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EVOLVING ISSUES AND FUTURE DIRECTIONS IN GST REFORM IN INDIA

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Preface

Madras School of Economics (MSE) established the Centre for Public Finance (CPF), which started functioning from April 1, 2021. This Centre is financed by the Government of Tamil Nadu. Its activities are guided by an Advisory Council (headed by me). The Centre focuses on both theoretical and empirical issues of public finance covering the following areas: deficit financing and public debt, monetary and fiscal interactions, tax policy and reforms, public expenditure management, public investment appraisal and cost benefit analysis, public enterprises reform, intergovernmental transfers, local finances and environmental issues.

Apart from general research activities, the Centre is committed (i) to review the Tamil Nadu Economy and State Finances every year, (ii) to conduct an Annual Conference on topics related to public finance and policy and (iii) to conduct Training Programs on public finance. It will also undertake specific studies on public finance funded by Government of Tamil Nadu and other National and International agencies.

During the academic year 2021-22, the Centre organized "Virtual Meeting on Improving the Presentation of Tamil Nadu Budget Document" on April 29, 2021 and conducted 5-day Training Programs on Public Finance for 15 batches covering a total of 270 Group A and Group B officials of Government of Tamil Nadu through online mode (from August 31, 2021 to December 31, 2021). It has also initiated about 10 research studies.

The study "Evolving Issues and Future Directions in GST Reform in India" by Dr. M. Govinda Rao is the first working paper of the Centre for Public Finance. After analysing the issues that have cropped up in the implementation of GST, this study makes detailed recommendations on the future reform agenda on the GST to reap the potential benefits of the reform and suggests that the compensation scheme may be extended by three years with modifications and used as an incentive to the States to agree for undertaking the much needed reform.

C. Rangarajan
Chairman, MSE

Evolving Issues and Future Directions in GST Reform in India

M. Govinda Rao

Abstract

The Goods and Services Tax (GST) was implemented in July 2017 to simplify the domestic consumption tax system by unifying various taxes, to minimise cascading effects of the taxes by setting off the tax paid at earlier stages of the production and distribution chain and to enhance revenue productivity by introducing self-policing embedded in the value added tax. However, the potential gains from the reform are yet to materialise. The promised increase in revenue productivity is yet to be realised. The tax base remains narrow due to a large list of exemptions. The inability to stabilize the technology platform has not helped to improve compliance. The multiple rates have complicated the tax structure, created scope for misclassification, inverted rate structure, and disputes arising therefrom. The exclusion of petroleum products and electricity from the GST base has continued significant cascading from the excluded taxes. In addition, the agreement on compensating the States for the loss of revenue will come to an end in June 2022, even before stabilising the reform. The paper makes detailed recommendations on the future reform agenda on the GST to reap the potential benefits of the reform and suggests that the compensation scheme may be extended by three years with modifications and used as an incentive to the States to agree for undertaking the much needed reform.

Keywords: *Tax reform, Goods and services tax; Value added tax.*

JEL Codes: *H20, H25*

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M. Govinda Rao

INTRODUCTION

The introduction of the value added tax (VAT), is perhaps, the most important tax reform seen across countries in the last three decades. As of 2018, as many as 166 countries out of 193 with UN Membership had implemented the VAT (VAT) in one form or another. All the OECD countries with the sole exception of the US have implemented the VAT. Most developing countries have replaced their cascading type domestic consumption taxes with the VAT primarily to garner additional revenues. This is an essential component of IMF programme to recoup revenue loss from the reduction in tariffs (Bird and Gendron, 2007, Keen, 2009). Of the countries that implemented the VAT so far, only five countries have repealed them but reintroduced them with improvements[1].

The introduction of the goods and services tax (GST) in India is a remarkable achievement and a unique experiment in cooperative federalism. The GST combines as many as 11 different domestic trade taxes levied at Central, State and local levels. It is a standard invoice-credit and destination-based VAT on goods and services. The challenge of implementing a major reform like the introduction of GST was particularly formidable as it involved building consensus between the Centre and 29 States and two Union Territories with legislatures (28 States and 3 Union Territories after converting Jammu and Kashmir into a Union Territory) . Not surprisingly, the reform took considerable effort and time, and it is still evolving. The difficulties arose also due to the difficulties in harmonising the tax structure at both Central and State levels and unification of tax points of the Centre and the States required considerable negotiations.

The reform process started in 1989 when the recommendation of the Jha committee (India, 1976) to rationalise the Union Excise Duties

[1] Bird and Gendron (2007) cite the cases of Belize, Ghana, Grenada, Malta, and Vietnam which repealed the VAT after implementing it, but introduced it in improved form.

into the Modified Value Added Tax (MODVAT) by providing a partial input tax credit (ITC). Despite this, the tax continued to be levied at multiple rates and on a number of items, the tax continued to be levied at specific rates. Although over the years, there were attempts to reduce the number of rates, the tax continued to be complex and as the levy was at the manufacturing stage, cascading effects continued to be substantial. The next major stage in the evolution of GST was the replacement of cascading type State sales taxes with the state VAT in 2005 which was preceded by prolonged negotiations by the Empowered Committee of State Finance Ministers.

The discussion on the introduction of a comprehensive GST started with the report of the Expert Group on Taxation of Services (India, 2001). The Group recommended extending the taxation of services to all services except a few in the negative list, reducing the number of MODVAT rates, and generalising input tax credit across both goods and services to evolve a manufacturing stage GST at the Central level. It further recommended that the States should be given concurrent powers to enable them to levy a comprehensive tax on goods and services at the retail level alongside abolishing the inter-state sales tax and working out the 'place of supply rule' to make the tax system destination-based.[2] The proposal was repeated by the Task for on Indirect taxes (India, 2002) and later by the Report of the Task Force on Implementation of Fiscal Responsibility and Budget Management Act, 2003 (India, 2003). Subsequent discussions by the empowered Group of State Finance Ministers finally led to the implementation of GST in 2017 in the current form.

International experience shows that a major reform like the implementation of GST takes a considerable time period to settle down, particularly in federal systems with subnational governments levying the

[2] For discussion in the issue, see, Rao and Rangarajan (2017)

tax. The only other examples of GST levied at multiple levels are in Brazil, Canada and the European Union and even after years of experience, the reform in these countries is still a work in progress. In the case of Brazil, the inter-state trade is subject to the 'origin base; principle and there is no conceptual and administrative clarity in the federal and the State versions of the VAT. Besides the problems with cross-border trade and inter-state tax exportation, it has very high compliance, administration, and distortion costs (Varsano, 2000, Bird and Gendron, 2007). In the European Union, implementation of VAT is a condition for membership and all 27 countries. The tax is levied on the basis of 'destination principle' by zero-rating exports, but there are serious challenges in collecting taxes from cross-border trade, services, and e-commerce (Keen, 2009, Cnossen, 2010). Furthermore, the structure of the tax is not harmonised in terms of thresholds, exemption, and rate structure in different countries. The standard rate of VAT in the EU varied from 15 to 25 per cent with a mean of 19.4 per cent and except for Denmark, all other European countries have two or more rates (Bird and Gendron, 2007). In Canada, Bird (2013) argues that even after three decades of experience, it is still a work in progress. As of 2011 six out of 10 provinces accounting for 80 per cent of the population have imposed some form of VAT or other. The reduction in the federal VAT rate from 7 per cent to 5 per cent in 2008 to create larger fiscal space for the provinces and the discretion to set the rates by the provinces has helped in the harmonisation. Nevertheless, there are four different systems in Canada with (i) four provinces (Alberta, 3 northern territories and North-eastern territories of Nunavut and Yukon) do not have any form of sales tax; (ii) 5 provinces (New Brunswick, Nova Scotia, Newfoundland, Labrador and Ontario) joining the VAT regime with rates varying from 7 per cent to 10 per cent. In 2013, the cumulative rate of tax varied from 12 per cent in British Columbia to 15 per cent in Nova Scotia; (iii) Quebec levies the tax at 9.975% and administers both federal and provincial VAT, Finally, three provinces (Saskatchewan, Manitoba and Prince Edward Islands) continue to levy a separate VAT on the tax base including the federal tax. In British Columbia the agreement to join the VAT regime exercise was controversial and, in the referendum held on April 2013, the State reverted to levying the earlier provincial sales tax.

GST in India was implemented with very high expectations of unifying and simplifying domestic consumption taxes, reducing distortions, and increasing revenue productivity. The main objective was not only to reduce the collection, compliance and distortion costs of the tax but also to improve the competitiveness by eliminating the taxes embedded in exports. However, both the structure of the tax and its administration including the technology platform was evolving when the COVID-19 pandemic caused a severe decline in revenues and has virtually relegated the discussion of further reforms to the back burner. As the economy returns to normalcy, the time is opportune to address the unfinished reform agenda. This paper attempts to assess the revenue impact of GST including the effect of the pandemic on the revenues and identify the further reform areas and the strategy to implement them.

This study proceeds as follows. Following sections briefly lay out the distinct features of the GST in India, analyse the impact of the tax on revenues and minimising distortions, and identify the reform areas and the strategy to implement them. The final Section will summarise the reform areas and their sequencing.

THE GST IN INDIA: SALIENT FEATURES

After several years of deliberations, India implemented the GST on July 1, 2017 by combining the domestic indirect taxes levied by both Union and State governments except the State excise duties on alcoholic products, taxes on petroleum products, electricity, and real estate. It is designed as a destination-based tax with central GST (CGST), State GST (SGST), and inter-state GST (IGST), with a seamless input tax credit on transactions across the country and the revenue from the latter credited in a separate account and finally settled through a clearing house mechanism to the destination state. The decisions relating to the structure and operation of the tax are taken by a separate institution created by amending the Constitution – the GST Council, and the registration, payment, and submission of returns are to be done through the GST Network (GSTN) – an IT-enabled administration.

