection rate of GST, using only publicly-available data is proposed. This has potential applications in revenue modelling, in analysis of trends across time and geographies, and for policy formulation. Rationalization of tax rates, structural efficiencies, widening of the tax base, and enhanced compliance are seen to contribute to the positive outcomes observed. In order to address the paucity of disaggregated data on enforcement in the public domain, the paper uses judicial data from District Level Courts to analyse spatial dimensions of GST enforcement. Overall, it is seen that GST has delivered on multiple fronts, including revenue growth, formalization of the economy, reduced rates of taxation, and creation of a more unified market. We also observe that post-GST tax buoyancy and collection efficiencies have shown significant improvement.

Keywords: Public Finance, Tax System, Efficiency, Optimal Taxation, Evasion

JEL Codes: H2; H210; H260

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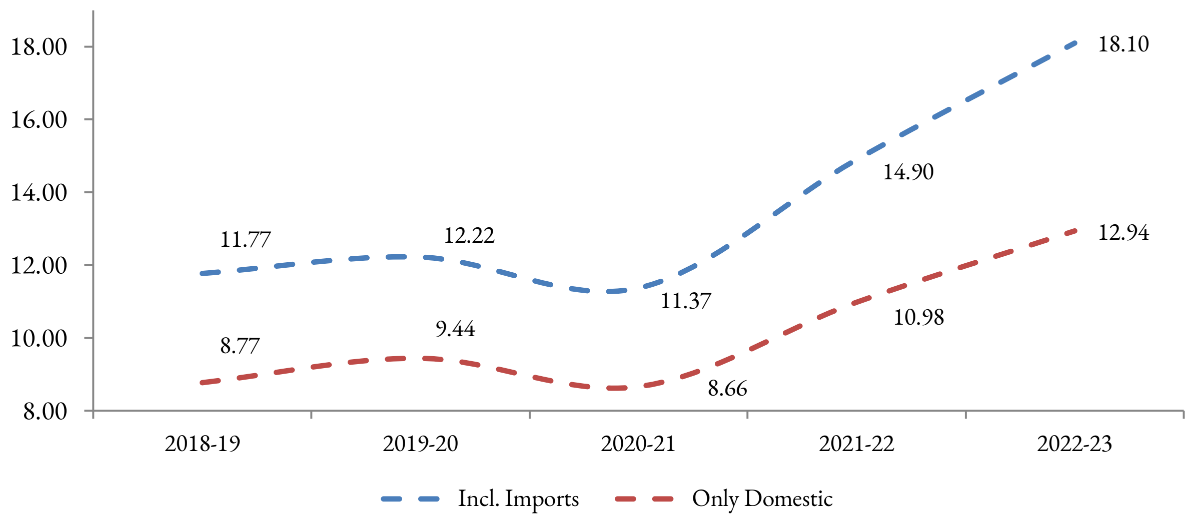
1. GST - A New Hope

While there are a number of metrics on which economic impact of the Goods and Services Tax (GST) may be judged (Aizenman and Jinjarak 2008), perhaps the most robust measure of the effectiveness of a tax is the revenue it yields.

Revenue yield was indeed a major concern right since the inception of the preparatory work for the GST reform (November 2009, 18). In the six years since its launch, GST revenue collections have gone from strength to strength. This is true for both, collections on domestic supplies, as well as integrated Goods and Services Tax (IGST) paid on imports (Economic Survey 2022-23, 48). The trend is particularly sharp from 2020-21 onwards (Fig. 1).

Fig 1: GST Revenue Collections (in Rs. Cr.), 2018-19 to 2022-23
[Rs. 1 Crore = ~USD 1,20,000]

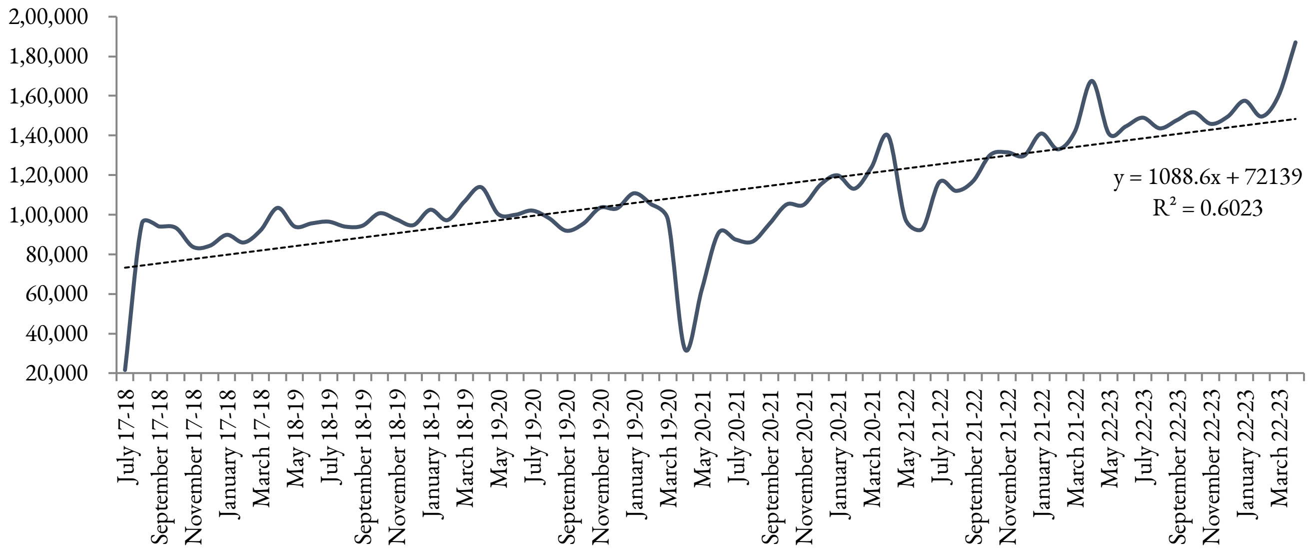


While the growth in revenue is evident, the underlying reasons for the same may not always be. Even discounting the pandemic year, this period has seen year-on-year real Gross Domestic Product (GDP) growth rates vary from 3.9% in 2019-20 to 9.1% in 2021-22 (MoSPI); inflation [*All India CPI*] vary from 4.8% in 2019-20 to 6.8% in 2022-23 (Economic Survey 2022-23, 121); and Gross Value Added (GVA) vary from -4.8% in 2020-21 to 8.8% in 2021-23 (PIB 2022). However, GST revenues have moved only in one direction – up!

This is an indication that there are other factors which would be powering this growth in GST revenues. We begin by attempting to quantify and then isolate the impact of extraneous factors such as GDP growth or inflation and subsequently estimate how much of the revenue collections might be attributable to intrinsic factors – such as design of the tax, tax effort by the administration, and possible systemic efficiencies. This helps us better understand the reasons for the growth and gives us possible insights into where the next phase of growth may come from.

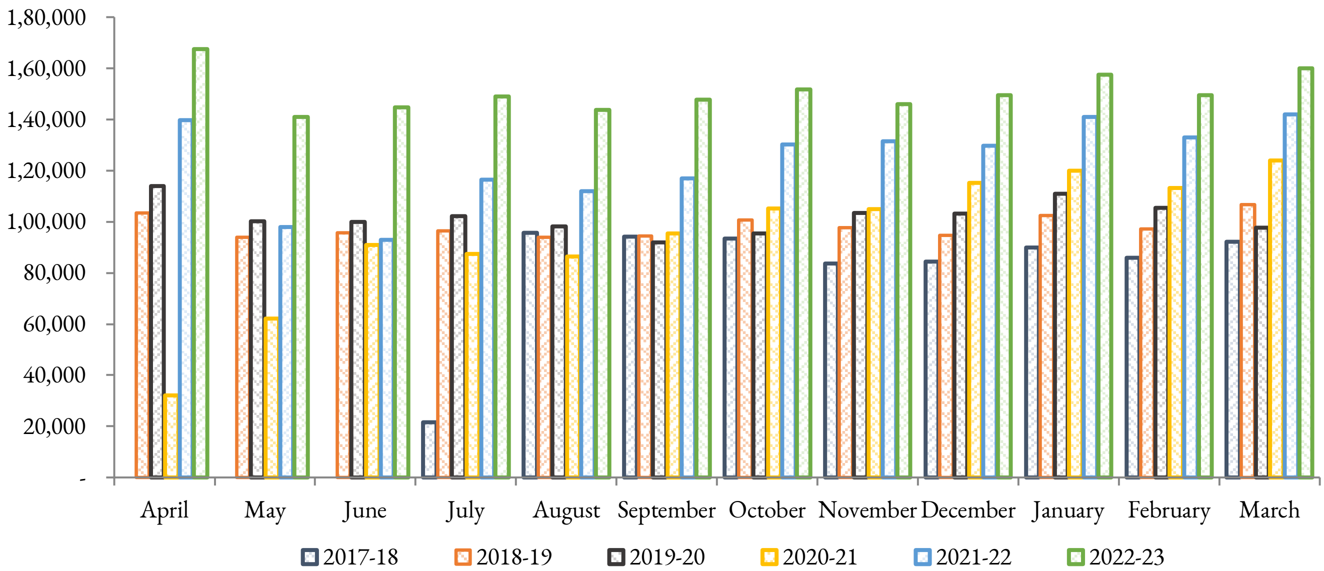
We begin our examination by taking a look at monthly GST collections to get a more granular view of the collections (Fig. 1A). Two things instantly stand out: the steady upwards trend, and distinct seasonality in revenue collections. This is intuitive, given consumption patterns are typically seasonal.

Fig 1A. Seasonality effects in Growth of Monthly GST Collections [Figures in Rs. Cr.]



Therefore, a month-on-month comparison may not always give an accurate picture. Another perspective for the same would be to do a month wise/year wise [same month - different years] comparison [Fig. 2] (Ministry of Finance). Barring the pandemic months, it may be seen that across the years, each month shows internal seasonality as well as external growth. This is indicative of robust growth in revenue collection and confirms the long-term trends.

Fig 2. Month wise/Year Wise GST Collections [Figures in Rs. Cr.]



In this backdrop, we take a look at the *tax buoyancy*. The year-on-year GST revenue growth is tabulated as under. It may be seen that, post pandemic, the year-on-year GST revenue growth significantly outpaces the GDP growth (MoSPI 2023) [Table 1].

Table 1: Comparing GST Revenue Growth against GDP Growth [Rs.in Cr.] [2017-18 GST Collections are Annualized]

	GST Collections	Y-o-Y Growth %	Nominal GDP	Y-o-Y Growth %	GST Revenue as % of GDP	GST Tax Buoyancy relative to GDP
	a	b	c	d	e	f
2017-18	1078617	-	17090042	-	6.31	-
2018-19	1177368	9.16	18899668	10.59	6.23	0.86
2019-20	1222116	3.80	20103593	6.37	6.08	0.6
2020-21	1136804	-6.98	19829927	-1.36	5.73	-
2021-22	1483290	30.48	23471012	18.36	6.32	1.67
2022-23	1807681	21.87	27203767	15.90	6.64	1.38
Average		**11.66**		**9.97**	**6.20**	**1.17**

However, an argument could be made that the above figures display only nominal growth, and revenue growth is only to be expected in a growing inflationary economy. In order to address this concern, we strip away the effect of inflation, using a derived Consumer Price Index (CPI) basket. This basket is constructed to include items attracting GST; exempted items (fresh produce, meat, fish etc.) and items outside the ambit of GST (petroleum etc.) are excluded.

