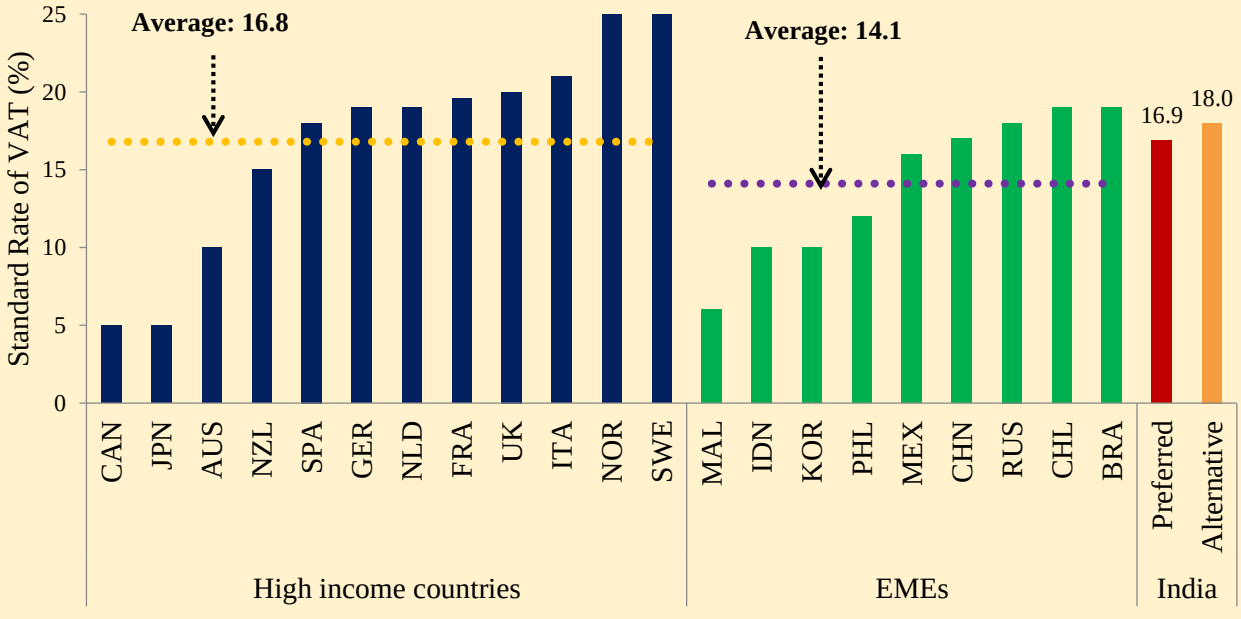
Report on the Revenue Neutral Rate and Structure of Rates for the Goods and Services Tax (GST)

December 2015



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Foreword

Ahead of the possible implementation of the Goods and Services Tax (GST), the government appointed a Committee with the following terms of reference:

(a) The Committee may recommend possible tax rates under GST that would be consistent with the present level of revenue collection of Centre and States.
(b) While recommending GST rates the Committee may develop a dynamic model to assess the impact of the following parameters on the tax rates viz. expected levels of growth of economy, different levels of compliance and broadening of tax base under GST.
(c) Analyse the sector-wise and State-wise impact of GST on the economy.
(d) The Committee may invite experts and stakeholders for consultations as it deems fit.

The composition of the Committee is the following:

Dr. Arvind Subramanian, Chief Economic Adviser, Ministry of Finance (Chairman)
Dr. W R Reddy, Principal Secretary, Taxes, Government of Kerala
Dr. P D Vaghela, Commissioner, Commercial Taxes, Government of Gujarat
Shri K Rajaraman, Principal Secretary and Commissioner, Commercial Taxes, Government of Tamil Nadu (since transferred from the post)
Shri Ritvik Pandey, Commissioner, Commercial Taxes, Government of Karnataka
Shri Udai Singh Kumawat, Joint Secretary, Department of Revenue
Shri Alok Shukla, Joint Secretary, Tax Research Unit, Central Board of Excise and Customs
Shri Upender Gupta, Commissioner, GST, Department of Revenue
Ms. Aarti Saxena, Deputy Secretary, State Taxes, Department of Revenue

The Committee met several times and had wide ranging consultations with experts in the field. The experts included Arbind Modi and G D Lohani from the Department of Revenue, Kavita Rao from the National Institute of Public Finance and Policy, Neelkanth Mishra from Credit Suisse, Satya Poddar from Ernst and Young, Rinku Murgai, Fredrico Gil Sander and Urmila Chatterjee from the World Bank, and Mario Mansour and David Wentworth from the Fiscal Affairs Department of the IMF. I would like place on record my deep appreciation for the consultations and material provided by the Committee members and other experts. These

insights have served as valuable inputs for the Report. The comments from the members of the Committee have been appropriately reflected in the Report.