The international experience with the implementation of GST shows that there is 'no one size fits all' or a unique GST. There are different models covering a variety of activities in different countries depending on what is politically acceptable. However, the general principles recommended by most experts are that (i) aim for a global tax with few exemptions, credits, rebates or deductions; (ii) do not use the tax system to achieve too many social and economic goals; (iii) keep the threshold at a reasonably high level to focus the administration on the "whales" rather than "minnows". This will serve the purpose of not only minimising administrative costs but also serving the cause of equity (Keen and Mintz, 2004). (iv) the structure of the tax should be kept simple with minimum rate differentiation to minimise administrative, compliance, and distortion costs; (v) continuously monitor the tax system, concentrate on basic tasks such as the collection of tax at source and an ID number system (vi) do not collect more information than that can be processed; (vii) actively encourage good record keeping and aim at the long term goal of self-assessment. Although by and large, the conventional wisdom on GST has proved right, it is not always possible to strictly adhere to them. In fact, as Bird and Gendron (2007; p. 4) state, "….some 'bad' features – such as too high or too low thresholds, overly extensive exemptions, or multiple rates – may be essential to successful adoption in the first place". However, it is important that these features are removed over time, though, it may not be easy to remove them[3].

[3] Bird and Gendron (2007) refer to the recommendation of a committee in Sweden to switch over to one rate of tax which was not found to eb politically feasible.

Most of the countries where VAT was adopted for enhancing revenue productivity as it was considered to be a "money machine"[4]. However, in India, besides the revenue objective, the reform was motivated by the desire to simplify and unify a number of domestic trade taxes, reduce distortions arising from cascading and harmonise indirect taxes between the Centre and States and among the States *inter se*. The short term focus was to have a structure that is revenue neutral though, in the medium and long term, it was hoped that better compliance would ensure higher revenue productivity.

There are some distinct features in the levy of GST in India. First, the GST combines indirect taxes levied by both the Centre and States. Second, the tax is levied by a joint tax authority of the Centre and the States for the purpose - the GST Council. The Constitution was amended to create the Council (Article 269 A), chaired by the Union Finance Minister and with Finance Ministers or other ministers nominated by each of the States and Union Territories with legislatures as Members. The Union Revenue Secretary is the Secretary of the Council, and a separate Secretariat was set up to oversee its functioning. The decisions taken in the Council should have at least 75 per cent votes. The Central government has one-third vote, and the States have the remaining two-thirds with an equal share. This is the way both the Centre and the States gave up their tax power and revenue autonomy in favour of tax harmonization. Third, the collection of the tax is done by providing a seamless input tax credit. GST comprises a Central GST (CGST), State GST (SGST), and Inter-state GST (IGST). The IGST revenue is credited in a separate account and finally allocated according to the State where the final transaction takes place through a clearing house mechanism. Fourth, considering the need for a strong technology platform for

[4] Keen and Lockwood (2010) test the "money machine" hypothesis in a cross country analysis and find that the adoption of VAT is associated with increase in revenues and improved effectiveness in a large majority of countries.

managing inter-state transactions and for 100 per cent check on the input tax credit, a specialised agency - the GST Network (GSTN) was created under the GST Council.

The threshold for registration is kept at Rs.40 lakh for goods and Es, 20 lakh for services. For the North-eastern and Himalayan States, the threshold has been kept at Rs.10 lakh. The administration of the tax was divided between the Centre and respective States. All taxpayers below the turnover of Rs.1.5 Crore were to be administered by the concerned State where they have registered and responsibility for administering the taxpayers above Rs.1.5 Crore turnover is divided between the Centre and the respective States equally based on random selection. The dealers with less than Rs.1.5 Crore have the choice of paying a simplified tax at a compounded rate of one per cent of the turnover in the case of manufacturers and traders, 5 per cent on restaurants and 4 per cent on service providers without any provision for the input tax credit.

After considerable discussions on the appropriate revenue-neutral rates, the GST with four main rates was implemented has four cumulative rate categories equally divided between the Centre and the States at 5%, 12%, 18%, and 28% besides exemption. This, there is no standard rate as such, but most services are taxed at 18 per cent. A special rate of 0.25% is applicable on precious and semiprecious stones and gold is taxed at 3 per cent. The items classified as 'demerit' and 'luxury' items of consumption such as aerated drinks, cars, air conditioners and washing machines, cement, paint, marble and such other goods and tobacco products are taxed at 28 per cent.

In order to get consensus on the reform, the Central government agreed to compensate the States for any shortfall in revenues from the revenues that would have accrued from the merged state taxes. The potential revenue was estimated by applying 14 per cent rate every year on the revenue from the merged taxes in 2015-16 as certified by the Comptroller and Auditor General, for a period of five years. The compensation was to be financed by a Cess on 'demerit' and luxury items levied at rates varying from 15 per cent to 96 per cent of the tax rate applicable. Surely, the compensation scheme was much too generous as the actual revenue growth in the revenue from the taxes in the States was much lower (Rao, 2017). In other words, the compensation scheme was not only to provide insurance against the revenue decline but also was to serve as an incentive to join the reform process.

The principles determining the rate structure for different goods and services were: (i) to ensure that the new levy did not cause an increase in consumer prices; (ii) the incidence of GST on various commodities remained broadly at the same level as the total incidence of taxes subsumed in GST; (iii) the rate structure chosen would be broadly revenue neutral; The GST Council set up a "fitment committee", comprising of the senior officials of the Tax Research Unit of the Central Board of Indirect Taxes and Customs (CBIC) and some senior officials of the Commercial taxes Departments of selected States. The committee determined the structure of rates broadly by estimating the cumulative incidence of subsumed taxes. In the process, the opportunity to think afresh in determining the rate structure to remove the anomalies that existed earlier was missed. However, after the introduction of GST, in response to the reactions by the businesses, a number of changes were made by reducing the tax rate from 28 per cent to 18 per cent and in some cases from 18 per cent to 15 per cent. Although the tax rates on various commodities and services are designed to be uniform, the GST Council allowed the State of Kerala to levy a special cess to finance the reconstruction after the unprecedented flood in 2018-19.

The taxpayers are required to electronically file a single return for CGST, SGST, IGST and GST Compensation Cess. Initially, a fully automated system with 100 per cent matching of invoices for input tax credit was envisaged with taxpayers required to submit three returns GSTR -1, GSTR-2, and GSTR-2 every month and a final annual return at the end of the year. GSTR -1 was required to furnish the details of outward supplies, GSTR-2 was to contain the information and inward supplies and GSTR – 3 was auto-populated with information from the two forms. However, the system could not function, and after the repeated postponement and simplified self-assessed summary form providing information and outward and inward supplies were designed as a temporary measure and ITC is being settled based on these summary returns. In July 2018 the GST Council announced that by January 1, 2019, a simplified new return will be rolled out, but was postponed repeatedly. In the absence of a proper return, the self-declaration done in GSTR – 3B has continued to be the basis for determining the tax liability. A later modification included that while the GST payment has to be monthly, the GSTR – 3B could be filed quarterly for the dealers with less than Rs.5 Crore turnover.

The introduction of GST has led to the abolition of check-posts. However, to keep a vigil on the movement of goods, a web-based e-way bill has to be carried compulsorily on all inter-state supplies by the person carrying the goods exceeding Rs.50000 was introduced on 1 April 2018. Even for intra-State supplies, the option was given to the States to choose any date on or before 3 June 2018 and all the States have notified e-way bill rules for intra-State supplies. To ensure that the benefits of ITC and any reduction in the rates of GST are passed on to the consumers, a three-tier structure for investigation and adjudication of complaints regarding profiteering at national and state levels and a directorate of anti-profiteering has been set up to address the complaints by the consumers.

IMPACT OF GST ON MINIMISING DISTORTIONS AND REVENUE PRODUCTIVITY

From the time GST was implemented, the reform has been evolving and after the onset of the pandemic, the focus shifted to the issue of compensating the States for loss of revenue and the reform itself lost its momentum. Thus, while the adoption of GST is an accepted and settled issue, the reform itself is evolving and will take some time to complete. In this situation, it is useful to make an assessment to identify the problem areas and those requiring fine-tuning to meet the original objectives.

Gains from Reform

It is easy to identify the important gains from the implementation of GST. The first is the fact that it has successfully unified and simplified several consumption taxes to reduce both administration and compliance costs. Second, it has succeeded in harmonising the domestic trade taxes. The reform has not only minimised the overlap in indirect taxes between the Centre and States but has also eliminated tax competition in terms of the race to the bottom among the States, by having a uniform rate structure across the country. Although inter-state suppliers must deal with the laws in different States, the laws and rules have been substantially harmonised to reduce the compliance burden. By eliminating the inter-State sales tax and providing seamless credit for the taxes paid earlier, it has reduced cascading from the tax on interstate transactions.

The most important gain from the tax has been the elimination of check-posts to enable unhindered movement of goods across the country. The abolition of check-posts has helped to reduce transportation time and more importantly, eliminate rent-seeking at the check-posts, which was particularly rampant in the States where Octroi and entry taxes were levied. This has paved the way for a nationwide market for goods and services. According to the Ministry of Road

Transport, post-GST, the long-distance travel time for trucks has been reduced by 20 per cent.[5] Another important gain is the cost savings from better supply chain management. Earlier, most businesses created branch offices all over the country and sent their supplies as consignment transfers to avoid the inter-state sales tax. With the introduction of GST with a seamless credit mechanism, there are no gains to be had by having branch offices and consignment transfers.

The electronic administration envisaged under the GST was to eliminate the interface between the taxpayer and tax collector. Right from registration, payment of the tax by availing ITC, filing of returns and assessment, the entire process was designed to be electronically managed without any personnel interface. This was also supposed to ensure faster refunds to the exporters. The mechanism was required also to ensure better compliance with the tax as well. A strong technology platform was critical also for ensuring seamless credit on cross-border supplies. However, glitches in the technology platform have constrained the full realisation of these benefits, and this is discussed later in the paper.