While each month's GST collection is deflated against that month's derived CPI Basket, however for ease of reference, the annual average of the actual and derived CPI for each financial year is summarized as under [Table 1A].

Table 1A: Annual average of the actual and derived CPI for each Financial Year

Financial Year	Average CPI	Average Derived GST Basket CPI	Derived GST Basket Index [Base = 2017-18]
A	b	c	d
2017-18	137.13	133.46	100.00
2018-19	137.32	138.17	103.53
2019-20	146.53	142.85	107.02
2020-21	157.81	152.08	113.95
2021-22	163.74	161.34	120.88
2022-23	174.56	172.66	129.36

This constructed CPI is then indexed for each month from 2017-18 to 2022-23. Results of deflating the GST Collections against this constructed CPI are summarized as under [Table 2].

Table 2: Deflating GST Revenue Growth with Constructed CPI Basket [Rs.in Cr.]

	Nominal GST Collections	**Y-o-Y Growth % of Nominal GST Collections**	**Real GST Collections** [Adjusted by Derived GST Basket CPI, 2017-18 Prices]	**Y-o-Y Growth % of Real GST Collections**	**Differenc e in Growth %**
	a	b	C	d	e = [b-d]
2017-18	1078617.00	-	1078617.00	-	
2018-19	1177368.00	9.16	1137392.00	5.45	3.71
2019-20	1222116.00	3.80	1141878.00	0.39	3.41
2020-21	1136804.00	-6.98	997509.00	-12.64	- 5.66
2021-22	1483290.00	30.48	1227155.00	23.02	7.46
2022-23	1807681.00	21.87	1397418.00	13.87	8
Average		**11.66**		**6.02**	**5.64**

From the above it may be seen that even deflating GST collections by the constructed CPI measure yields a 6.02% growth. In other words, on average across the last five years, 5.64% of growth in GST revenue collections is explained by inflation, with the balance 6.02% being the product of other factors. Moreover, for the years 2021-22 and 2022-23, revenue buoyancy of GST collections vis-a-vis nominal GDP exceeds 1 (Economic Survey 2022-23, 48).

Another oft-made observation is that revenue collections were growing at a higher velocity prior to being subsumed in GST, and that the velocity of growth has since tempered (Chandrasekhar and Ghosh 2023). This is an assertion worth exploring, since velocity of revenue growth was an important consideration at the time of introduction of the new regime.

To examine the velocity of growth of revenue, we stand on the shoulders of giants – placing reliance on an analysis done by the Economic Survey 2022-23 (2023). We compare the revenue growth in the five years prior to the introduction of GST (i.e. 2012-13 to 2016-17) and the revenue growth in the five years post (i.e 2017-18 to 2022-23). The results are tabulated in Table 3/3A.

While a simplistic comparison would indicate that the velocity of tax collections has reduced post introduction of GST, when compared in the context of GDP growth in the relevant period, the buoyancy of collections has been distinctly higher in the GST regime. This is true even if we only consider GST on domestic supplies.

Table 3: Velocity of growth of indirect tax collections Pre-GST [Augmented Total Taxes fills in gap in revenue data of certain States]

Pre-GST					Rs. Lakh Crore	
	2012-2013	**2013-2014**	**2014-2015**	**2015-2016**	**2016-2017**	**CAGR** [2016-17 over 2012-13]
State Taxes Subsumed in GST						
Total Taxes subsumed in GST	2.86	3.09	3.32	3.97	3.92	
Augmented Total Taxes subsumed in GST	3.22	3.48	3.73	4.41	4.41	
Central Taxes Subsumed in GST						
Union Excise Duties [other than on petroleum products]	0.33	0.35	0.34	0.37	0.6	
Service Tax	1.33	1.5	1.68	2.11	2.54	
Total Central Taxes Subsumed	1.66	1.9	2.02	2.48	3.14	
Total Central + State Taxes Subsumed in GST	**4.88**	**5.37**	**5.75**	**6.9**	**7.55**	**11.53%**
Nominal GDP	99.44	112.34	124.68	137.72	153.92	**11.54%**

Pre GST Buoyancy of total subsumed taxes - 0.9988

Table 3A: Velocity of growth of indirect tax collections Post-GST

Post GST					Rs. Lakh Crore	
	2018 - 2019	**2019 - 2020**	**2020 - 2021**	**2021 - 2022**	**2022 - 2023**	**CAGR** [2022-23 over 2018-19]
Total GST Collections [Domestic Supplies]	8.77	9.44	8.66	10.98	13.25	**10.87%**
Total GST Collections [including GST on Imports]	11.77	12.22	11.37	14.83	18.08	**11.33%**
Nominal GDP	189	201.04	198.30	239.71	272.04	**9.5%**

Post GST Buoyancy [Domestic Supplies] - 1.1439

Post GST Buoyancy [Including GST on imports] - 1.1925

The above results are further bolstered by the fact that there has been a steady reduction in the tax rates. At the time of introduction of GST, the effective weighted average GST rate stood at 14.4%. This has steadily reduced to 11.6% in September 2019 (RBI 2019).

In revenue terms, this can be quantified as being **a saving for the economy in excess of Rs. 4.3 Lakh Crore in just the last year**! This is indicative of both structural as well as administrative efficiencies, especially in widening the tax base, removing distortions, and improving compliances.

Consider, for instance, the number of indirect tax payers: the total number of pre-existing Central Excise/Service Tax/VAT taxpayers who migrated into GST in 2017 was 44,35,653. The total number of registered GST assesses in June 2023 stood at 1,40,91,249 [a 218% increase!] (GST Council 2023). As against this, the total number of active companies registered with the Registrar of Companies stood at 11,67,858 [with authorized capital of Rs. 60,92,404 Crore] in March, 2018. The corresponding figures in March 2022 stood at 14,38,045 [with an authorized capital of Rs. 89,18,020 Crore] – a 23% increase (Ministry of Corporate Affairs 2022).

From the above it is evident that the number of new entrants into the GST chain is far greater than the number of new entities formed. Taken together, this is perhaps an indicator of the **enhanced formalization** of the economy.

1.1 Pooled sovereignty: The force awakens

With the introduction of GST, the Centre and the States, pooled their sovereignty in matters related to the administration of the new tax, especially in areas such as policy making, fixation of rates, drafting of laws/rules etc. This is at times cited as a restriction on the powers of the States. However, it is equally a "*restriction*" for the Central Government. Further, it is often asserted, without any basis, that the GST Council is "*dominated*" by the Centre (Chandrasekhar and Ghosh 2023).

The GST Council, supported by its Committees, has delved into a number of complex issues and come up with recommendations which have brought about symmetry in the administration of the law and stability in the rate structure. It is a testament to the spirit of co-operative federalism that save one (GST Council 2019), *all* decisions of the GST Council have been taken by consensus. Moreover, all decisions of the Council for improving compliance, plugging loopholes, or rationalizing exemptions have benefited the Centre and the States equally.

Compensation of revenue to States to make good any possible revenue shortfalls was provided under the Goods & Services Tax (Compensation to States) Act, 2017. The Act provided for a projected nominal growth rate of 14% per annum for a period of five years from the date of introduction of GST (PIB 2022).

At the 49th GST Council meeting [Feb 2023], it was informed that the Union Government has decided to clear the entire pending balance GST compensation for the month of June 2022 (PIB 2023). This amount was released from the Centre's own resources, and will be recouped from the future compensation cess collections. With this, the Centre has cleared the entire admissible compensation envisaged at the time of introduction of GST.

A look at the disaggregated figures for the total devolutions under the GST to states is as under [Table 4] (Economic Survey 2022-23, 59) (PIB 2023).

Table 4: State of State Revenues from GST

Rs. Lakh Crore

	2018-2019	**2019-2020**	**2020-2021**	**2021-2022**	**2022-2023**
SGST + States Share in IGST	5.78	6.03	5.56	7.25	8.69
YoY Growth %		***4.2***	***-7.8***	***30.5***	***19.8***
SGST + States Share in IGST + Compensation	6.63	7.68	7.24	7.94	9.04
YoY Growth %		*15.9*	*-5.7*	*9.7*	*13.5*
SGST + States Share in IGST + Compensation + Loans	6.63	7.68	8.34	9.53	9.21
YoY Growth %		*15.9*	*8.6*	*14.3*	*-3.36*

The reason for the negative Y-o-Y growth in 2022-23 is on account of most of the compensation envisaged having been transferred to the States by June 2022. Therefore, a more robust metric could be the States SGST collections, along with their share in IGST Collections. This has shown a healthy uptick (*Table 4*).

2. The Rise of GST: What powers revenue growth?

2.1 The Carrot: Reduction in GST Rates

Theory linking tax rates and revenue collections goes back a long way. The idea has been around at least since the 14th-century scholar *Ibn Khaldun* and further expounded by *Adam Smith* and *John Maynard Keynes* (Laffer 2004).

However, ever since the American supply-side economist, *Arthur Laffer*, drew his famous curve, reportedly on a Washington DC restaurant napkin (Gellman 2009), there has been considerable public debate about the possibility of an inverse relationship between tax rates and revenue collections. Though, initially postulated in the context of taxes on income, the relationship has since been extended to apply on taxes of goods and services (Miravete, Seim and Thurk 2018).

While, the exact shape of the curve and the extent of the relationship remains a topic of debate, it would be instructive to explore how GST tax rates have moved in the period since the introduction of GST, especially in the period that has witnessed significant revenue growth.

However, in trying to do so, we face a challenge – what could the one representative tax rate be, and how do we quantify it across time periods on the basis of regular, publicly-available data?

For import tariffs, trade-weighted average rates are often used, which '*weigh*' the trade in a particular tariff item against the applied rates for that line so as to arrive at a representative average (WTO). This average can then be compared across geographies or over time. However, since the rate-wise/tariff-item-wise value of supplies is not available in public domain, it is not directly possible to quantify what the effective GST rate may be.

The Fifteenth Finance Commission (FC-XV) made an attempt to quantify the effective GST rate in its report published in October 2020. As per a study conducted by the National Institute of Public & Policy (NIPFP) on behalf of the FC-XV, the effective tax rate using data from the GST Returns data [upto October, 2018] was estimated to be about 14 per cent (Finance Commission India 2020, 131).

In September 2019, the Reserve Bank of India estimated that after multiple rate adjustments, the effective weighted average GST rate declined from 14.4 per cent at the time of inception of GST [2017] to 11.6 per cent (RBI 2019, 34). Further, as per an IMF analysis of GST, conducted for the FC-XV, the effective tax rate was indicated as being 11.8 per cent [October, 2020] (Finance Commission India 2020).

However, none of these effective rates are available for a range of time. Therefore, comparison of the movement of rates over time is not possible. Further, since the underlying data is not readily available in the public domain, the question of a stable and sustainable mechanism for computation of the GST effective rate remains.

The Constructed GST Rate Index

In order to address the above issues, we propose to construct a **GST Rate Index**. The rate index is intended as an indicator of the effective rate and is computed using GST rates data readily available in the public domain. The mechanism of its construction and operation is discussed later in this section.

The objective behind the index is to be able to track relative movements of the tax rates, and to get a sense of how it impacts tax collections and taxpayer behaviour. We may keep in mind that this is intended as index, and is not the actual rate *per se*.