I would also like to thank Aakanksha Arora, Antony Cyriac, Narendra Jena, Kapil Patidar, Pradyut Kumar Pyne, and Arvinder S. Sachdeva of Economic Division of the Department of Economic Affairs for their efforts in the preparation of the Report.

(Arvind Subramanian)
Chief Economic Adviser
&
Chairman of the Committee

I. INTRODUCTION

1.1 As the world economy slows, and increasing financial volatility and turbulence become the "newest normal," only a few economies have the resilience to be a refuge of stability and the potential to be an outpost of opportunity. India is one of those few. As oil and commodity prices continue to be soft, and in the wake of actions taken by the government and the Reserve Bank of India, macro-economic stability seems reasonably assured for India. This bedrock of stability coupled with reforms to unleash the entrepreneurial energies of India can create the policy credibility and business environment that India is indeed seizing the historic opportunity afforded by domestic and international developments to propel the economy to a high growth trajectory. Key amongst these reforms is the goods and services tax (GST), which has, in some ways, been "priced" into expectations of the government's reform program.

1.2 For nearly ten years, India has been on the verge of implementing a GST. But now, with political consensus close to being secured, the nation is on the cusp of executing one of the most ambitious and remarkable tax reforms in its independent history. Implementing a new tax, encompassing both goods and services, to be implemented by the Centre, 29 States and 2 Union Territories, in a large and complex federal system, via a constitutional amendment requiring broad political consensus, affecting potentially 2-2.5 million tax entities, and marshalling the latest technology to use and improve tax implementation capability, is perhaps unprecedented in modern global tax history.

1.3 It is easy to overlook how ambitious the Indian GST will be, and a cross-country comparison highlights the magnitude of ambition. According to the World Bank (2015), over 160 countries have some form of value added tax (VAT), which is what the GST is. But the ambition of the Indian GST experiment is revealed by a comparison with the other large federal systems—European Union, Canada, Brazil, Indonesia, China and Australia--that have a VAT (the United States does not have a VAT).

1.4 As Table 1 highlights, most of them face serious challenges. They are either overly centralized, depriving the sub-federal levels of fiscal autonomy (Australia, Germany, and Austria); or where there is a dual structure, they are either administered independently creating

too many differences in tax bases and rates that weaken compliance and make inter-state transactions difficult to tax (Brazil, Russia and Argentina); or administered with a modicum of coordination which minimizes these disadvantages (Canada and India today) but does not do away with them.

Table 1: Comparison of Federal VAT Systems

Nature of VAT	Country Examples	Disadvantages
Independent VATs at Centre and States	Brazil, Russia, Argentina	Differences in base and rates weaken administration and compliance. Inter-state transactions difficult to manage.
VAT levied and administered at Centre	Australia, Germany, Austria, Switzerland, etc.	State government relieved of responsibility of raising taxes which also takes away fiscal discretion of States
Dual VAT	Canada and India today	A combination of the above two and hence limits both their disadvantages
"Clean" dual VAT	India's GST	Common base and common or similar rates facilitate administration and compliance, including for inter-state transactions, while continuing to provide some fiscal autonomy to States

Source: World Bank (2015)

1.5 The Indian GST is expected to represent a leap forward in creating a much cleaner dual VAT which would minimize the disadvantages of completely independent and completely centralized systems. A common base and common rates (across goods and services) and very similar rates (across States and between Centre and States) will facilitate administration and improve compliance while also rendering manageable the collection of taxes on inter-state sales. At the same time, the exceptions—in the form of permissible additional excise taxes on sin goods (petroleum and tobacco for the Centre, petroleum and alcohol for the States)—will provide the requisite fiscal autonomy to the States. Indeed, even if they are brought within the scope of the GST, the states will retain autonomy in being able to levy top-up taxes on these "sin/demerit" goods.

1.6 Provided it can be reasonably well-designed, the Indian GST will be the 21st century standard for VAT in federal systems.

1.7 It is, therefore, imperative to ensure that the design and implementation of this policy is done right. And, one important, perhaps critical, dimension of this is the level and structure of tax rates on which this Committee has been asked to make recommendations.