Another important feature of Indian GST is the creation of the GST Council. This is an important innovation in cooperative fiscal federalism where both the Union and the State governments forgo their tax autonomy in to achieve a harmonised domestic consumption tax. (Reddy, 2018). In a situation in which there is an institutional vacuum for intergovernmental bargaining, fostering cooperation, regulating competition and ensuing conflict resolution, the GST Council provides a model for achieving this in the levy of domestic indirect tax. This experiment can be a useful model. However, it is important to raise a word of caution at this stage. Given the number of actors and the

[5] See, https://economictimes.indiatimes.com/news/economy/policy/post-gst-travel-time-of-trucks-has-reduced-by-a-fifth-government/articleshow/59831749.cms?from=mdr.

attempt to forge unanimity in decisions could result in the important reforms suffer from the tyranny of status quo´.

Impact on Revenues

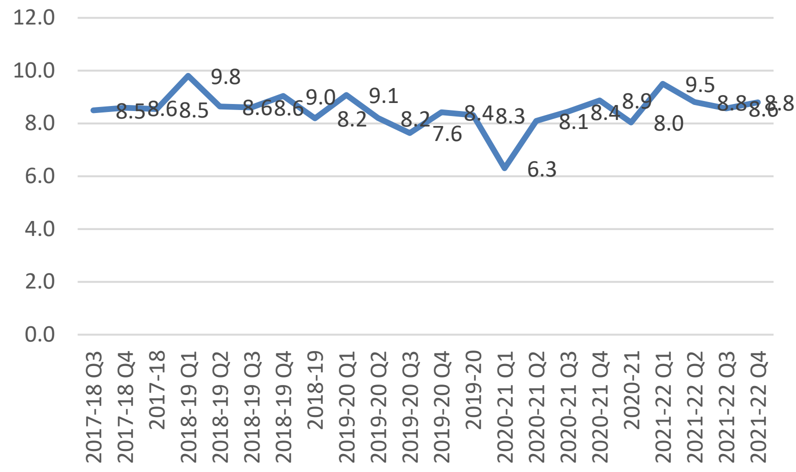
In the short term, the GST was supposed to be revenue-neutral, but it was expected that over time, better compliance due to the self-policing nature of the tax would result in a significant increase in revenue productivity. However, almost five years of experience shows that the promised revenue gains have not accrued for a number of reasons. Although the time period in the evolving context of reforms is too short to make a judgment on the revenue implications, particularly as a number of changes in the rates of tax have been made during this period, and the technology platform is still to stabilise, the assessment helps to identify the measures needed to improve revenue productivity in the short and medium terms.

The analysis shows that after implementation, there has been a deceleration in the growth of revenues. For 2017-18, the CAG estimates that the GST revenue was actually lower than the revenue collected from the subsumed taxes in the previous year by almost 10 per cent. This is in spite of excessive drawing of IGST on Centre's account and short transfer of compensation cess to the Public Account (India, 2019, p. 28-29). The main reason for the low revenue productivity in the first three years was the inability to stabilise the technology platform. This led to the continuous postponement of the annual returns and the inability of the system to check the correctness of the input tax credit. The result was tax evasion on a massive scale by claiming input tax credit by producing invoices from fictitious firms. Just as the technology showed signs of stabilising, the pandemic struck and with severe restrictions on economic activities, the revenues declined.

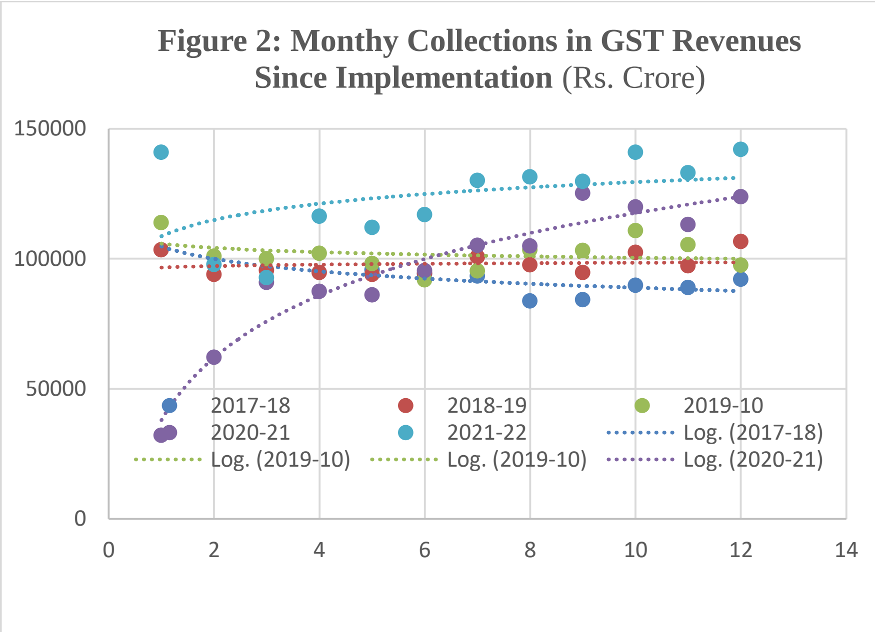
Figure 1 presents the quarterly effective rates of GST revenue estimated for the country right from the third quarter of 2017-18 to the third quarter of 2021-22 along with annual averages. The effective rate is estimated as a percentage of GST revenue in the quarter to the sum of private final consumption expenditure and government consumption expenditure during the quarter. Immediately after the tax was implemented the effective rate increased from 8.2 per cent in 2017-18 Q3 to 9.8 per cent in 2018-19 Q1, but thereafter fluctuated between 8 to 9 per cent and declined to 7.6 per cent in 2019-20 Q3, due to sharp slowdown in industry and service sectors of the economy. Following the most severe lockdown in economic activity, the effective tax rate plummeted to 6.3 per cent in 2020-21 Q1. With the lifting of restrictions and better compliance following the improvements in tax administration particularly with the stabilization of the technology platform, the effective rate recovered to 8.9 per cent in 2020-21 Q4. As the pandemic subsided the effective rate increased to 9.5 per cent in the first quarter of 2021-22 and remained at more than 8.6 per cent thereafter.

The effective rates of GST over the years show some important findings. First, the revenue as a ratio of the tax base does not show any clear trend in spite of a significant slowdown in economic activities. Second, the fluctuations clearly reflect the economic impact of the lockdowns and restrictions imposed to contain COVID-19 from time to time. Third, after sharp declines in the effective rate during both the first and the second waves of the pandemic, the effective rate rebounded immediately to the previous levels in the next quarter during both the first and second waves. Fourth, the monthly collections in each of the years since implementing the GST presented in the Figure show that the collections have settled at a higher trajectory in 2020-21 and even more in 2021-22 and this reflects improved administration, particularly as the technology platform improved.

Figure1: Quarterly Effective Rates of GST (Per Cent)



The recent period has seen an encouraging trend in revenue collections from GST. The higher buoyancy not only reflects economic recovery after the second wave of the pandemic but also the firming up of the technology platform. In fact, there was a steady increase in the monthly revenue collections from October, 2020 to reach Rs.1.4 trillion in April 2021 due to improvements in technology platform. The second wave of the pandemic plunged the revenue collections to Rs.1.03 lakh Crore in May, 2021 and Rs.0.93 lakh Crore in June, 2021 before picking up again to reach Rs.1.17 lakh Crore in September. With better technology and enforcement, and pent-up consumption demand during the festival season, the revenues have steadily increased to reach Rs. 1.68 crore in April, 2022.



Reasons for Low Revenue Productivity

The report of the C and AG had made a detailed compliance audit of the technology platform and pointed out a number of shortcomings (India, 2019). It had observed the postponement of the originally envisaged GST returns (GSTR- 1,2, 3) due to technical glitches and the inability to undertake the originally envisaged universal matching of invoices to verify input tax credit (ITC) using the simplified returns (GSTR -3B) as principal reasons for the slow growth of revenues. With a reduced probability of detection, this seems to have caused significant evasion by using fake invoices. The CAG's report concluded, " On the whole, the envisaged GST tax compliance system is non-functional" (India, 2019; p. 22). Further, the settlement of IGST to the States also could not be done properly as the system failed to generate the required modules such as appeals and refunds from the returns.

There are a variety of reasons for the low revenue productivity of GST, the principal ones being glitches in the technology platform and second, the structure of GST. The report of the CAG makes a detailed analysis of the technical glitches adversely impacting on compliance (India, 2019). The failure of the technology platform to verify invoices for ITC has the potential to create false claims and refunds. Similarly, the inability to validate the registrations has led to the creation of several shell companies (some of them within the group) to issue fake invoices which eventually disappear leading to evasion of the tax. The fact that the annual return filing date was being repeatedly postponed due to technical glitches for almost two and a half years did not disallow wrong claims on the ITC. In the absence of a clear paper trail, the assessment will be based entirely on trust, and this provides an opportunity for unscrupulous businessmen to evade the tax. In fact, the annual return filing for 2018-19 was repeatedly postponed till December 2020. Similarly, the inability to validate and debar the ineligible taxpayers from availing composition levy has also led to misuse of the option. Based on the information made available from the All India Enforcement Drive by the CBIC through the Directorate of Revenue Intelligence and other CBIC formations from November 2020, it was reported that more than 5700 cases involving an amount of Rs. 40000 Crore were detected in the fiscal year 2021.[6] Indian GST with a complex structure with the simultaneous levy of Central and State level destination-based tax, wide-ranging exemptions and multiple rates requires a robust technology platform and the failure to erect that had adverse effects on the compliance of the tax which is being overcome gradually.