At this stage, the rate index is restricted to GST rates on goods. This is primarily on account of a number of carve-outs having being created in GST Rates and exemptions on Services. Since the '*universe*' for services is not as clearly delineated as it is for goods, construction of a Rate Index for services remains a project for the future.

Moreover, as noted in the Report on the Revenue Neutral Rate and Structure of Rates for the Goods and Services Tax (GST) chaired by the then Chief Economic Advisor (CEA), the *incremental services base* (incremental to services that are already incorporated in the value of goods and taxes as such) is about Rs. 8.5 Lakh Crore, out of a combined base (Goods and Services) of Rs. 39.4 Lakh Crore [21.5%] (GST Council 2015).

Constructing the GST Rate Index

GST Rates, as prescribed by the GST Council, are notified in the Gazette of India. The first such notification was Notification No. 1/2017-Central Tax (Rates) dated 28th June, 2017 (2017). The notification prescribes rates of various items and groups them into six schedules. The schedule-wise rates are as under:

Table 4A: CGST Rate Schedule: Total applicable GST will be twice that above [CGST + Equal SGST]

Schedule No.	CGST Rate Specified (%)
a	B
Schedule I	2.5
Schedule II	6
Schedule III	9
Schedule IV	14
Schedule V	1.5
Schedule VI	0.125

In addition to the above, there is a defined list of items which are exempt from GST i.e. attract GST at NIL rate. This list is specified under Notification No. 2/2017-Central Tax (Rates) dated 28th June, 2017 (Department of Revenue, Ministry of Finance 2017).

Each of the above schedules has a set of commodities, typically listed HSN tariff heading/sub-heading wise, that attract GST at the rate prescribed for that schedule. Rates change from time to time, and commodity groups are moved from one schedule to another; the composition of these schedules changes accordingly.

Further, only non-conditional exemptions, i.e. exemptions that are available outright without any accompanying conditions have been considered. This is because conditional exemptions are typically targeted towards specific circumstances and may not be reflective of the general rates.

It is noted that there are only a few occasions where completely new commodity groups have been introduced/carved out or deleted/merged from the existing commodity sets, causing a net change in the number of entries.

This may also be seen from Table 4, where the last observed number of entries is just 6.56% higher than the initial number of entries. The last observed summation of the rates multiplied with the number of entries is only **6.08% lower** than the first observed summation. This is an indicator that over the years, only a small number of completely new entries have been introduced, and that overall there has been a decreasing trend in cumulative rates.

In order to construct the '*GST Rate Index*' the number of lines [items] in a particular schedule is multiplied with the rate attracted by that schedule, so as to construct a weighted value of entries in the schedule. The cumulative sum of such weighted values is then divided by the total number of entries to obtain the entry weighted average rate index (*EWA Rate Index*).

The number of lines in the exempt basket is also indicated. The rate attracted by the largest number of commodities [*modal rate*] has remained 18%. However, the percentage of the total commodities attracting that rate has steadily increased from 33.41% at the time of introduction of GST to 44.36% at the beginning of Financial Year 2023-2024. The number of exempt entries has also increased.

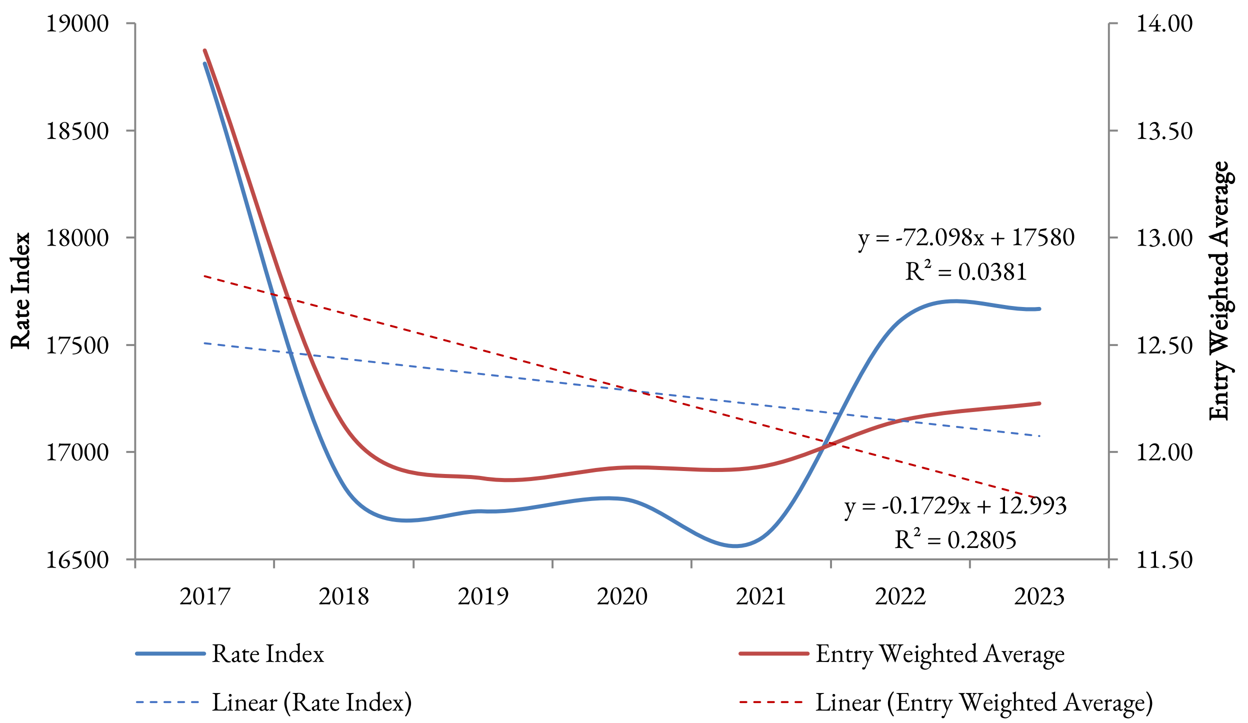
GST rates are fixed on the recommendations of the GST Council. The Council is constituted as per Article 279A (1) of the Constitution [122nd Amendment] and comprises of the Union Finance Minister, Union Minister of State in-charge of Revenue, and Ministers In-charge of Finance or Taxation of each State (GST Council n.d.). As of August 2023, there have been 51 meetings of the Council. For ease of comparison, the rates have been sampled at the beginning of each financial year; however, a more frequent sampling is possible.

Table 4B: Weighing the GST Rate Schedule: A Constructed GST Rates Index

As on	No. of Entries	No. of Entries x Rate	Entry Weighted Average Rate Index	No. of GST Exempt Entries	% of Total Entries at Modal Rate
	a	b	c = b/a	D	e
01.07.2017	1356	18811.75	13.87	149	33.41
01.04.2018	1389	16843	12.13	154	42.84
01.04.2019	1408	16724	11.88	164	43.39
01.04.2020	1407	16781.75	11.93	166	43.50
01.04.2021	1391	16597.75	11.93	166	43.93
01.04.2022	1450	17612.75	12.15	166	43.72
01.04.2023	1445	17667.75	12.23	165	44.36

The movement of the *Rate Index* [left axis] and the *Entry Weighted Average* [right axis] values is at Figure 3. The Rate Index dropped sharply in 2018-19, and more modestly in 2020-21; it continues to remain at a much lower level than at the time of introduction of GST.

Figure 3: Constructed GST Rates Index



Though, the general trend of the Rate Index is sloping downwards, given the U-shape of the graph, the linear trend line perhaps has a limited scope for future extrapolations. Further, comparing the index with some indications of the GST Collection Rates available in the public domain indicates the following [Table 4C].

Table 4C: Comparing GST Rate available in Public Domain and the Weighted Rate Index for corresponding period

	Source	Rate in Public Domain (%)	Weighted Rate Index (%) [Corresponding FY]
	a	b	c
July 2017	RBI	14.4	13.87
2018-19	NIPFP Working Paper No. 392	12.56	12.13
September 2019	RBI	11.6	11.88
October 2020	IMF Analysis for XV FC	11.8	11.93

Source:

1. RBI State Finances (2019)
2. Revenue Performance Assessment of Indian GST (Mukherjee 2023, 16)
3. RBI State Finances (2019)
4. Report of Fifteenth Finance Commission for 2021-26 (2020, 131)

Having taken a look at the movement of GST rates over the last five years, it would be instructive to quantify the **collection efficiency** (C-efficiency) of GST collections and to see how it compares internationally. We go on to explore the likely reasons for this improvement in collection efficiencies a little later in the paper.

Calculating C-efficiency

The C-efficiency ratio is a widely used indicator for evaluating performance and overall efficiency of revenue administrations. It is defined as simply being the ratio of *actual revenues* collected to the *theoretical revenue* that may have been collected in a *perfectly enforced* and *completely compliant* ideal tax system, with taxes being levied at a *uniform rate* on *all* consumption (Keen 2013).

C-efficiency is a handy tool for comparing the efficiency of tax administrations/systems, especially since it requires only small data sets. C-efficiency (E^c) is expressed as:

$$E^c = \frac{V}{PV^T}$$

$$\text{where } PV^T = \tau^s(FC - V)$$

The numerator V is actual tax revenue, and the denominator PV^T is the theoretical maximum tax revenue which is calculated as the product of τ^S, the standard rate of tax, and FC (final consumption), at prices *exclusive* of tax (Ueda 2017).

Using the *Rate Index* and the *Entry Weighted Average Rate* as a proxy for the effective tax rate we compute the C-efficiency over the last five years. The figures used are from the Ministry of Statistics & Program Implementation (MoSPI) *National Accounts Statistics, 2023* (MoSPI 2023) and the Economic Survey, 2022-23 (2023). The results are tabulated as Table 5.