II.BENEFITS OF PROPOSED GST

2.1 Many benefits are claimed for the GST: that it will increase growth[1]; that it will increase investment by making it easier to take advantage of input tax credits for capital goods; and that it will reduce cascading.[2] While these are important, in our view three benefits stand out in today's context: governance/institutional reform and "Make in India by Making one India," which are two key pillars of the government's reform efforts. The investment, and hence growth, benefits could also be substantial.

Governance

2.2 The government has placed a great deal of emphasis on curbing black money reflected in the Black Money Bill. These measures can be very significantly complemented by a GST, which, especially if it is extended to as many goods and services as possible (especially alcohol, real estate and precious metals), can be a less intrusive, more self-policing, and hence more effective way of reducing corruption and rent-seeking.

2.3 Under the GST, this can happen in two ways. The first relates to the self-policing incentive inherent to a valued added tax. To claim input tax credit, each dealer has an incentive to request documentation from the dealer behind him in the value-added/tax chain. Provided, the chain is not broken through wide ranging exemptions, especially on intermediate goods, this self-policing feature can work very powerfully in the GST.

[1] An oft-cited study by the NCAER (2010) suggested that growth would increase by 0.9-1.7 per cent of GDP, purely based on the elimination of the cascading of taxes on exports. What is unclear is the quantitative importance of the elimination of the embedded taxes on exports under the GST relative to the current regime of zero-rating of exports. In other words, how incomplete is the current zero-rating of exports and how much will the GST improve upon it are questions that need further investigation.

[2] Whether cascading is a serious problem and why is discussed by Keen (2013).

2.4 According to Pomeranz (2013), "The Value Added Tax (VAT) is a stark example of a tax believed to facilitate enforcement through a built-in incentive structure that generates a third-party reported paper trail on transactions between firms, which makes it harder to hide the transaction from the government (e.g. Tait, 1972; Burgess and Stern, 1993; Agha and Haughton, 1996; Kopczuk and Slemrod, 2006). This belief has contributed to one of the most significant developments in tax policy of recent decades (Keen and Lockwood, 2010): a striking increase in VAT adoption from 47 countries in 1990 to over 140 today (Bird and Gendron, 2007)."

2.5 The best evidence of the impact of the paper trail on evasion comes from an experiment in Chile which shows that firms that are part of the VAT chain are less responsive (in terms of evasion) to announcements of an increase in audit, suggesting that being part of the VAT itself performs the self-auditing function (Pomeranz, 2013). Moreover, the study finds that increasing the audit probability of firms suspected of evasion generates spillovers up the VAT paper trail that lead to an increase of their suppliers' tax payments. In a sense, the supplier, because of the paper trail left by the VAT, knows that his evasion will be more likely to be detected once his client is audited.

2.6 Second, the GST will in effect have a dual monitoring structure—one by the States and one by the Centre. Hence, there will be a greater probability that evasion will be detected. Even if one set of tax authorities overlooks and/or fails to detect evasion, there is the possibility that the other overseeing authority may not.

Make in India by Making one India

2.7 The current tax structure unmakes India, by fragmenting Indian markets along state lines. This has the collateral consequence of also undermining Make in India, by favouring imports and disfavouring domestic production. The GST would rectify it not by increasing protection but by eliminating the negative protection favouring imports and disfavouring domestic manufacturing.

2.8 These distortions are caused by three features of the current system: the central sales tax (CST) on inter-state sales of goods; other numerous inter-state taxes that will be replaced by the (one) GST; and the extensive nature of countervailing duty (CVD) exemptions.

CST[3]

2.9 The 2 per cent CST on inter-state sales of goods leads to inefficiencies in supply chain of goods. Goods produced locally within the jurisdiction of consumption attract lower tax than those produced outside. This tax encourages geographic fragmentation of production. The tax can be avoided partially through branch/stock transfers by manufacturers. However, the tax savings from branch transfers get substantially offset by the incremental costs of logistics and warehousing of goods in multiple locations.

2.10 Consider a simple example, where intermediate goods produced in Maharashtra go to Andhra Pradesh for production of a final good which in turn is sold in Tamil Nadu. Effectively, the goods will face an additional tax of 4 per cent, which will reduce the competitiveness of the goods produced in Andhra Pradesh compared with goods that can be imported directly to say Chennai from South and East Asian sources.