The trend in GST revenue collections shows a subdued pattern in the first two years but the unprecedented lockdown following the COVID-19 pandemic resulted in the revenues plummeting from about Rs., one

[6] https://economictimes.indiatimes.com/news/economy/finance/gst-evasion-of-40000-crore-detected-from-fake-invoicing-itc-claims/articleshow/88603551.cms?utm_source=contentofinterest and utm_medium=text and utm_campaign=cppst

lakh Crore in March 2020 to Rs.32172 Crore in the next month. The revenue collection recovered gradually with the relaxation of restrictions and improvements in technology, but with the emergence of the second wave and the restrictions following that, the collections plummeted again to the lowest level in April 2020. Failure to firm up the technology platform is also one of the reasons for the delay in the settlement of refunds to exporters. With improvements in the technology platform, the revenue collections in absolute terms have steadily increased thereafter, but due to the second wave of the pandemic, the collections slowed down due to the restrictions imposed in January 2021. With the easing of restrictions from March 2021-22, and since then, monthly revenue collection exceeded Rs.one lakh Crore. The collection so far was the highest in April 2022, when it touched Rs.1.68 lakh Crore. The revenue collections would have increased even more but for the adverse effects of a severe supply shortage in semiconductors, after August 2021, on the production and sales of a number of industries including automobiles, computers, mobile phones and consumer electronics.

An important issue concerns in tax administration relates to focusing on large taxpayers. The issue must be dealt with in two ways. First, as argued by Keen and Mintz (2004), the threshold should be kept high enough to focus on "whales" rather than minnows. This not only helps the administration to focus on the large taxpayers and also serves the cause of equity as most of the low-income earners buy their requirements from small traders. Bird and Gendron (2007) after reviewing the experiences of different countries suggest a thumb rule of having a threshold of USD. 100000 for developing countries. In India, the threshold was kept at Rs.20 lakhs when the GST was implemented but later, it was raised to Rs.40 lakhs for goods, but for services, the threshold remains at Rs.20 lakh. The analysis based on the information collected from Karnataka, an average State shows that over 92 per cent of the taxpayers are in the turnover range of below Rs.5 million and they account for just about 12 per cent of the GST paid (Table 1). Considering the low proportion of turnover and the tax paid up to Rs.50 Lakh turnover, it may be desirable to raise the threshold to Rs.50 lakh without making the distinction between goods and services (Rao, 2011).

Should the tax administration undertake 100 per cent matching of invoices? The review of the early experience of this in Korea shows that the practice was neither efficient nor effective (Choi, 1990)[7]. Therefore, the system was modified in 1988 to match invoices above a threshold (approximately £175) and when the discrepancies between input and output invoices or between invoices and VAT returns were higher (approximately £2,875), and later, the practice of e-invoicing was adopted. A detailed analysis by Krever (2014) showed that a comprehensive invoice matching system imposed high compliance costs on taxpayers who are least likely to evade VAT and divert administrative resources from audit processes aimed at uncovering suppression of sales or claims to ITC related to outputs of large taxpayers.

Considering the heavy demands on technology, In the Indian context, it may be appropriate to review the strategy of 100 per cent matching and require invoice matching for the suppliers with a turnover of more than some threshold (say Rs.one Crore, and for invoices more than Rs.10000). The GST Council has already introduced an e-invoicing system for B2B transactions for taxpayers with a turnover of more than Rs.100 Crore and that should help to minimise the evasion through fake invoicing. A detailed audit can be carried out in cases where there are discrepancies unless the technology permits this without casting much administrative and compliance burden. Even if the threshold is not increased, confining the invoice matching to taxpayers with a turnover of more than Rs.10 Crore will limit the invoice matching requirements to just 8 per cent of the existing taxpayers (Table 4).

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[7] Richard Krever (2014) provides very useful insight in the Korean experience. Se also, Bird and Gendron (2007; p. 170-171).

Table 1: Turnover Range wise Number of Taxpayers and Tax Paid in Karnataka (2018-19)

Turnover Range (Rs. Million)	Number of Taxpayers Rs.	Taxable Turnover Rs. Million	Tax Paid Rs. Million	Percent of Taxpayers	Per cent of Turnover	Per cent of Tax Paid	Per Cent of Tax Paid to Turnover
< 2	490357	1345112	62816	85.42	3.56	7.05	4.67
2-5	41865	1093451	44234	7.29	2.90	4.96	4.05
5-10	18635	1021396	39201	3.25	2.71	4.40	3.84
10-100	20379	3954303	162736	3.55	10.48	18.25	4.12
100-500	2150	3122868	152295	0.37	8.27	17.08	4.88
500 - 5000	607	4844476	214176	0.11	12.83	24.03	4.42
5000-10000	23	736016	28285	0.00	1.95	3.17	3.84
>10000	18	21627367	187728	0.00	57.30	21.06	0.87
Total	574034	37744989	891471	100.00	100.00	100.00	2.36

Source: Office of the Commissioner of Commercial taxes, Government of Karnataka.

Compensation Mechanism to the States as Insurance Against Revenue Shortfall

To forge a consensus on the structure and operation of GST, a number of compromises had to be made in the structure of the tax and the States had to be given insurance against falling revenues. The Centre agreed to compensate the States for any shortfall in revenues calculated by applying 14 per cent growth every year on the 2015-16 actual revenues from the subsumed taxes which was attested by the C and AG.

Tax reform is likely to succeed when it is implemented in the upward phase of the economic cycle (Bird, 2011). Unfortunately, in the Indian context, the implementation of GST coincided with various economic shocks. First, the aftereffects of demonetisation in November 2016 continued to stifle consumption and investment. Second, the slowdown in the economy was caused by several structural problems including the balance sheet crisis of commercial banks and the corporates had adversely impacted investment and growth. Third, Elevated levels of fiscal imbalances did not leave any fiscal space for augmenting aggregate demand. Fourth, although the GST was implemented after considerable deliberations, the administrative system, particularly the technology platform dealing with the complex structure with multiple rates, seamless input tax credit and clearing house mechanism to settle IGST was not fully operational. Even after the implementation, several changes were made to the structure in the ensuing months. Finally, the impact of the lockdowns and restrictions on economic activities dampened revenue collections.

The analysis of state-wise compensation requirements estimated by projecting the C and AG certified revenues from the taxes subsumed in GST in 2015-16 is shown in Table 2. This brings out some important findings. First, the compensation requirement has steadily o increased over the years from about Rs.20015 Crore in 2018-19 to Rs.98954 Crore in 2019-20. Second, in the first full financial year after GST implementation (2018-19), very few low-income and North-eastern and Hill States had to seek compensation, perhaps due to the moving over to the destination-based tax. Third, as per the reply to a question in Rajya Sabha the compensation cess collections were able to meet the compensation requirements from 2017-28 to 2019-20 (Table 3), but thereafter, the decline in the revenues was mainly due to severe lockdown to contain the epidemic resulted in the closure of economic activities

The pandemic brought out the crisis of compensation to the fore. With a sharp decline in revenue collections, the amount of compensation required was large and that led the Centre to breach the agreement plunging the Union-State relationships to a new low. In the 41st meeting of the GST Council, the Centre presented the total compensation requirements at Rs.3 lakh Crore. The amount of cess available for compensation was estimated at Rs.65000 Crore. Of the remaining Rs.2.35 lakh Crore, the Centre attributed the loss of revenue due to the

"Act of God" at Rs.1.28 lakh Crore and suggested that the States may either borrow the entire amount of Rs.2.35 lakh crore from the market at market interest rates or borrow Rs.1.1 lakh Crore under a special window to be opened by the RBI and both the principal and interest payments to be adjusted against future revenue collections from the cess. After considerable controversy, the States finally accepted the second option. The actual compensation payments made to the States, as reported in Rajya Sabha is presented in Table 3. It is seen that the actual compensation paid to States increased from Rs.49286 Crore in 2017-18 to 1,65302 Crore in 2019-20 and marginally declined to Rs.154365 even though the requirement was much more as the States were made to borrow to meet the requirements.

Table 2: The Shortfall in GST Revenue from Compensation Eligibility in States (Rs. Crore)

State	2018-19				2019-20				2020-21			
	Potential Revenue	Actual Revenue	Shortfall	Per cent	Potential Revenue	Actual Rev.	Shortfall	Per cent	Potential Rev.	Actual Rev.	Shortfall	Per cent
I. General Category States												
Andhra Pradesh	18030	21257	-3227	-17.9	20554	20227	327	1.59	26712	18671	8041	43.1
Bihar	16402	16738	-336	-2.1	18698	15801	2897	15.49	24300	20800	3500	16.8
Chattisgarh	9561	8665	896	9.4	10900	7895	3005	27.57	14165	7754	6411	82.7
Goa	2835	2529	306	10.8	3232	2438	794	24.56	4200	2373	1827	77.0
Gujarat	37502	35351	2151	5.7	42752	34106	8646	20.22	55561	41827	13734	32.8
Haryana	19794	18775	1019	5.1	22565	18873	3692	16.36	29325	20350	8975	44.1
Jharkhand	8331	8201	130	1.6	9497	8418	1079	11.37	12343	9064	3279	36.2
Karnataka	46973	42663	4310	9.2	53549	42147	11402	21.29	69592	37835	31757	83.9
Kerala	21861	21390	471	2.2	24922	20447	4475	17.95	32388	19000	13388	70.5
Madhya Pradesh	19922	19751	171	0.9	22711	20447	2264	9.97	29515	20448	9067	44.3
Maharashtra	78632	83181	-4549	-5.8	89640	82602	7038	7.85	116496	88000	28496	32.4
Odisha	14360	12639	1721	12.0	16370	13204	3166	19.34	21275	13010	8265	63.5
Punjab	18808	13510	5298	28.2	21441	12751	8690	40.53	27864	11522	16342	141.8
Rajasthan	22299	23763	-1464	-6.6	25421	21954	3467	13.64	33037	37663	-4626	-12.3
Tamil Nadu	38710	39137	-427	-1.1	44130	38376	5754	13.04	57351	42300	15051	35.6
Telangana	20935	24206	-3271	-15.6	23866	23517	349	1.46	31016	23600	7416	31.4

(Table Contd...)

(Table Contd...)