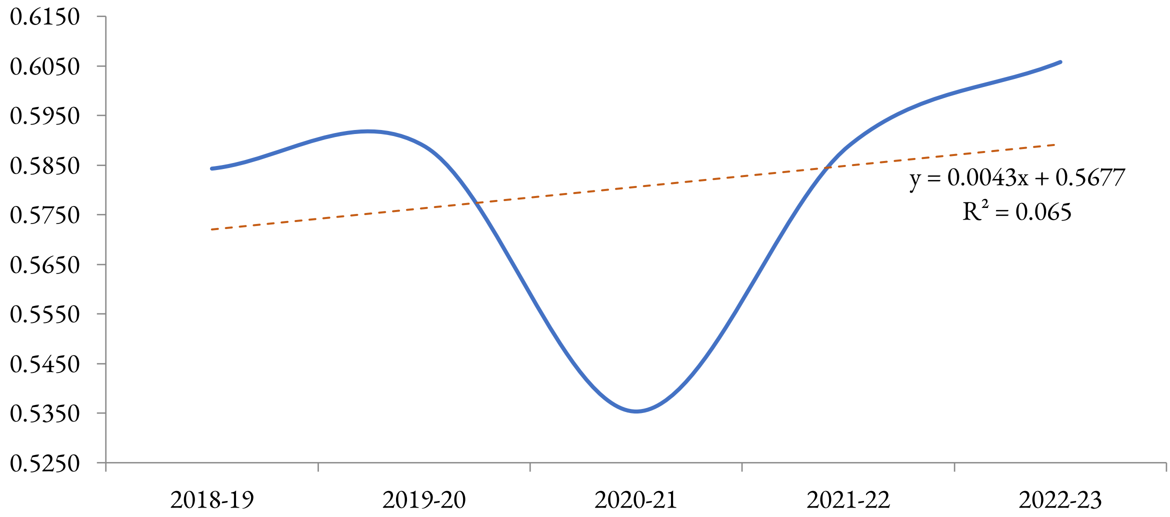
Table 5: Computing C-efficiency for GST Collections

Rs. In Crore

	GST Collections [Domestic Only]	**PFCE** [Private Final Consumption Expenditure]	**GFCE** [Government Final Consumption Expenditure]	**Total Consumption Expenditure [b+c]**	**Total Consumption Expenditure exclusive of GST [d-a]**	**Computed Standard GST Rate** [Entry Weighted Average Rate Index]	**Potential Tax Revenue [e*f/100]**	**GST Collections - Domestic/Potential Revenue [a/g]**
	a	B	c	d	e	f	g	h
2018-19	877000	11205296	2045552	13250849	12373849	12.13	1500948	0.5843
2019-20	944000	12237111	2200871	14437982	13493982	11.88	1603085	0.5889
2020-21	866000	12032762	2393290	14426052	13560052	11.93	1617714	0.5353
2021-22	1098000	14095405	2633867	16729272	15631272	11.93	1864811	0.5888
2022-23	1325000	16398403	2928406	19326809	18001809	12.15	2187220	0.6058
Average	**1022000**	**13193795**	**2440397**	**15634193**	**14612193**	**12**	**1754756**	**0.5806**

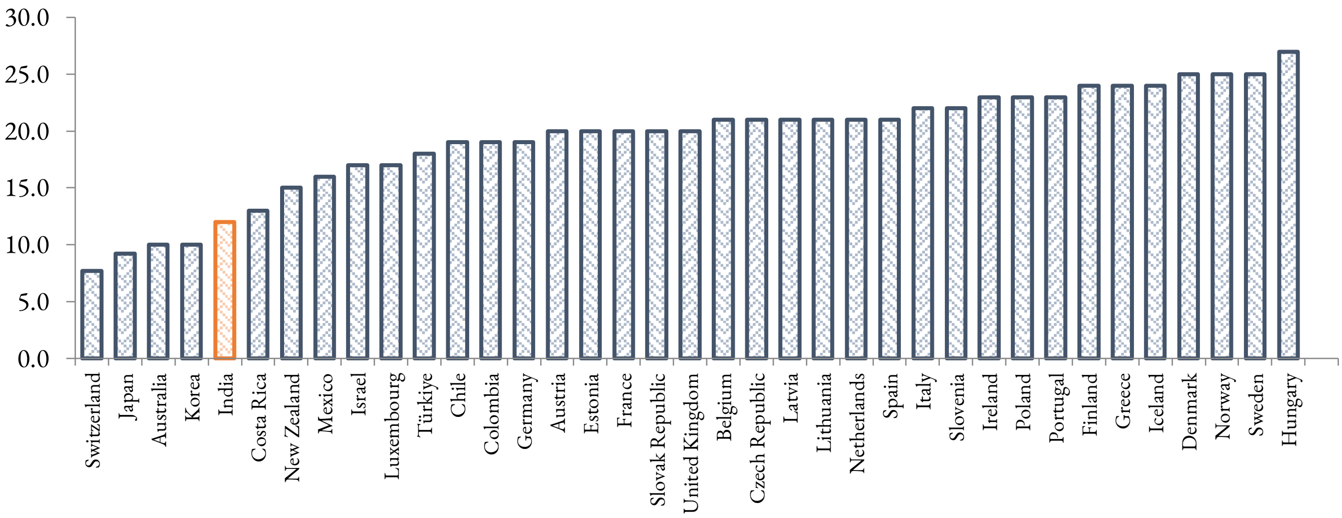
From the above we may see that the C-efficiency has shown a steady increase from 2020-21 onwards. This is commensurate with the steady growth in GST collections in the same period [*Fig. 1 refers*]. The movement of the C-efficiency of GST collections is captured in Fig. 4 under.

Figure 4: Computed C-efficiency of GST Collections [2018-19 to 2022-23]



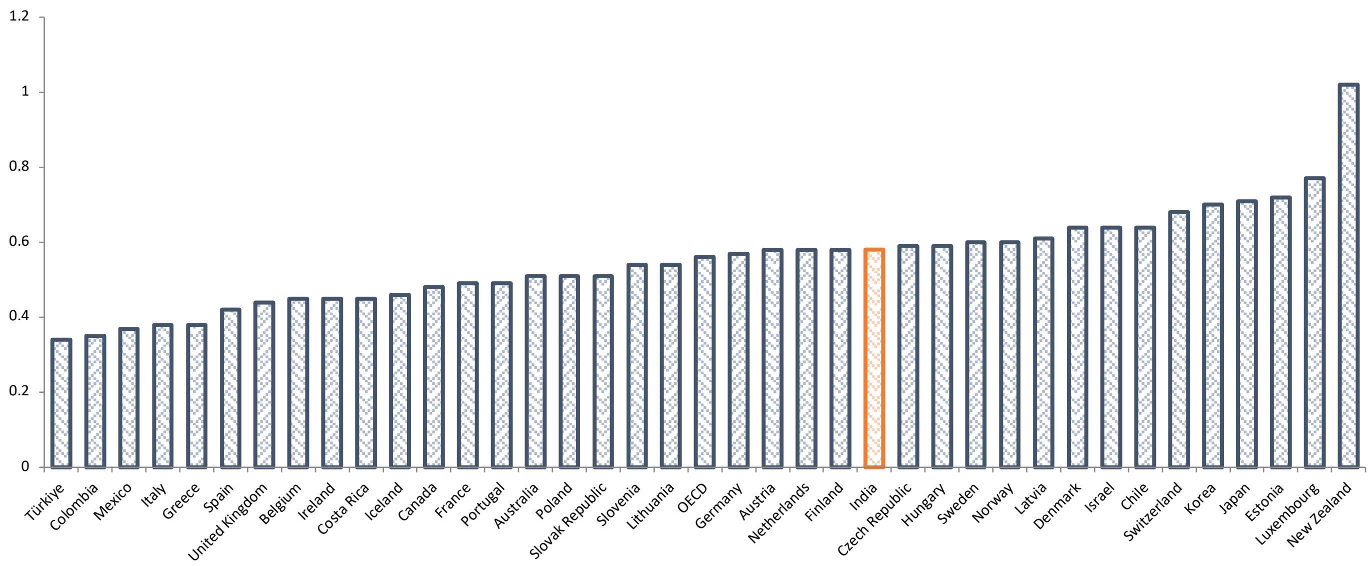
To compare India's effective GST rate internationally, we make use of the OECD *Consumption Tax Trends 2022: VAT/GST and Excise, Core Design Features and Trends,* which records standard consumption tax (VAT) rates across 37 countries (OECD 2022, Fig 1.2). For ease of comparison, five-year average values of the Entry Weighted Average Rates for the period 2018 to 2022 have been considered. It is evident that India has one of the lowest Standard GST Rates [Fig. 5].

Figure 5: Comparing Standard Consumption Tax (VAT/GST) Rates across select OECD countries



Similarly, comparison of C-efficiency of the 37 OECD countries indicates India to be in the top third of the distribution (OECD 2022, Sec 2.9). India's C-efficiency has been taken as a five-year average (0.5806). Year-on-year, the figures have since shown a further improvement to 0.6058 (2022-23, Table 5 above refers).

Figure 6: Comparing C-efficiency for consumption Taxes (VAT/GST) across selected OECD countries



Typically, improved collection efficiencies would be on account of enhanced tax collection rates, or on account of enhanced compliance, which in turn is determined by a mix of **facilitation** and **enforcement** – the carrot and stick!

Having examined the movement in GST rates in the foregoing paragraphs, we now proceed to examine the behaviour of GST compliance and what factors might be having an impact on compliance levels.

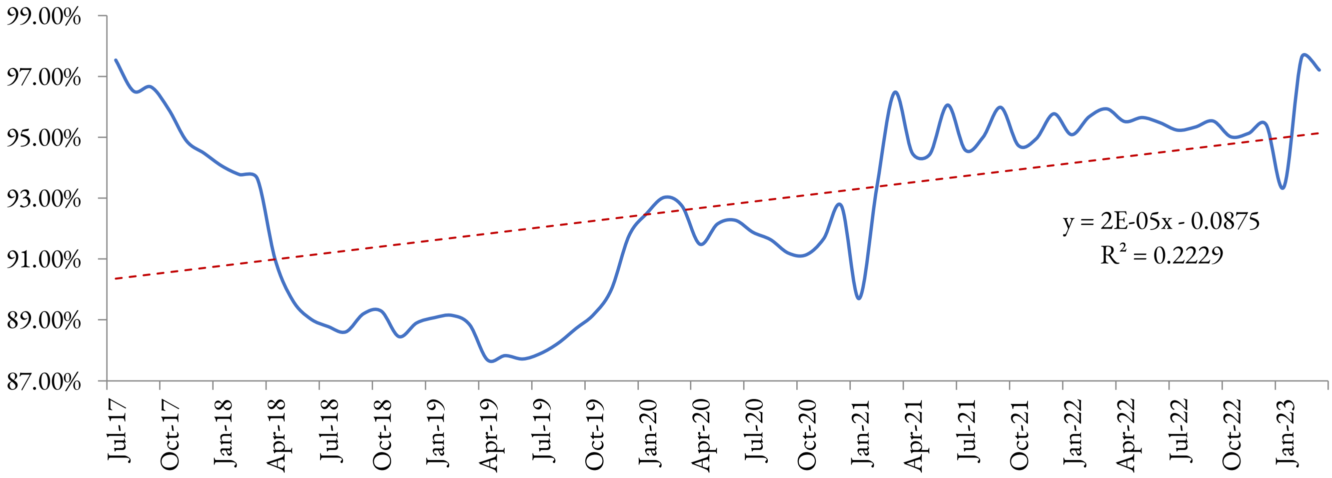
2.2 The Stick: Quantifying Compliance

One way to gauge the extent of compliance could be to take a look at the percentage of registered tax payers filing returns. Based on monthly data captured by the GST Network (GSTN), return filing percentage is a robust measure of compliance levels.

We look at the return filing percentage for *Return GSTR-3B* - a simplified monthly return summarizing liabilities, Input Tax Credit (ITC) availed, net tax payable etc (GST n.d.). Various parts of the form are auto-populated from other filings; given that it includes liabilities and input credit availed, it provides a comprehensive financial profile of the taxpayer. Thus, the filing percentage of this return is used a means of measuring levels of compliance.

Tracking the percentage of returns filed out of those eligible for filing, we see an uptick in return filing percentage since March 2021 [Figure 7] (GST n.d.).

Figure 7: GSTR 3B Return filing percentage [July 2017 to March 2023]



However, this measure only captures the gap between the total registered taxpayers, and out of those, taxpayers filing their returns on time. Revenue losses on account of unregistered assessees, outright evasion, or inaccurate reporting would not be quantified in this measure.