Uttar Pradesh	43391	48801	-5410	-12.5	49466	27232	22234	44.95	64285	50355	13930	27.7
West Bengal	26119	28166	-2047	-7.8	29776	27308	2468	8.29	38696	25074	13622	54.3
All Gen. Cat States	464463	468723	-4260	-0.9	529488	437743	91745	17.33	688123	489646	198477	40.5
II. Special Category States												
Arunachal Pradesh	333	806	-473	-142.2	379	802	-423	-111.43	432	910	-478	-52.5
Assam	7779	8890	-1111	-14.3	8868	8788	80	0.90	10109	9894	215	2.2
Himachal Pradesh	4723	3450	1273	27.0	5385	3550	1835	34.07	6138	3451	2687	77.9
Jammu and Kashmir	6194	5412	782	12.6	7061	4720	2341	33.16	8050	7077	973	13.8
Manipur	451	787	-336	-74.5	514	853	-339	-65.89	586	1000	-414	-41.4
Meghalaya	827	902	-75	-9.1	943	910	33	3.45	1074	1219	-145	-11.9
Mizoram	246	504	-258	-105.3	280	532	-252	-90.08	319	504	-185	-36.7
Nagaland	333	344	-11	-3.4	379	613	-234	-61.56	433	463	-30	-6.6
Sikkim	319	460	-141	-44.2	364	455	-91	-25.12	415	431	-16	-3.8
Tripura	1025	1074	-49	-4.8	1169	1027	142	12.11	1332	985	347	35.2
Uttarakhand	6448	4960	1488	23.1	7350	4931	2419	32.91	8379	3609	4770	132.2
All Special Cat. States	28677	27589	1088	3.8	32692	27181	5511	16.86	37268	29543	7725	26.1
All States	493140	496312	-3172	-0.6	562180	464924	97256	17.30	725391	519189	206202	39.7
Compensation requirements			20015				98594				207470	

Table 3: GST Compensation Payments to States (Rs. Crore)

Sl. No.	State/UT-wise	Compensation released in 2017-18	Compensation Released in 2018-19	Compensation Released in 2019-20	Compensation Released in 2020-21
1	Andhra Pradesh	382	0	3028	4627
2	Arunachal Pradesh	15	0	0	0
3	Assam	980.39	455	1284	2149
4	Bihar	3140	2798	5464	4493
5	Chattisgarh	1589	2592	4521	2827
6	Delhi	326	5185	8424	6931
7	Goa	281	502	1093	987
8	Gujarat	4277	7227	14801	11563
9	Haryana	1461	3916	6617	5841
10	Himachal Pradesh	1059	1935	2477	1623
11	Jammu and Kashmir	1160	1667	3281	2104
12	Jharkhand	1368	1098	2219	2475
13	Karnataka	7669.59	12465.14	18628	13763
14	Kerala	2102	3532	8111	7077
15	Madhya Pradesh	2668	3302	6538	5863
16	Maharashtra	3077	9363	19233	22485
17	Manipur	24	0	0	53
18	Meghalaya	140	66	157	255
19	Mizoram	0	0	0	6
20	Nagaland	0	0	0	27
21	Odisha	2348.08	3785	5122	3633
22	Puducherry	387.29	681	1057	564
23	Punjab	5108.94	8985.06	12187	6959
24	Rajasthan	2899	2280	6710	6312
25	Sikkim	6	0	0	69
26	Tamil Nadu	1018	4824	12305	11269
27	Telangana	169	0	3054	5424
28	Tripura	149	172	293	259
29	Uttar Pradesh	2432	0	9123	11742
30	Uttarakhand	1432	2442	3375	2235
31	West Bengal	1608	2615	6200	7750
Total	Total	49276.29	81887.2	165302	151365

Source: Ministry of Finance, Government of India (as reported on the answers to questions in Rajya Sabha session 252).

Structure of the Tax and Revenue Impact

The best practice approach to GST reform is to keep the list of exemptions in GST small to have a more comprehensive trail of transactions. The rationale for exempting many items or levying low rates on items considered necessities is to ensure equity in the distribution of tax burden. However, while exemptions or low rates of tax on such items may confer larger proportional benefit to the low income groups, they could result in larger absolute benefit to higher income groups. As argued by Keen (2013), this is an inefficient way of achieving equity as the exempted items are consumed also by the rich and therefore, the better way to achieve equity is by making cash transfers and spending on items like education and healthcare[8]. In India, as many as 148 commodities under four digit HSN classification and having almost 50 per cent weight in the consumer price index have been kept on the list of exemptions mainly to minimise the impact of the tax on prices. Apart from most unprocessed agricultural goods, processed items no packaged and branded and some items are exempted for social reasons. The glaring examples of exempted services are the transportation of goods and people by road, railways (except travel in first or air-conditioned class), and inland waterways and courier services. As petroleum products are not included in the GST to except for road and water transportation and upper class train travel too is exempted. Selectivity in taxation creates other anomalies. While the flour is not taxed, toasted bread and rusk are taxed at 12 per cent and malt, biscuits, cakes and pastries are taxed at 18 per cent. Given that the technology involved in their supply is not advanced, the high rate of tax drives the process of production and sale to the informal sector. While items like coffee beans, and fresh tea leaves are exempt, coffee and its substitutes, tea and dry ginger are taxed at 12 per cent. Unbranded food items such as condiments and savouries are not taxed, branded items

[8] Sonia Munoz and Stanley Song-Wook Cho (2004) using micro data on Ethiopia conclude, "……..even very poor countries can sometimes deliver the expenditure goods more effectively than poorly targeted exemption". Quoted in Bird and Gendron (2007) footnote.13; p. 77.

are subject to 12 per cent tax. De-oiled cakes used as cattle feed are exempt but other uses are taxed at 5 per cent. There are many such examples.

Table 4: Tax Rates on Motor Cars

Type of Vehicles	GST Rate	Compensation Cess	Total Tax Rate
Petrol/CNG/LPG car less than 1200cc/ length less than 4 meters	28%	1%	29%
Petrol/CNG/LPG car less than 1200cc/ length more than 4 meters	28%	15%	43%
Petrol/CNG/LPG car over 1200cc (irrespective of length)	28%	22%	50%
Diesel car less than 1500cc and length less than 4 meters	28%	3%	31%
Diesel car less than 1500cc and length more than 4 meters	28%	20%	48%
Diesel car over 1500cc engine capacity, greater than 4 meters length and ground clearance of 170mm or more	28%	22%	50%
Electric Cars (all sizes including 2 and 3 wheelers)	12%	Nil	12%
Vehicles fitted for use as an ambulance	28%	Nil	28%

The Rates are as decided by the 31th GST Council meeting held in December, 2018.Source: https://www.paisabazaar.com/tax/gst-on-cars/

Rate differentials done for reasons of equity simply based on the perceptions about the consumption pattern may not only result in lower tax collections but may also have an adverse impact on employment and equity. Many items such as building materials including cement and its products, marbles and granites, veneer and plywood, paints and varnishes, tiles, sanitary ware, motor cars and parts, refrigerators, air-conditioners, vacuum cleaners, and even chocolates and razor blades are taxed at 28 per cent on the perception that these are luxury items. In fact, in the case some of the items, in addition to the basic rates, compensation cess at varying rates is levied on these items over and above 28 per cent tax. These rates vary widely creating enormous rate differences among the commodities and services subject to the 28 per cent category. As shown in Table 4, on motor cars alone, the cess varies depending on the engine capacity, length and fuel use of the vehicle. In some cases, the total incidence of the tax works out to 50 per cent. The automobile industry with its ancillaries and repair and services has enormous employment implications.

The problem is high tax rates create an incentive for evasion of the tax by creating a grey market for such goods. This is particularly true of building materials in which the rate of tax levied is 28 per cent, but the final tax on affordable houses is one per cent and on other houses, 5 per cent without ITC. Since there is no paper trail on the input providers for the builders of these properties, they can purchase their inputs from the grey market and merely pay the compounded tax or not pay the tax at all as there is no paper trail. This can result in a huge loss of revenue. In the case of motor cars, high taxes could lead to higher prices resulting in lower demand. The problem is reinforced by the fact that motor spirit and diesel are not included in the base of GST and this increases the cost of transportation. The resulting lower demand can cause loss of employment. Thus, the tax that is intended to fall on the rich may actually hurt the poor more. It is, therefore, important to assess the general equilibrium effects of the tax system while designing the tax structure[9].

[9] The automobile industry has been claiming that there have been massive layoffs on account of various factors including high rate of GST.

In traditional cascading type sales taxes, commodities and services predominantly used as inputs are taxed at much lower rates than outputs to minimise the cascading effect. However, differentiating rates between the inputs is inappropriate when the full input tax credit is given under the VAT because it provides incentive to suppress the value at the output stage. Implementation of GST was an important opportunity to think afresh and determine the tax rates based on the first principles. However, when the fitment committee simply added the rates of merged taxes in GST to calculate the total rate for various commodities and services and fitted the items closer to the pre-determined rates, it carried over the shortcomings of the prevailing structures. Thus, most metallic ore is taxed at 5 per cent, metallic bars, sheets, tubes and other products are taxed at 18 per cent and utensils are taxed at 12 per cent, a foundry owner can buy the ores by paying 5 per cent tax, manufacture bars, sheets and tubes and sell it in the market and suppress his output and sale.

MULTIPLICITY OF RATES: COMPLICATIONS, DISTORTIONS AND INVERTED DUTY STRUCTURE

Multiple Rates

Keen (2013 a) convincingly argues that levying the tax at multiple rates and particularly, levying a lower rate of tax on the items predominantly consumed by low income groups for equity reasons is an inefficient way of targeting. The objective is better achieved by the expenditure side of the budget. Jenkins et.al (2006) also recommends the levy of tax without rate differentiation for reasons of simplicity in administration, reducing compliance burden and minimising distortions. International experience shows that, over the years, the trend has been increasingly to levy the tax at a single rate Table 5). In fact, the Thirteenth Finance Commission recommended a 'flawless' GST at a single rate.