3. An estimate of the Phantom Menace

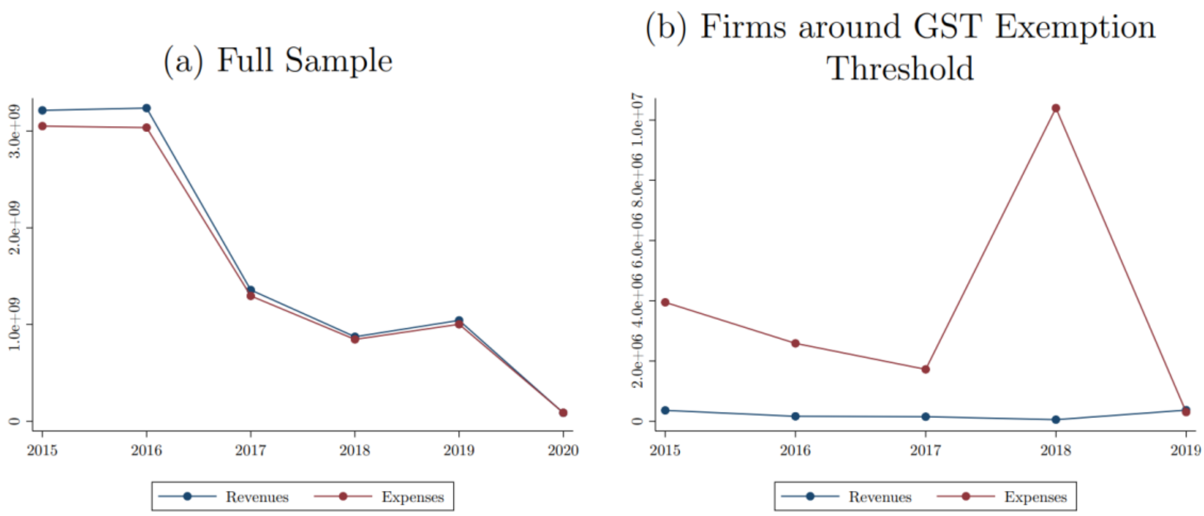
An estimation of evasion of the outright variety is relatively difficult, and we would need to rely on proxy indicators for an idea of extent of the problem.

A study quantifying the prevalence of corporate tax evasion, particularly post the introduction of GST, titled *"Impact of the GST on Corporate Tax Evasion: Evidence from Indian Tax Records"* (Agarwal, et al. 2022) makes use of a large sample of AOC-4, IND-AS, and XBRL filings of firms with the Registrar of Companies (RoC), matching these with the stock and flow data from firm balance sheets and profit & loss accounts. (ibid). This data is subsequently merged with data from the Annual Survey of Industries (ASI), conducted by the National Statistical Office, to assess the accuracy of reporting of incomes and costs.

It is observed that when the entire sample is considered, both revenues and costs show a decrease post the introduction of GST [*Fig. 8A*]. However, for firms around the exemption threshold, i.e., firms with average revenues above Rs. 19 lakhs and below Rs. 21 lakhs, there is a variance.

Firms around the exemption threshold are observed to report losses on average and report higher costs immediately post introduction of the GST [*Fig. 8B*]. The results are summarized in Figure 8A/B.

Figure 8A/B: Impact on Expenses of Company of the Introduction of GST

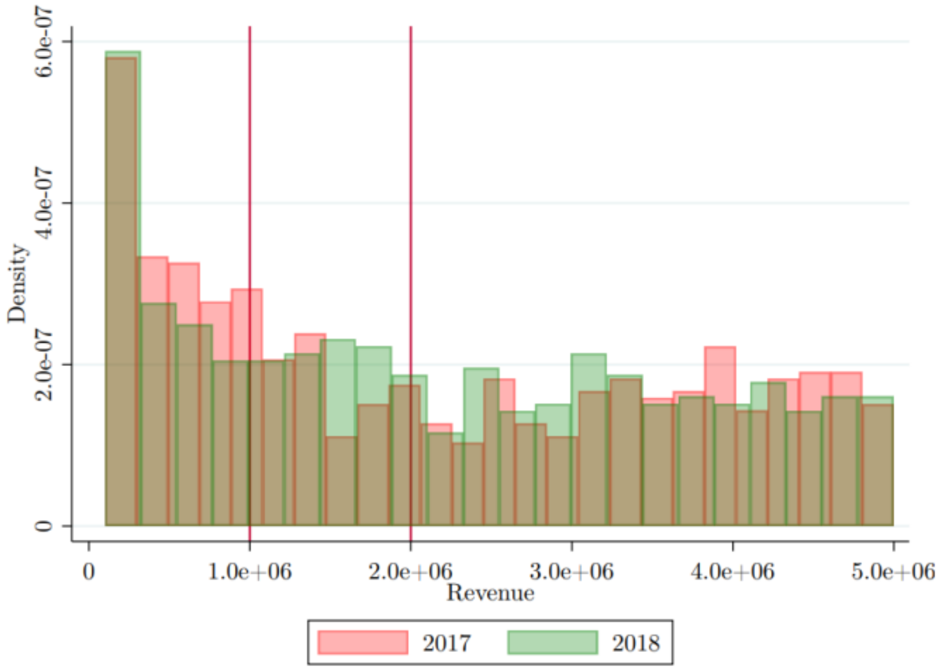


The authors quantify cost over-reporting by firms, and argue that the margin of evasion increased after the implementation of GST. Further, they provide a hypothesis that the **GST led to better income monitoring**, which increased reported firm revenues without a substantial change in production, thereby providing an incentive to firms to inflate non-verifiable costs (ibid, 12).

Another metric is the shift in the bunching of reported revenue around the previous threshold exemption limit [Rs. 10 lakhs] to the new threshold limit [Rs. 20 lakh [for services] and Rs. 40 lakhs [for goods]. Post introduction of the GST, a clear bunching of reported revenues around the new threshold limit is seen [Fig. 9].

Taken together, the above metrics are an indicator of the existence of underreporting/misreporting of revenues and costs. This creates what the authors note as an *enforcement notch*, an area of the distribution which calls for enhanced examination and audit or enforcement action.

Figure 9: Bunching of Revenue around GST Exemption Limits viz. Rs. 20/40 Lakhs



3.1 Enforcement Data

Another metric to measure the extent of evasion could be to analyse the detection of evasion – both in time and across geographies. We examine the *number of cases detected*, a few years prior to the introduction of GST and five years since i.e. from 2014-15 to 2022-23.

The value or the number of detections may not be an accurate measure of the quantum of evasion, as it may be impacted by a number of factors such as administrative capacities, compliance requirements, novel methods of data triangulation etc. That said, the trends in detection are a useful metric to measure inter-temporal and inter-state variations in evasion.

Data presented in the Parliament (Lok Sabha 2023) (Lok Sabha 2018) is used for this estimation. The total number of cases of Central Excise and Service Tax [both subsumed in GST] prior to the introduction of GST, and GST evasion cases instituted post the introduction of GST, are summarized in Table 6. The Revenue collected in the relevant years is also tabulated (Ministry of Finance 2023). It may be noted that the revenue collection figures as well as the numbers of cases booked pertain to the Centre, since availability of data regarding enforcement cases booked varies across States.

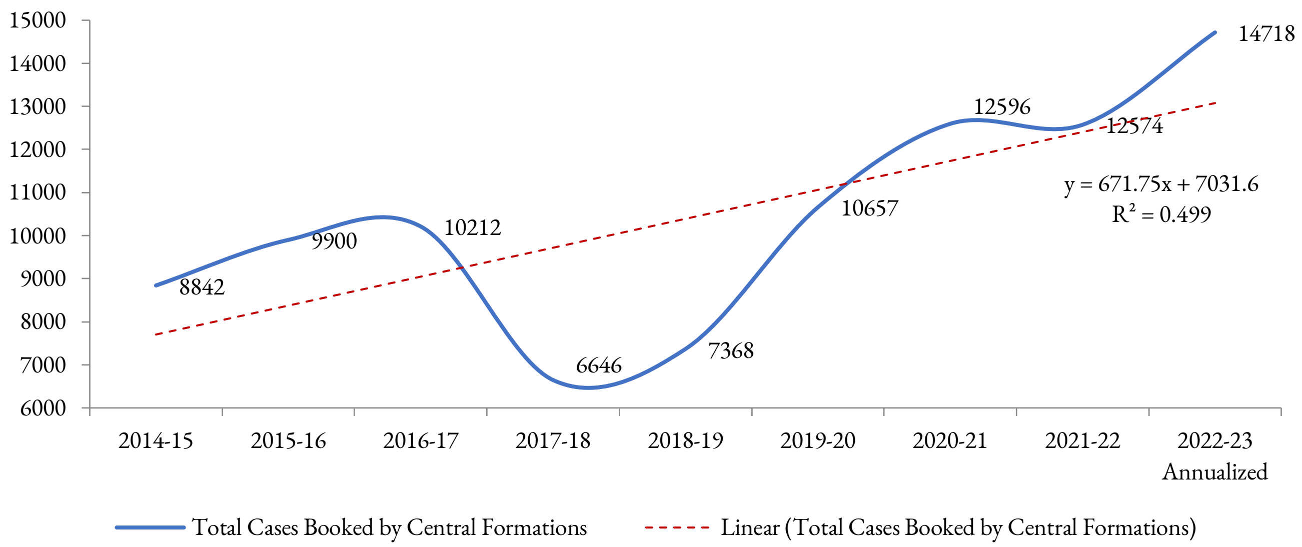
Figure 10 shows the trends in the numbers of enforcement cases booked prior to and post the introduction of GST. For the period prior to the 2017-18, i.e. before the introduction of GST, cumulative figures of Central Excise and Service Tax have been considered.

Table 6: Total Evasion Cases booked by Central Formations and Total Central Revenue Collected

Year	Total Evasion Cases Booked by Central Formations	Total Central Revenue (Rs. Cr.)	Ratio of Cases:Revenue
	a	*b*	*c = a/b*
2014-15	8842	356756.3	0.0248
2015-16	9900	499487.1	0.0198
2016-17	10212	636254.8	0.0161
2017-18	6646	782623.1	0.0085
2018-19	7368	581559.3	0.0127
2019-20	10657	598748.9	0.0178
2020-21	12596	548777.3	0.0230
2021-22	12574	689113.7	0.0182
2022-23 [Annualized/RE]	14718	854000	0.0172