While the overwhelming expert opinion is on the desirability to levy the tax at a single rate, in actual practice each country chooses the structure that is politically acceptable (Bird and Gendron, 2007). Even in the European Union, all countries except Norway levy the tax at two or more rates, and the proposal to switch over to a single rate based on the recommendation of an expert committee in Sweden was shot down politically (Bird and Gendron, 2007). At the same time, if excessive rate differentiation is done for reasons of political acceptability, it may become difficult to remove.

Table 5: VATs with a Single Rate at Time of Introduction

Years	Number of New VAT Countries	Percentage with Single Rate
Before 1990	48	25
1990-1999	75	71
1999-2011	31	81

Source: Keen (2013)

Levying GST at four main rates makes it complicated. When the cesses are taken into account, it is difficult even to count the number of rates as shown in the example of motor vehicles. In the case of motor vehicles, rate differentiation is done on the basis of engine capacity, length of cars and fuel base. There are instances where differentiation for the same commodity or service group is done based on the values (footwear, apparel, quilts, hotel tariff) for equity reasons (Table 6). Differentiation is also made based on the nature of the commodity as in the case of fibres used in textiles (natural or man-made), based on whether the commodity is in the nature of input or an output and use of the commodity (oil cakes used as cattle-feed and others).

The problem with multiple rate structure is that it is easily prone to misclassification. For example, silk fibre is exempt, cotton and natural fibres are taxed at 5 per cent and man-made fibres are taxed at 18 per cent (See Table 6). Food served in restaurants in hotels having room tariff less than Rs.1000 per night is exempt, and in other restaurants, it is taxed at 5 per cent without the provision of ITC whereas restaurant services in hotels with over Rs.7500 room tariff per night and those in clubs and guest houses are taxed at 18 per cent[10]. Similarly, catering services were taxed at 18 per cent which was brought down to 5 per cent without ITC in the 37th meeting of the Council Surely, it is not very difficult for the restaurants to classify catering as sales from the restaurants, nor is it difficult for a professional caterer to open a small restaurant to misclassify the same.

Table 6: Some Examples of Anomalies in Tax Rates

Item	Rate of Tax (%)
1. Different Tax Rates on same commodity group	
Footwear Value up to Rs.1000 Value Above Rs.1000	5 12
Fibre: Silk and Jute Cotton and Natural Manmade	 Nil 5 18
Readymade Apparel: Value Up to Rs.1000 Value Above Rs.1000	 5 12
Cotton Quilts/Piece: Value Up to Rs.1000 Above Rs.1000	 5 12
Hotels and Lodges: Tariffs up to Rs.1000 Tariffs from Rs.1000-Rs. 2500 Tariff from Rs.2500 – Rs. 7500 Tariff Above Rs.7500	 Nil 12 18 28
Restaurants Catering	5 18
2. Rate Differentiation According to the Use of the Article	
De-oiled cakes: Used as Cattle feed Other uses	 Nil 5

[10] Brought down to 12 per cent in the 37th Council meeting on September 20.

3. Rate Differentiation According to Stage of Production	
Metallic Ores (Iron, Manganese, Copper, Nickel, Cobalt, Aluminium, Lead, Zinc, Tin, Chromium, Tungsten, Uranium, Thorium, Titanium, Precious metals and others (from 2601 to 2617) Pig Iron, Ferro Alloys, Iron and Steel and alloys of steel, Uranium and powder, semi-finished products of iron and steel etc., Utensils, Household articles	5 18 12
Aluminium utensils, table and kitchen ware or household articles Aluminium alloys, ingots, billets, wires, bars, rods, plates, sheets, tubes and pipes. Aluminium foil, doors, windows and their frames and sanitary ware	12 18 28

An important consequence of multiplicity of rates is the possibility of input taxes claimed for credit exceeding the output taxes payable and this requires refunds to be made. Such an inverted rate structure occurs in the cases where the input tax rates are higher than the output taxes payable. Textiles and housing provide examples of inverted duty structure. In textiles, the synthetic fibre is taxed at 18 per cent, yarn at 12 per cent, and cloth at 5 per cent. This results in inverted duty structure and the difficulties in providing them results in large refunds and the inability to provide these has posed problems to the manufacturers[11]. Similarly. in housing, most inputs in the construction are taxed at 28 per cent and are affordable and other houses are either subject to compounded levy of 1 per cent and 5 per cent or if they want to claim the input tax credit, 5 per cent and 12 per cent respectively.

Cascading Element

The most important objective of GST implementation was to minimise cascading of both Central and state consumption taxes. While the reform has helped to substantially reduce the cascading element in taxes, it falls

[11] The President of CII has complained that the delays in the refunds has severely hampered working capital liquidity. See, https://economictimes.indiatimes.com/industry/cons-products/garments-/-textiles/textiles-sector-rues-synthetics-inverted-duty-structure/articleshow/67877119.cms?from=mdr

well short of the desired. This is mainly due to the exclusion of motor spirt, high speed diesel, real estate, alcohol and electricity from the GST. The revenue from these cascading taxes constitutes a substantial proportion of revenues collected from internal indirect taxes. At the Central level, the excise duty collected on petroleum products constituted 40.3 per cent of the total internal indirect taxes collected in and the revenue from cascading indirect taxes at the State level was 43.4 per cent in non-special category States in 2017-18. Even if the data on Andhra Pradesh and Goa are ignored because the former is a newly formed State and the latter is a very small state, the revenue from consumption taxes excluded from GST base varies from 33.6 per cent in Maharshtra to 54.6 per cent in Tamil Nadu (Table 7). As the States levy their sales taxes on the union excise duty paid value, the cascading element is substantial A study by Rao and Mukherji (2019) estimates that the cascading impact of not providing ITC to natural gas, petroleum products and electricity is significant and varies among sectors depending upon their direct and indirect use as inputs. Some sectors with substantial exports also face significant cascading, and this adversely impacts on their competitiveness. Cascading element in taxes is tantamount to imposing a tax on exports and eliminating such penalties was an important motivation for adopting GST in Canada. Furthermore, providing ITC for fuel provides an incentive for businesses to report their sales. In fact, because of keeping fuel outside the GST base, the entire transport sector except, air travel and air-conditioned and first class train travel is exempted which renders the tax base narrower and adds to cascading.

Table 7: Revenue from Cascading Taxes after GST Implementation in 2017-18

State	GST (Rs. Million)	Cascading Taxes (Rs. Million)*	Total (Rs. Million)	Share of cascading Taxes in Total (Per Cent)
Andhra Pradesh	103960	427854	531814	80.5
Bihar	170297	102000.3	272297.3	37.5
Chattisgarh	121510	70796.3	192306	36.8
Goa	32030	11281.1	43311.1	26.0
Gujarat	433976	342869.3	776845.3	44.1
Haryana	237600	148449	386049	38.5
Jharkhand	106000	64260	170260	37.7
Karnataka	426397	227973	654370	34.8
Kerala	270000	246605	516605	47.7
Madhya Pradesh	216931	177973	394904	45.1
Masharashtra	1053029	535565	1588594	33.7
Odisha	129748	109109	238857	45.7
Punjab	217717	125137	342854	36.5
Rajasthan	221540	229520	451060	50.9
Tamil Nadu	432764	519558	952322	54.6
Telangana	280518	303310	583828	52.0
Uttar Pradesh	529803	314783	844586	37.3
West Bengal	230600	130602	361202	36.2
All States	5557746	4265512	9823258	43.4

Note: Cascading Consumption taxes include Sales taxes on Petroleum products, motor vehicle tax, passengers and goods tax, electricity duty and entertainment tax and other consumption taxes excluding State Excise Duty.

Source: State Finances: A Study of Budgets of 20170-18 and 2018-19. Reserve Bank of India.

In addition to the exclusion of these consumption taxes from the GST, ITC is not available on items exempted from GST, the compounded tax on the dealers with less than Rs. 15 million turnover, and compounded tax on services in restaurants and housing. The tax on affordable housing is levied at a compounded rate of 1 per cent and other housing, at 5 per cent with no input tax credit. Large scale exemptions and extending the benefit of compounding to cases such as supplies in restaurants and housing also deny ITC and add to cascading.

THE REFORM ISSUES AND STRATEGY FOR IMPLEMENTATION

The implementation of GST is, perhaps, the most important consumption tax reform in India. However, it is still evolving, and considering the various shortcomings pointed out above, it will be quite some time before it stabilises to yield the desired gains in revenue and economic efficiency. Furthermore, in a complex governance system involving 28 states and three Union Territories besides the Centre in the GST Council undertaking many of the reforms would require appropriate strategies to be taken. As mentioned earlier, when some bad elements enter the system to make the reform acceptable, it becomes difficult to remove them later and that would require a careful strategy to be adopted. This section identifies specific areas of reform and the strategy that may be adopted to implement them.

The important reform areas identified in the foregoing analysis are: (i) broadening the base by minimising exemptions and including petroleum products and electricity in GST; (ii) rationalising the rate structure by reducing the number of rates to avoid the problems arising from misclassification, disputes and inverted duty structure; (iii) Addressing the issue of compensation to the loss of revenue to the states as the tax is yet to stabilise and strategizing compensation formula to incentivise the reform process, and (iv) Creating a multidisciplinary technical advisory unit in the GST Council to analyse economic, administrative and legal implications of the tax and its changes to help in the scientific calibration of the required changes from time to time.

Broadening the Base

The best practice approach to tax design and reform is to broaden the base, reduce the rates and reduce rate slabs to evolve a simple tax system to reduce, administrative, compliance, and distortion costs while ensuring revenue productivity (Bird and Zolt,(2008, Rao, 2015). This requires substantial pruning of the exemption list. This will not only expand the tax base, but also help in formalising the transactions. A broader base would enable levying the tax at lower rates to collect the same amount of revenue. The decision of the GST Council in its 47^{th} meeting to withdraw exemptions on items like all packaged food items is in the right direction. The basic exemption list should be confined to unprocessed food items and perishables. As mentioned earlier, the objective of equity is better served through the expenditure side of the budget. With extensive coverage under the food security programme the case for wide-ranging exemptions does not exist. Besides, the objective of equity is better served by providing better education and healthcare.

A major anomaly in the GST system in India is the exclusion of petroleum products and electricity from the GST base. Petroleum products have been kept out mainly for revenue reasons as they constitute a substantial proportion of domestic consumption taxes in both Union and the state fiscal systems. It may be noted that in 2019-20 the revenue collected from excise duty and sales tax on petroleum products constituted over 40 per cent of internal indirect taxes collected by the Centre and the States. The adverse effects on the competitiveness of Indian manufacturing on account of this have been significant due to the cascading caused by the high taxes on transportation of goods and goods. As argued earlier, it is desirable to amend the State List to exclude electricity duty and include taxation of electricity in the GST. The inclusion of both petroleum products and electricity is important to reduce cascading and to make the tax system competitive.

Naturally, there is a revenue concern in including petroleum products in the GST base. However, a part of this can be recouped by including all forms of transportation except upper class rail and air transportation which are currently exempted. Also, a preferable way is to include petroleum products in the GST base, tax them at the general rate and levy an environmental excise in addition Also, there is no case for exempting the services of advocates and doctors.

Rationalising the Rate Structure

This indeed is the opportune time to rationalise the rate structure. The economy is on the recovery mode and more importantly, the revenue from GST has shown reasonably high buoyancy with revenue collections of over Rs. one lakh Crore in the last nine months and touching a record 1.42 lakh Crore in March 2022. What is important is the revenue increase has not come about only due to economic recovery. The more important reason seems to be that at last, the GSTN has been able to stabilise the technology platform. Mandating the issue of e-invoicing for all businesses above Rs. 100 Crore has enabled better invoice matching and detection of fake invoices that were used to claim the input tax credit. This has helped to improve the compliance of the tax and has also enabled its better enforcement of the tax. With the passage of time, GSTN should be able to enforce e-invoice requirements to all businesses above Rs. 10 Crore, and that will cover more than 95 per cent of the taxpayers. With this development, we can expect high revenue buoyancy and that should provide comfort to undertake further reforms.

The main focus of reforms should be the rationalisation of the structure of the tax. First, it is necessary to restructure the rates to avoid an inverted duty structure. Electrical transformers, railway wagons, some textile products, plastic bags and solar modules are some of the items where rationalisation is needed and there may not be any difficulty in this. The rate category wise percentage of tax collected in Karnataka in 2021-22 shows that about 70 per cent of the tax is collected from the supplies taxed at 18% alone and the revenue collected from 12% category is just about 8% (Table 8). Perhaps, it is desirable to merge the two rates to 16% without much loss of revenue. This could considerably reduce classification disputes and an inverted duty structure. Third, there are some items in the 28 per cent category which can hardly be called demerit goods, and these can be brought down to the general rate of 16%. The most important set of items are building and construction materials which are now taxed at 28 per cent and the revenue collected from this category is just about 14% (excluding the cess). Construction is a labour-intensive activity, and the second advance estimate of GDP for 2020-21 shows the sector contracting by 10.3 per cent. Thus, reducing the rate would not only increase employment but also provide the much-needed relief to the sector.

Table 8: Tax Rate-wise Revenue Collections in Karnataka

Sl. No.	**Total number of Tax payers (As of March 2022)**	**Tax rates**	**Turnover in 2021-22 (in crores)**	**Revenue Collections for 2021-22 (₹ in crores)**				
				CGST	**SGST**	**IGST**	**CESS**	**Total**
1	8,69,595	5%	2,63,213.8	3,907.0	3,907.7	5,334.0	215.7	13,364.4
2		12%	1,42,127.6	6188.23	6,187.7	4,672.4	2.97	10,860.2
3		18%	7,97,010.7	43,573.8	43,571.2	55,038.7	1464.75	1,42,183.6
4		28%	1,05,520.7	7,253.9	7,253.9	15,033.9	9595.32	29,541.8
5		All	1307872.8	60,923.0	60,924.0	80,079.0	11,279.0	2,13,205.0
		Per Cent of Total						
1		5%	20.13	6.41	6.41	6.66	1.92	6.27
2		12%	10.87	10.16	10.16	5.83	0.03	8.00
3		18%	60.94	71.52	71.52	68.73	12.99	67.38
4		28%	8.07	11.91	11.91	18.77	85.07	18.36
5		All	100.00	100.00	100.00	100.00	100.00	100.00

Note: The total number of Taxpayers reflects regular taxpayers (Other than Composition taxpayers).

The economy has been registering a steady recovery as it emerges out of the shocks, and with the settled technology platform, tax compliance in GST too has been showing improvements. Not surprisingly, the revenue collection from the tax has shown a steady increase to reach Rs. 1.42 lakh crore in March 2022. In fact, the revenue from GST has shown a steady increase with collections registering more than Rs. one lakh crore in the last nine months and this is the opportune time to rationalise the rate structure.

Of course, the GST Council is concerned with the problems arising from excessive rate differentiation and has set up a seven-member Ministerial Panel chaired by the Chief Minister of Karnataka, and the report of the panel is awaited. It is widely reported in the press that the Committee is thinking of increasing the lower tax rate from 5 per cent to 8 per cent and essential items in the 5 er cent category to 5 per cent. This will be retrograde because, an additional rate category will be added. The need of the hour is to reduce the rate categories and not increase them.

Ideally, it would be desirable to have a single rate of tax besides exemptions on unprocessed food items. That will avoid not only the problems arising from multiple tax rates but also put an end to lobbying by manufacturers for placing their products in the low tax rate category. However, moving over to a single rate structure may not be implementable at this stage due to political economy considerations. It would be preferable to merge the 12 per cent and 18 per cent categories into 15-16 per cent and move the 5 per cent to 8 per cent and remove the 28 per cent category altogether. That will result in the GST being strature with two rates and as the cesses will cease after 2026 when the compensation requirement is over, it will really become a “good and simple tax”.

Extending Compensation to the States: A Strategy to Accelerate Reforms

As motioned earlier the States were promised compensation for any loss of revenue for a period of five years so that they have the comfort of revenue insurance in the period of stabilising the new tax. The compensation will end in June 2022 and the states are anxious about losing the comfort even before the tax has stabilised. Considering the time taken to stabilise the tax and the disruptions caused by the pandemic, the States have been urging the Centre to extend the compensation period to another five years.

Thus, it would be unwise to extend the compensation on the original terms of applying 14 per cent growth on the base year revenue. The Union government may rework the ceiling growth rate equivalent to the growth of nominal GSDP in the States and use compensation as a strategy for the next two-three years to get the reforms implemented If the high buoyancy of the tax seen in the recent period continues, the compensation payment may not be required, but assurance of compensation will provide a measure of comfort to the States to agree for the reforms. Reforms to complete the process of transition to a reasonably well-structured GST is important not only to enhance the buoyancy of the tax in the medium term but also to reduce administrative and compliance costs and minimise distortions.

IN CONCLUSION

Implementation of GST in India is a far-reaching tax reform involving both the Union and State governments. It is not surprising that some bad features entered into the tax system to get the reform accepted by all governments. However, once they enter, it is extremely difficult to get rid of these bad features and concerted efforts have to be made to remove them. Since the rollout of the reform on July 1, 2017, there have been 46 meetings of the GST Council until December 31, 2021 to decide on the changes in the structure and operational details of the tax. Thus, GST has been evolving in India and will have to face many challenges before settling down to an efficient and stable tax system.

There have been considerable gains from the reform though, the full potential of the reform in terms of gains in revenue productivity and economic efficiency would require important additional changes in the tax system. The most important gain is from the abolition of inter-State check-posts erected to trace cross-border transactions and intra-state check-posts erected to collect octroi and entry tax by local bodies. This has substantially removed impediments to the movement of goods across the country and is an important step in creating a national common market. In addition, it has helped to reduce the cost and time required for the transportation of goods. The merger of Inter-State sales tax has helped to make the tax destination-based and reduced tax exportation from the more developed producing states to the consumers in less developed States. Besides, the merger of central sales tax has put an end to the supply chain inefficiency due to the consignment transfers and abolition of branch offices in different States set up to avoid the tax.

One of the major vacuums in Indian fiscal federalism is the absence of an effective institution for inter-governmental bargaining and conflict resolution and the GST Council provides an interesting example of this. This is a model which can be employed to foster much greater understanding between the Union and the states and among the States *inter-se* on matters requiring collaboration and also to resolve various conflicts among them. However, it remains to be seen how the institution will eventually shape. More importantly, the emphasis on building consensus to making changes in the tax system could result in delays in decision making besides forcing and sub-optimal decisions due to compromises.

The most important concern now is stagnant revenues and unless immediate steps are taken to increase the revenue productivity, the euphoria about GST will wane and there could be questions about the wisdom of undertaking reform itself. There has been a sharp decline in the buoyancy of the tax. The States are concerned as they stare at significant revenue loss after the period of compensation payment for the loss of revenue gets over in June 2022. The matter of compensation came to a head after the pandemic struck and the States had to be compensated through the loans given by the RBI through a special window to be repaid by extending the cess up to 2016.

The first important issue that the GST Council and GSTN together should address is to firm up the technology platform. The C and AG in its IT audit of GST has pointed out a number of shortcomings in the present system and the GST Council should take steps to plug these loopholes. Wider use of e-invoicing rather than focussing on 100 per cent matching of invoices, faster inter-state clearances of inter-state transactions, the timely process of real time reporting and expeditious processing them, faster refunds to the exporters are some of the issues that need immediate attention.