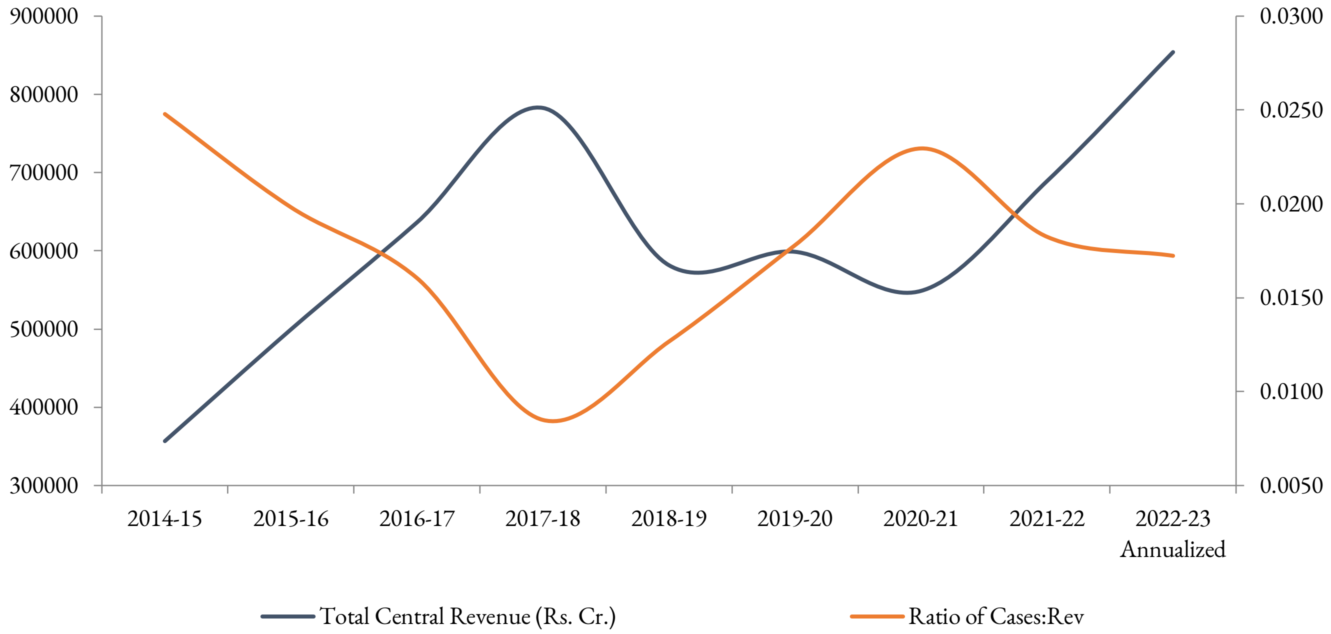
While an increasing trend is indicated in absolute numbers, when considered against the growth in revenue collections, it is seen that in the period 2014-15 to 2022-23, the growth in Revenue [*Central Excise + Service Tax and GST*] was 139.37%, whereas the growth in the number of evasion cases booked was 66.45%.

Figure 10: Total No. of Indirect Tax Evasion cases registered by Central Formations [2014-15 to 2022-23]



Further the ratio of the enforcement cases to revenue collections also shows a declining trend [*Figure 11*]. This enhancement in compliance is perhaps indicative of better targeting and increased productivity of administrative interventions.

Figure 11: Ratio of Central Revenue Collected and Evasion Cases detected by Central formations [2014-15 - 2022-23]



Looking at the geographical spread of enforcement actions [cases booked] gives a broad correlation between high-revenue-yielding states and the number of cases booked therein. Using data from a Parliament Question (PQ) (Lok Sabha 2023), the state-wise distribution of amount of GST evasion detected by Central GST formations in the period, 2017-18 to 2022-23 [Annualized] is mapped in *Figure 12*.

It may be kept in mind that the figures pertain to the cumulative amounts involved in the cases detected. Therefore, a few big cases may skew the numbers. With that caveat, it is interesting to further probe the relation between revenue collections and detections of evasion. Moreover this would make comparison of evasion across States with differing revenue collections more meaningful.

Comparing the ratio of amount of tax evasion detected by Central formations (*ibid.*) and the total GST revenue [domestic only] (GST n.d.) of the corresponding state shows the following trend [*Table 7*].

Figure 12: State wise distribution of amount of GST evasion detected by Central GST Formations [17-18 to 22-23 -Annualized]

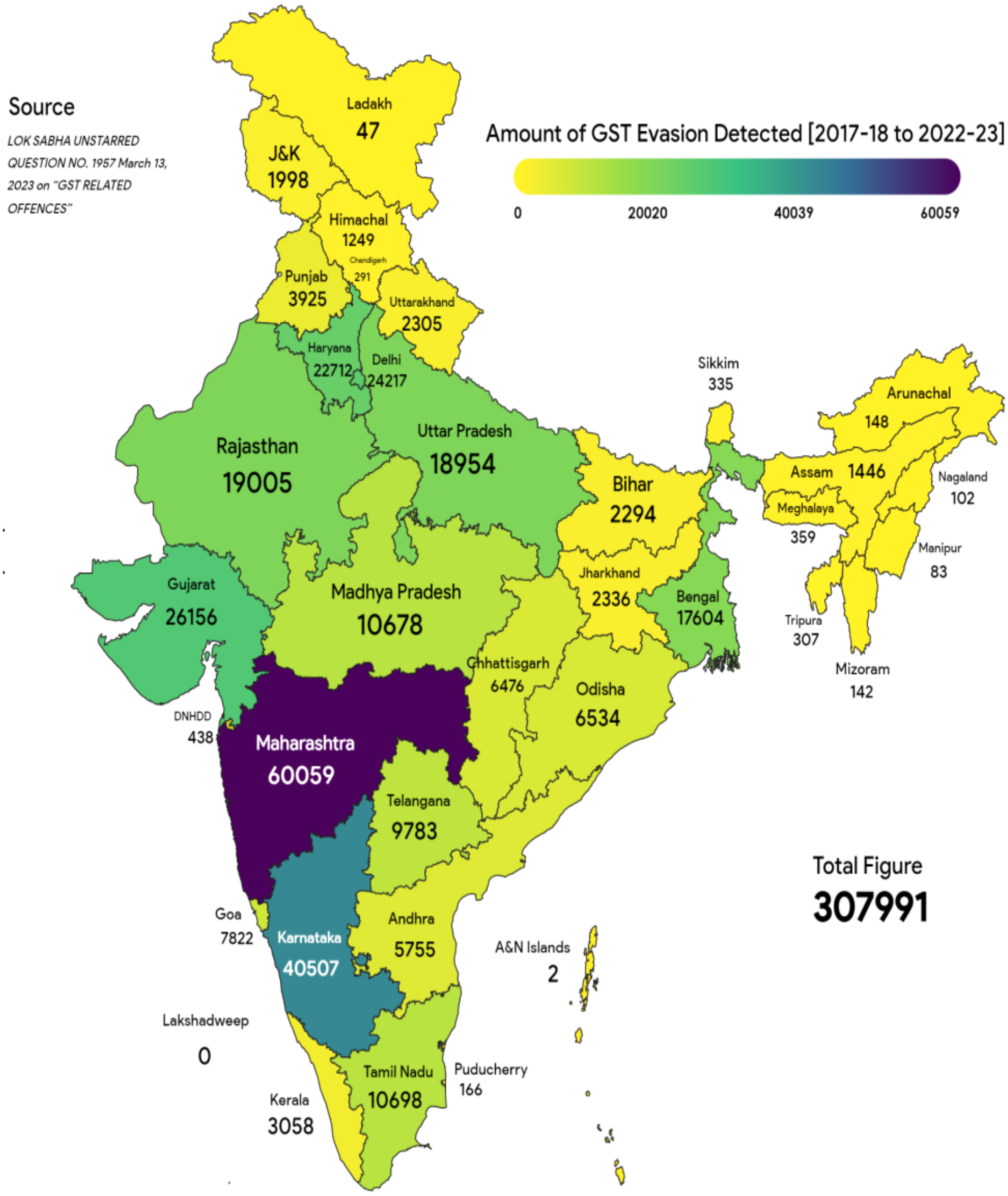
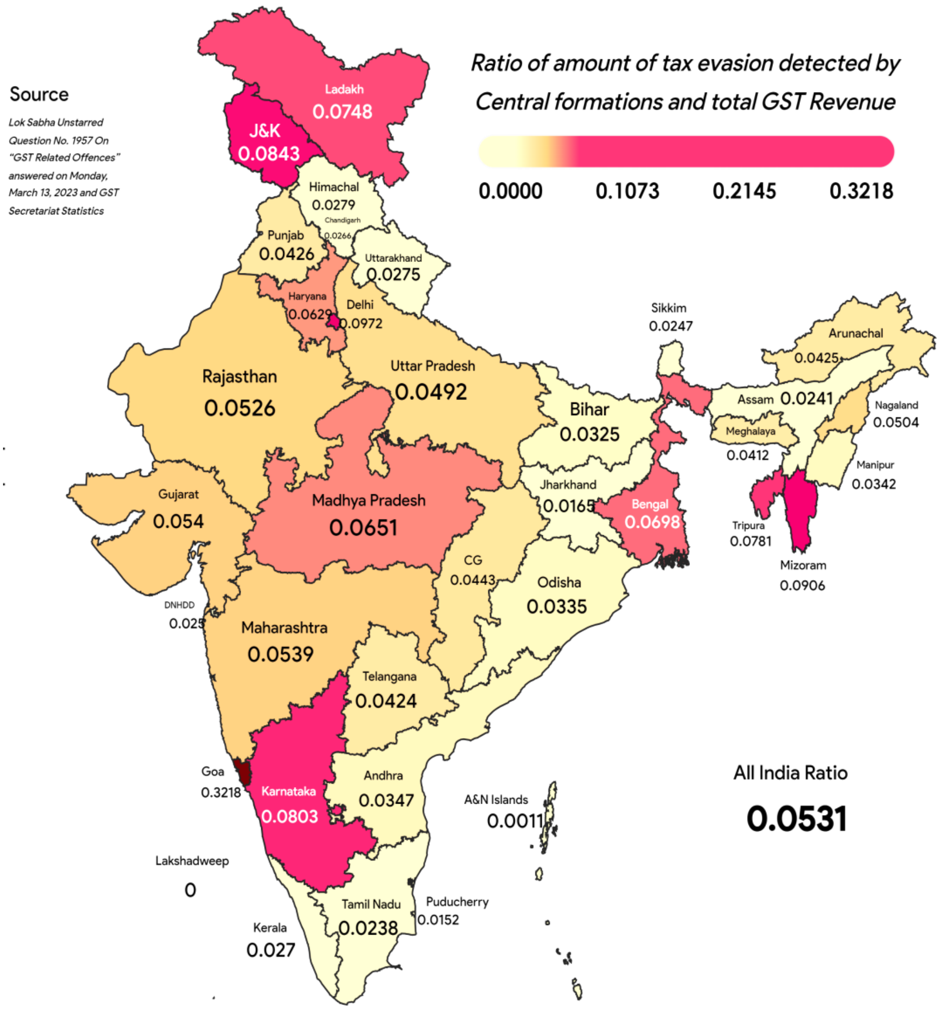


Table 7: Statewise ratio of amount of evasion detected by Central formations and Total GST Revenue Collected [2017-18 to 2022-23 Domestic] States above Rajasthan have a ratio higher than the country-wide average

State/UT	Amount of GST Evasion Detected [Rs. in Cr.]	Statewise GST Collections, Domestic Only [Rs. in Cr.]	Ratio of Detections to Revenue
Goa	7822	24303.32	0.3218
Delhi	24217	249094.17	0.0972
Mizoram	142	1566.79	0.0906
Jammu & Kashmir	1998	23706.66	0.0843
Karnataka	40507	504666.74	0.0803
Tripura	307	3931.90	0.0781
Ladakh	47	628.27	0.0748
West Bengal	17604	252119.47	0.0698
Madhya Pradesh	10678	164057.65	0.0651
Haryana	22712	361295.40	0.0629
Gujarat	26156	483932.85	0.0540
Maharashtra	60059	1114958.13	0.0539
Rajasthan	*19005*	*361295.40*	*0.0526*
Nagaland	102	2022.74	0.0504
Uttar Pradesh	18954	384980.72	0.0492
Chhattisgarh	6476	146048.41	0.0443
Punjab	3925	92115.29	0.0426
Arunachal Pradesh	148	3481.44	0.0425
Telangana	9783	230816.19	0.0424
Meghalaya	359	8714.06	0.0412
Andhra Pradesh	5755	165822.17	0.0347
Manipur	83	2424.08	0.0342
Odisha	6534	195087.02	0.0335
Bihar	2294	70638.92	0.0325
Himachal Pradesh	1249	44714.74	0.0279
Uttarakhand	2305	83701.15	0.0275
Kerala	3058	113406.77	0.0270
Chandigarh	291	10930.46	0.0266
Daman & Diu and Dadra Nagar Haveli	438	17502.67	0.0250
Sikkim	335	13583.78	0.0247
Assam	1446	60112.17	0.0241
Tamil Nadu	10698	449190.27	0.0238
Jharkhand	2336	141277.23	0.0165
Puducherry	166	10949.52	0.0152
Andaman & Nicobar Islands	2	1780.65	0.0011
Lakshadweep	0	99.61	0.0000
Total	**307991.00**	**5794956.82**	**0.0531**

State-wise variation of the ratio of amount of tax evasion detected by Central formations and the total GST revenue [domestic only] is at Figure 12A.

Figure 12A: Statewise ratio of amount of evasion detected by Central formations and Total GST Revenue Collected [Domestic]

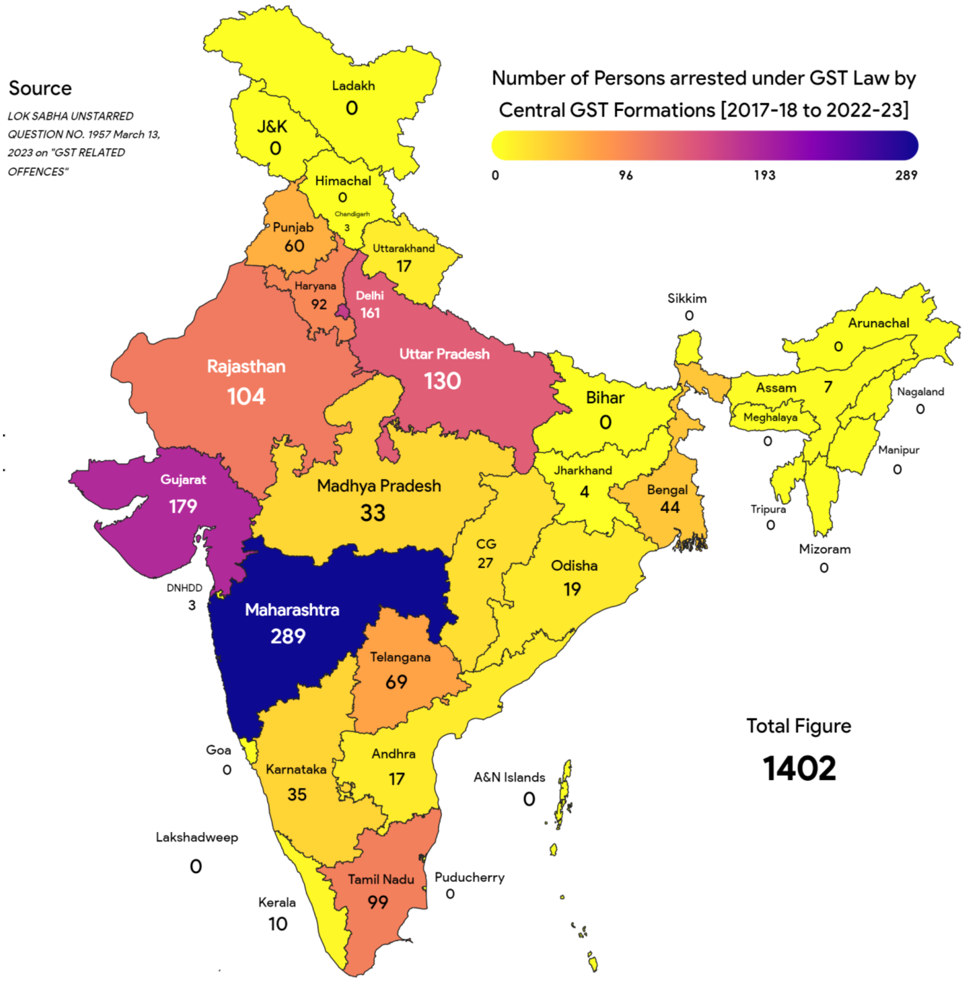


In the above analysis, no distinction has been made on the type of evasion – whether by mis-reporting, clandestine removal, ineligible availment of input credit etc. In addition, the figures available are for the period 2017-18 to 2022-23 [Annualized] therefore an inter-temporal analysis in the absence of year-wise figures is not possible.

In order to get around these limitations, it is proposed to make use of figures of arrests made. Since each arrest is followed up by production in the jurisdictional district court, tracking of arrests made is a good measure of the enforcement activities in a jurisdiction.

In addition, since arrests are typically made in cases where there is a apprehension that the accused may tamper with the evidence or may influence other persons of interest, the number of arrests made is likely to be reflective of cases of evasion involving ingredients of fraud, mis-reporting, or outright evasion. The total number of persons arrested for evasion of GST in the period 2017-18 to 2022-23 [upto Feb. '23] stood at 1402 (Lok Sabha 2023). The state-wise distribution of these arrests are summarized in *Figure 13*.

Figure 13: State wise distribution of arrests made under GST law by Central GST Formations [2017-18 to Feb. 2022-23]



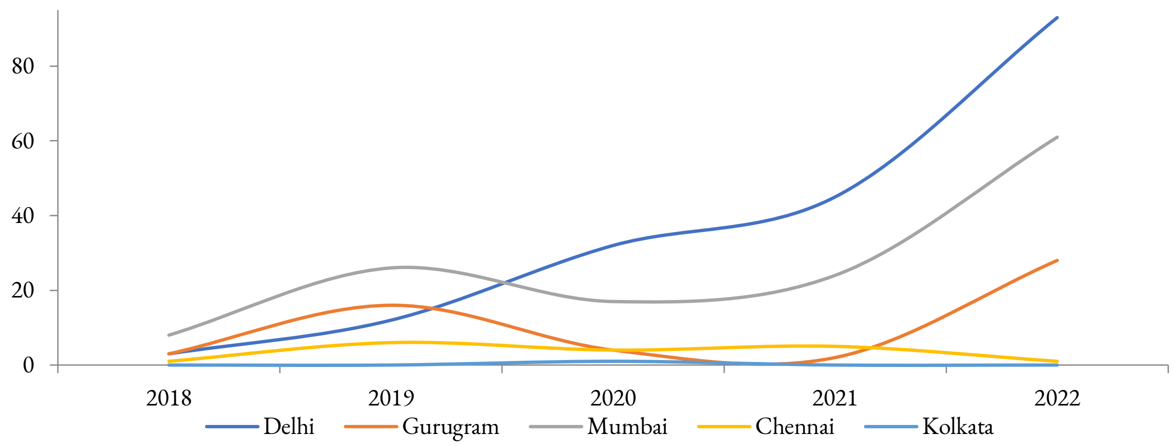
The above figures are for the period from 2017-18 upto February 2022-23, and again indicate a broad correlation with the geographical spread of revenue collections. However, in the absence of figures at regular intervals, it is again not possible to discern an inter-temporal trend.

Since data on arrests is not available in public domain, judicial data from the National Judicial Data Grid (*District and Taluka Courts of India*) portal *E-Court Services* (ecourts.gov.in) is used in order to get a sense of the inter-temporal spread of GST enforcement actions. *E-Courts* is envisaged as a national data warehouse for judicial case data including the orders/judgments for Courts across the country right up to District Courts[1].

In addition to date-wise data of filing and disposal of cases, the database is organized district-wise. Therefore, it is possible to analyse enforcement trends at a granular [district] level. A search was run on the portal for cases involving search string '*GST*'; subsequently, the results were *cleaned* to de-duplicate the cases since a single case may have been heard multiple times, with multiple interim orders.

We make use of this de-duplicated database of *GST* cases for five cities – *Delhi, Gurugram, Mumbai, Chennai and Kolkata* to get an idea of the trends in enforcement activities undertaken over the last five years. The data is sorted calendar-year-wise, by the year of the institution of the case [Figure 14].

Figure 14: Number of GST related matters brought to lower courts in select cities [2018 to 2022]



Source: ecourts.gov.in

The above data is from *ecourts.gov.in* and there is a possibility that it may not contain all the cases, however it is a useful indicator of the trends. The above data suggests an increase of cases of serious evasion (of the sort that would trigger arrests) in Delhi, Mumbai and Gurugram. A more detailed district-wise distribution of enforcement action is underway and it would be interesting to examine the trends from a more granular exercise. This would have implications on the kind of industries or entities which may be evasion prone.

Before we close, for the sake of completeness, we also look at another mechanism of detection of non-payment/short payment of taxes - the process of Tax Audit. Audit by the tax administration[2] involves the examination of records, returns, and other documents maintained by the taxpayer, to verify the submissions made to the tax authorities and assess the level of compliance.

In order to get a sense of the detections made by the process of Audit, we place reliance on *Report No. 5 of 2022 (Indirect Taxes–Goods and Services Tax)* of the Comptroller and Auditor General (CAG), (2022) which *inter alia* examined the effectiveness of the compliance verification mechanism under GST.

The total detections made by Audit by the Central Tax Administration is at Table 7A. Since the data is available only for two years, at present, an analysis of the trends is not quite feasible.

Table 7A: Total detection made vis-à-vis units audited by Internal Audit (GST)

Amount in Rs. Cr.

Year	Category	Total units planned for Audit	Total units audited	Amount of Short levy detected	Total Recovery	Recovery as % of total Detection
2019-20	Large Units	17,172	244	65.51	9.42	14
	Medium Units	18,050	296	15.31	8.06	53
	Small Units	19,920	318	14.72	1.81	12
	Total	**55,142**	**858**	**95.54**	**19.29**	20
2020-21	Large Units	17,929	2816	1623.95	291.94	18
	Medium Units	18,257	4405	510.44	138.05	27
	Small Units	19,728	4781	346.84	83.57	24
	Total	**55,914**	**12,002**	**2,481.23**	**513.55**	**21**

Classification of Units as Large, Medium and Small varies across field formations. A model classification is suggested in Model All India GST Audit Manual 2023, Pg. 258 (The Committee of Officers on GST Audits 2023)

For the sake of context, we examine the total detections made under the Central Excise and Service Tax Acts in audits conducted in the same period. It may be noted that since it involves examination of documents and material on record, the Audit actually relates to the records of a past period. Moreover, a direct comparison between Audit under GST and under Central Excise and Service Tax may not be possible on account of GST being a new levy. However for sake of completeness, the total detections made by Audit (Central Excise & Service Tax) by the Central Tax Administration is at Table 7B.

Table 7B: Total detection made vis-à-vis units audited by Internal Audit (Central Excise & Service Tax)

Amount in Rs. Cr.