With relatively low threshold, large list of exemptions and multiple rates, GST has ceased to be a "good and simple tax" contrary to the official claims made. The reform in the structure of the tax is important. It may not be possible to undertake comprehensive reforms in the structure due to the fear of losing revenue. However, even while making incremental changes, it is important to have a clear idea about the design, direction, sequence, and speed of reforms. To begin with, it would be useful to keep the threshold at Rs. 50 Lakh to avoid including too many small taxpayers with little revenue. As pointed out, this also serves the cause of equity. Another area requiring immediate intervention is to reduce the tax on consumer durables, cars, and building materials presently taxed at 28 per cent to the 18 per cent category. The idea is to move away from the 28 per cent category altogether. Information from Karnataka for 2021-22 shows that, at present, the revenue from this category including the cess is reported to be 18.4 per cent including cess and 14.6 per cent excluding cess. Transferring 28 per cent category into 18 per cent could increase the demand for these items of consumption and therefore, the actual revenue loss will be lower. In the final part of the reform, the 12 per cent and 18 per cent categories can also be merged to 15-16 per cent to simplify the tax system to have two rate categories (besides exemption). These reforms can be calibrated over a period of two-three years.

There are some “demerit goods” or sumptuary goods such as tobacco and its products in the 28 per cent category. The proper method to treat these goods is to levy the GST at the standard rate and have a separate sumptuary excise. Over time it would be desirable to adopt such an approach. At present, the supply of tobacco products is taxed at 28 per cent, but there are very high rates of compensation cess varying with the nature of the product. In the case of cigarettes, the rate of cess varies depending on the length of cigarettes. Of course, it is important to have high tax rates on them to discourage their consumption. However, the sumptuary objective can be captured by a separate excise levied by the Central government over and above the GST levied at 18 per cent. Another sumptuary item which is outside the ambit GST is alcohol for human consumption. This is because the Constitution places the tax on alcoholic consumption in the State List and the States may not be willing to cede their power to tax and include them in the base of GST.

Minimising distortions from cascading requires including the supply of all the items in the tax base. Therefore, over time it is important to include petroleum products and electricity in the base of GST. The major reason for keeping petroleum products out of GST base is their overwhelming contribution – almost 35-40 per cent of the revenue from tax on domestic consumption at both Central and State levels. As mentioned, it would be desirable to levy the GST on these products at the standard rate and levy a separate excise for environmental reasons (Ahamad and Stern, 2011). This will satisfy both revenue and environmental causes. As regards electricity is concerned, the Constitution places it in the State list and the States should be persuaded to agree to make the necessary amendment of the Constitution to enable the levy of GST.

The large list of exemptions has eroded the base of GST and it is important to revisit the list to broaden the base. The present approach has been to exempt most of the items are perishables and those considered necessities not only for administrative and equity reasons but also to ensure that the levy of GST does not cause inflation. The exempted supplies have a weight of almost 50 percent in the consumer price index. Besides, the entire passenger and goods transportation excluding air travel and upper-class train travel is exempt from the tax. Once a systematic approach is taken to taxing petroleum products, it should be possible to include these in the tax base. While exempting the tax may not be the appropriate method to deal with questions of equity, it may not be easy to prune the list politically. Nevertheless, it is important to minimise the list of exempted items with the passage of time.

There are infirmities in the rate structure prevailing at present and these should be rationalised. As mentioned earlier, the supply of the same group of commodities is taxed at different rates depending on the price or their use and nature of purchase (consumption or take home; restaurant or catering), There are also rate differences based on the stage of production. It is important to review the rates and correct them for reasons of efficiency and better compliance.

An important initiative that the GST Council should undertake is to have a proper technical and a research team to analyse and design the structure of GST including exemption, rates and revenue and economic implications of changes in the rates, matters dealing with administration including registration, forms, filing of returns, payment of the tax, assessment, audit and enforcement. Similarly, estimation of revenue implications from changes in the rates requires measurement of the effect of rate changes on the demand for the commodity or service. In fact, a strong research team is important to see the implications of high tax rates and their changes on output and employment. At present, the GST Council continues to rely on the analysis by the 'fitment committee' which consists of the nominated officials of the Tax Research Unit in Central Board of Indirect Taxes and Customs and some officials of the Commercial taxes Department from some States. For a reform of this nature, it is necessary to have a strong Tax Analysis Unit in the Ministry of Finance with a small number of highly qualified specialists comprising of economists, lawyers, accountants, and administrators. In fact, this should be done without much delay to ensure that the Council gets quality advice in the evolving process of reforms.

One of the major constraints in undertaking detailed research is the reluctance of the GST Council to share detailed data even for research. Even the State-wise data on SGST, IGST and compensation cess is not available in the public domain. There is considerable hesitancy on the part of the Council to share the data even with the C and AG and the Finance Commission. The report of C and AG is unequivocal in stating, "after much pursuance, CBIC has shared only the MIS reports which give aggregate statistics at Commissionerate level (for Central data) and State level (for State data)" and "Unhindered and full access to pan-India data is crucial for meaningful audit and to draw required assurances needed, otherwise certifying revenue receipts may become difficult. DoR's offer of providing data based on CAG's queries is not workable, as without the full data, it is neither possible to formulate queries, nor run the required algorithms on the data. The CAG sought data through the Application Programme Interface (APIs) already designed by GSTN. It needs hardly be stated that providing such data as CAG may require is a constitutional and legal requirement". When a constitutional body like C and AG itself has difficulties in securing the data required for conducting the audit, it is not surprising that independent researchers find it impossible to secure access to the information required to undertake quality analysis. Hopefully, the Council will wake up to the need for scientific analysis and does not try to "shoot the messenger".

REFERENCES

Ahmad, Ehtisham and Nicholas Stern (2011), "Effective Carbon taxes and Public Policy Options", in M. Govinda Rao and Mihir Rakshit (Eds), *Public Economics: Theory and Policy,* New Delhi: Sage Publications.

Bird, Richard (2013), The GST/HST: Creating an Integrated Sales Tax in a Federal Country", *The School of Public Policy Research Papers*, 5 (2) (March), 1-35.

Bird, Richard and Pierre-Pascal Gendron (2007), *Value Added Taxes in Developing and Transitional Countries*, (Cambridge and New York), Cambridge University Press,

Bird, Richard M. and Eric Zolt (2008), "Tax Policy in Emerging Countries", *Environment and Planning C: Government and Policy*, 26 (1), 73-88.

Choi, K. (1990), "Value-Added Taxation: Experiences and Lessons of Korea", in R. M. Bird and O.Oldman (eds.), Taxation in Developing Countries (Baltimore: Johns Hopkins University Press), 269–87.

Cnossen, Sijbern (2010), "VAT Coordination in Common Markets and Federations: Lessons from the European Experience", Tax Law Review, 63, 584-603.

India (2001), Report of the Expert Group on taxation of services (Chairman: M. Govinda Rao), Ministry of Finance, Government of India.

India (2003), Report of the Task Force on Indirect Taxes (Chairman: Vijay Kelkar), Ministry of Finance, Government of India.

India (2019), Report No. 11 of 2019: Compliance Audit - Department of Revenue: Goods and Services Tax, Comptroller and Auditor General, Government of India.

Jenkins, Glenn P., Jenkins, P. Hatice, and Chun Yan Kuo (2006), In the VAT Naturally Progressive? (Mimeo, Queens University).

Keen, Michael, (2013), "Targeting, Cascading and Indirect Tax Design", IMF Staff Paper: 13/57; Washington D.C: International Monetary Fund.

Keen, Michael (2013a), "The Anatomy of the VAT", *National Tax Journal*¸ 66, 423-446.

Keen Michael (2007), "VAT Attacks", *International Tax and Public Finance*, 14 (4), 365-381.

Keen, Michael (2009), "What Do (and Don't) We Know about the Value Added Tax?", Journal of Economic Literature, 47 (1), 157-170.

Keen, Michael and Ben Lockwood (2010), "The Value Added Tax: Ots Causes and Consequences", *Journal of Development Economics*, 92, 138-151.

Keen, Michael and Jack Mintz (2004), "The Optimal Threshold for a Value-Added Tax", *Journal of Public Economics*, 88(3/4): 559–76.

Krever, Richard (2014), "Combating VAT Fraud: Lessons From Korea?", *British Tax Review*, 3.

Munoz, Sonia and Stanley Sang-Wook Cho (2004), "Social Impact of a Tax Reform: The Case of Ethiopia" in Sanjeev Gupta et. al (Eds), *Helping Countries Develop: The Role of Fiscal Policy,* International Monetary Fund, Washington D. C.

Reddy, Y. V. and G R. Reddy (2018), *Indian Fiscal Federalism*, New Delhi: Oxford University Press,

Rao, M. Govinda (2019), "Evolving Landscape of Indian Fiscal federalism and Institutional Challenges: Reinventing the Role of the Finance Commission", in Sudha Pai (Ed.) *Constitutional and Democratic Institutions in India,* (Chapter 16), Hyderabad: Orient Blackswan (Forthcoming)

Rao, M. Govinda (2015), "Tyranny of Status Quo: Challenges of Reforming the Indian Tax System", *India Policy Forum*, 47-103.

Rao, M. Govinda (2011), "Goods and Services Tax: Is it a Gorilla, Chimpanzee or a Genus Like Primate?", *Economic and Political Weekly*, XlVI, 7 (February 12), 43-48.

Rao. M. Govinda and C. Rangarajan (2017), "GST, a Work in Progress", The Hindu, December 21, 2017.

Rao, M. Govinda and R. Kavita Rao (2005), Trends and Issues in Tax Policy and Reforms in India, *India Policy Forum*, 55-123.

Rao, M. Govinda and Sudhanshu Kumar (2018), Envisioning Tax Policy for Sustainable Development of India, Asia Pacific Sustainable Development Journal, 25 (1), 85-107.

Varsano, Ricardo (2000), Subnational Taxation and Treatment of Interstate Trade in Brazil: problems and a Proposed Solution", in Javed Burki and Guillermo Perry metal (Eds) Decentralization and Accountability of the Public Sector, Washington D. C., the World Bank , 339-355.

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