Year	Category	Total units planned for Audit	Total units audited	Short levy detected	Total Recovery	Recovery as % of total Detection
2019-20	Large Units	6361	3432	8429	519	6
	Medium Units	12075	6678	1698	365	21
	Small Units	35383	21649	1210	412	34
	Total	**53819**	**31759**	**11337**	**1296**	**11.43**
2020-21	Large Units	4075	1421	5532	185	3
	Medium Units	7758	2106	1017	118	12
	Small Units	27630	8860	468	124	27
	Total	**39463**	**12387**	**7017**	**427**	**6**

Comparing the detections made under the Central Excise & Service Tax Acts makes it evident that there Departmental Audit is likely to perform a key role in detection of tax payment anomalies. To that end, a Model All-India GST Audit Manual, 2023 has been prepared by a Committee of Officers on GST Audits and is available in the public domain (The Committee of Officers on GST Audits 2023).

As and when more data is available, it will be instructive to note future trends in GST Audit detections.

4. Conclusion

From the above, at first glance, it may be seen that enforcement, compliance, and revenue collections appear to move together. However, there are a number of other factors affecting revenue collections, such as procedural simplification, ease of compliance, as well as systemic changes such as enhanced coverage of e-waybills and e-invoicing.

The effects of GST has been measured on a number of metrics – logistics efficiencies, enhancing trade between states (Debroy and Misra 2023), easing compliance by introducing uniform processes and procedures, etc. However, the biggest indicator of the efficiency and efficacy of a tax reform has to be the revenue it yields.

As we have seen from the above analysis, there can be little dispute that post the introduction of GST, revenue collection has significantly improved, and that this improvement has been on account of systemic, structural, and administrative enhancements in the design and implementation of the tax.

We began this study by quantifying the growth in revenues post the introduction of GST, and attempted to isolate the impact of growth in the tax base, as well as of inflation, so as to be able to gauge improvements in revenue collection on account of administrative factors, particularly tax rates and enforcement.

We went on a construct an *entry weighted average rate index* (EWA Rate Index), in order to ascertain a standard rate of GST, that helps examine the movement in rates over time as well as to compare rates internationally. This is a novel tool, based on publicly-available data, and can be updated on a regular basis. It has numerous potential applications in policy formulation, revenue forecasting, examination of impact of rate changes etc.

Further, we make an attempt to quantify the extent of evasion and the enforcement response thereto. We note that even though the total number of cases detected has shown a steady growth, however, taken as a ratio of the amount of Revenue collected, the figures shows a declining trend from 2020-21 onwards.

This is perhaps an indicator of better-targeted (and thereby more productive) interventions. In addition to exploring the geographic spread of data regarding GST evasion, using district court level data from e-courts.gov.in, we also look at how the trends have moved over the last five years.

In addition, we note the following points:

- Levels of Indirect taxes in India, as indicated by the Entry Weighted Average are amongst the lowest internationally. Out of 37 OECD members, **only four** have average tax rates lower than that of India.
- Similarly, comparison of *C-efficiency* of the countries places India in the **top third** of the distribution of 37 OECD members.
- **GST Rates reduced sharply** in 2018-19, and more modestly in 2020-21, and continue to remain at a much lower level as compared to the time of introduction of GST.
- While in absolute numbers, the number of cases of tax evasion detected may have increased, however the number of cases booked as a ratio of the revenue collections has shown a decreasing trend.
- We also note that the **percentages of returns filed timely** [using GSTR-3B as an indicator] has significantly increased, from a low of 87.69% in April 2019 to more than 95% in 2022-23. This is a further indication of improved compliance.
- This enhancement in compliance is perhaps indicative of **better targeting** and **increased productivity** of administrative interventions.
- State-wise data regarding amount of evasion detected, expressed as a ratio of the revenue collected, shows **geographical variations in tax evasion**. In the absence of year-wise data, it is possible that there could be a few extreme values skewing the numbers. The **underlying reasons for this variation**, along with possible corrective measures, could be an area for further examination.

Availability of more granular data would make it possible to delve deeper into facets such as sectoral contribution to revenue and revenue growth, reasons for geographical variations in compliance, and impact that GST compliance has on other economic metrics.

We conclude by quoting from the *Arthashastra*, which describes a variety of indirect taxes including sales taxes, tariffs, cesses & surcharges, countervailing duties, and royalties, and goes on to note the importance of tax enforcement.

कोश मूलो दण्डः

[Kosha Moolo Dandah]

Arthshastra by Kautilya; Part 8 of Chapter 1, Verse 47

The verse refers to revenue being the backbone of the administration / economy, and that it forms the basis for the State itself. So too would be the protection of due and just revenue.

References

Aizenman, Joshua, and Yothin Jinjarak. 2008. "The collection efficiency of the Value Added Tax: Theory and international evidence." *The Journal of International Trade & Economic Development* 17 (3): 391-410 https://doi.org/10.1080/09638190802137059.

The Empowered Committee Of State Finance Ministers. November 2009. "First Discussion Paper On Goods and Services Tax In India." New Delhi.

Ministry of Finance. 2023. *Economic Survey 2022-23.* New Delhi: Department of Economic Affairs.

MoSPI. n.d. *Annual Estimates of GDP & Growth Rates- Constant Prices.* Accessed November 24, 2023. https://www.mospi.gov.in/dataviz-annual-estimates-gdp.

PIB. 2022. *Provisional Estimates of Annual National Income, 2021-22 AND Quarterly Estimates of Gross Domestic Product for the Fourth Quarter (JAN-MAR), 2021-22.* May 31. Accessed November 24, 2023. https://pib.gov.in/PressReleasePage.aspx?PRID=1829784.

Ministry of Finance. n.d. "GST Collections for August 2022 records increase of 28% y-o-y." *Department of Revenue.* Accessed November 24, 2023. https://dor.gov.in/sites/default/files/pressnote.pdf.

MoSPI. 2023. *National Factsheet on Indian Economy.* Accessed November 24, 2023. https://www.mospi.gov.in/national_factsheet/.

Chandrasekhar, CP, and Jayati Ghosh. 2023. "GST collections: hype and reality." *Hindu Business Line*, May 15: https://www.thehindubusinessline.com/opinion/columns/c-p-chandrasekhar/gst-collections-hype-and-reality/article66854556.ece.

RBI. 2019. *State Finances: A Study of Budgets 2019-20.* RBI.

GST Council. 2023. *GST System Statistics.* Accessed November 24, 2023. https://gstcouncil.gov.in/gst-system-statistics.

Ministry of Corporate Affairs. 2022. *Annual Reports on the Working and Administration of the Companies Act, 2013.* December. Accessed November 2023. https://www.mca.gov.in/content/mca/global/en/data-and-reports/reports/annual-reports/annual-report.html.

GST Council. 2019. "Agenda for 38th GST Council Meeting." *GST Council Meetings.* December 18. Accessed November 2023. https://gstcouncil.gov.in/gst-council-meetings.

PIB. 2022. *GST compensation to States for loss of revenue arising on account of implementation of GST for a period of five years.* July 19. Accessed November 24, 2023. https://www.pib.gov.in/PressReleasePage.aspx?PRID=1842755.

—. 2023. *Recommendations of 49th GST Council Meeting.* February 18. Accessed November 24, 2023. https://pib.gov.in/PressReleasePage.aspx?PRID=1900376.

Laffer, Arthur. 2004. *The Laffer Curve: Past, Present, and Future.* The Heritage Foundation.

Gellman, Barton. 2009. *Angler: The Cheney Vice Presidency.* Penguin Books.

Miravete, Eugenio J., Katja Seim, and Jeff Thurk. 2018. "Market Power and the Laffer Curve." *Econometrica* 86 (5): 1651-1687 https://doi.org/10.3982/ECTA12307.

WTO. n.d. *Technical Notes on Country Pages* . Accessed November 2023. https://www.wto.org/english/res_e/statis_e/daily_update_e/tariff_profiles/TariffProfileTechnicalNotes_E.htm.

Finance Commission India. 2020. "Report of Fifteenth Finance Commission for 2021-26." New Delhi.

GST Council. 2015. "Report on the Revenue Neutral Rate and Structure of Rates for the Goods and Services Tax (GST)."

Department of Revenue, Ministry of Finance. 2017. "Notification No.1/2017-Central Tax (Rate)." *GST Council.* June 28. Accessed November 24, 2023. https://gstcouncil.gov.in/sites/default/files/All-rate-notification/Notification-for-CGST-rate-Schedule.pdf.

—. 2017. "Notification No.2/2017-Central Tax (Rate)." June 28. Accessed November 24, 2023. https://gstcouncil.gov.in/sites/default/files/All-rate-notification/Notification-for-CGST-exemption.pdf.

GST Council. n.d. *About Us.* Accessed November 24, 2023. https://gstcouncil.gov.in/gst-council.

Mukherjee, Sacchidananda. 2023. *Revenue Performance Assessment of Indian GST.* NIPFP Working Paper Series, NIPFP.

Keen, Michael. 2013. *The Anatomy of the VAT.* IMF Working Papers, IMF.

Ueda, Junji. 2017. *The Evolution of Potential VAT Revenues and C-Efficiency in Advanced Economies.* IMF Working Papers, IMF.

MoSPI. 2023. *National Accounts Statistics 2023.* Accessed November 2023. https://www.mospi.gov.in/publication/national-accounts-statistics-2023.

Ministry of Finance. 2023. *Components of GDP at Current Prices.* Accessed November 24, 2023. https://www.indiabudget.gov.in/economicsurvey/doc/stat/tab16.pdf.

OECD. 2022. "Consumption Tax Trends 2022." November 30. Accessed November 2023. https://www.oecd-ilibrary.org/sites/6525a942-en/1/3/1/index.html?itemId=/content/publication/6525a942-n&_csp_=9be05a02fe0e4dbe2c458d53fbfba33b&itemIGO=oecd&itemContentType=book#figure-d1e568.

GST. n.d. *About Form GSTR-3B.* Accessed November 2023. https://tutorial.gst.gov.in/userguide/returns/index.htm#t=GSTR3B.htm.

—. n.d. *GST Statistics.* Accessed November 2023. https://www.gst.gov.in/download/gststatistics.

Agarwal, Sumit, Shashwat Alok, Shiv Dixit, and Tejaswi Velayudhan. 2022. "Impact of the GST on Corporate Tax Evasion: Evidence from Indian Tax Records." *17th Annual Conference on Economic Growth and Development.* New Delhi: Indian Statistical Institute.

Lok Sabha . 2023. "Unstarred question No. 1957 on GST Related Offences ." March 13.

Lok Sabha. 2018. "Unstarred Question on "Tax Evasion by Corporates" No. 4043 ." August 10.

Ministry of Finance. 2023. *Receipt Budget.* Budget Division.

ECourts Services. n.d. *E-Courts: About Us.* Accessed November 24, 2023. https://ecourts.gov.in/ecourts_home/static/about-us.php.

Comptroller and Auditor General of India. 2022. *Report No.5 of 2022- Compliance Audit Report on Indirect Taxes - Goods and Services Tax, Union Government Department of Revenue (Indirect Taxes – Goods and Services Tax).* CAG Audit Reports, CAG.

The Committee of Officers on GST Audits. 2023. "Model All India GST Audit Manual."

Debroy, Bibek, and Devi Prasad Misra. 2023. "India on the Move: An examination of the volume and direction of internal trade in India." *Indian Public Policy Review* (The Takshashila Institution) 4 (2): 01-26 https://doi.org/10.55763/ippr.2023.04.02.001.

Notes

[1] See E-Courts Services https://ecourts.gov.in/ecourts_home/static/about-us.php

[2] Prescribed under Section 65 of the CGST Act, 2017