2.11 How quantitatively significant is the impact of the CST? We have some suggestive evidence based on data provided by six States: Maharashtra, Andhra Pradesh, Karnataka, Gujarat, Tamil Nadu and Kerala. In these States, stock transfers, on average, account for as much of inter-state trade as the trade subject to the CST (in the case of Gujarat and Andhra Pradesh, stock transfers are more than twice as much) (Table 2). In other words, the distortion affects fifty per cent of the total trade that flows between States.

Table 2: Impact of the Central Sales Tax (In Rs. Crore)

	Maharashtra	Tamil Nadu	Kerala	Karnataka	Andhra Pradesh	Gujarat	Total
Taxable turnover	316598	214771	293151	186045	60669	304479	1375713
Non-taxable turnover (stock transfer + consignment sales)	241319	142321	44683	98300	160910	651620	1339154
Ratio of non-taxable to taxable turnover	76%	66%	15%	53%	265%	214%	97%

Source- Respective States Government's Revenue Division.

[3] The proposed Constitutional Amendment bill provides for a 1 percent duty on inter-state sales for a limited period. We strongly recommend that this provision be deleted for the very reason that the CST militates against Make in India.

Eliminating other inter-state taxes

2.12 Currently, there are a number of inter-state taxes that are levied by the States in addition to the CST. These include: entry tax not in lieu of octroi and entry tax in lieu of octroi.

2.13 Under the GST, all these taxes would be folded into the GST with enormous benefits. What are the benefits?

2.14 There is ample evidence to suggest that logistical costs within India are high. One study suggests that, for example, in one day, trucks in India drive just one-third of the distance of trucks in the US (280 kms vs 800 kms). This raises direct costs (wages to drivers, passed on to firms), indirect costs (firms keeping larger inventory), and location choices (locating closer to suppliers/customers instead of lowest-cost location in terms of wages, rent, etc.). Further, only about 40 per cent of the total travel time is spent driving, check points and other official stoppages take up almost one-quarter of total travel time. Eliminating check point delays could keep trucks moving almost 6 hours more per day, equivalent to additional 164 kms per day – pulling India above global average and to the level of Brazil. So, logistics costs (broadly defined, and including firms' estimates of lost sales) are higher than the wage bill or the cost of power, and 3-4 times the international benchmarks. [4]

2.15 Another study shows that inter-state trade costs exceed intra-state trade costs by a factor of 7-16, thus pointing to clear existence of border barriers to inter-state movement of goods. Further, inter-state trade costs in India exceed inter-state costs in the US by a factor of 6, suggesting that India's border effects are large by international comparison. Bringing India's inter-state trade costs down to the US level (reducing by a factor of 6) increases welfare by 15 per cent; conversely, completely eliminating intra-state trade frictions raises welfare by 5 per cent.[5]

2.16 All of these barriers to inter-state trade become even more important in India because the share of roads in freight traffic is high (about 72 per cent) and much higher than in comparable countries and rising over time because of under-investment in the Railways (Economic Survey,

[4] JPS Associates (2011), "Economic Cost of Inter-State Barriers in Goods Traffic,"
[5] Leemput (2014), "A Passage to India: Quantifying Internal and External Barriers to Trade."

2015, pp.92-94). The implication is that it is especially important for India to reduce costs to inter-state trade because of the excessive reliance on roads for movement of goods.

2.17 Now, all of these costs are not due to taxes. But, the World Bank estimates that about 20-30 per cent are (World Bank).[6] It is these costs that can be expected to decline with the introduction of the GST, providing a boost to inter-state trade and hence productivity growth within India.[7]

CVD and SAD Exemptions

2.18 It is insufficiently appreciated that India's border tax arrangements undermine Indian manufacturing and the "Make in India" initiative. Eliminating exemptions in the countervailing duties (CVD) and special additional duties (SAD) levied on imports will address this problem. How so?

2.19 It is a well-accepted proposition in tax theory that achieving neutrality of incentives between domestic production and imports requires that all domestic indirect taxes also be levied on imports. So, if a country levies a sales tax, VAT, or excise or GST on domestic sales/production, it should also be levied on imports. In India, this is achieved through the CVD/SAD which is levied on imports to offset the impact of the excise duty levied on domestically manufactured goods.

2.20 However, CVD/SAD exemptions act perversely to favour foreign production over domestically produced goods; that is, they provide *negative protection* for Indian manufacturing. Table-3 illustrates the impact of CVD/SAD and excise exemptions. When there are no CVD/SAD and excise exemptions (Scenario 1), neutrality of incentives between domestic goods and imports is achieved which is desirable. In scenario 2, there is no excise exemption but there is a CVD/SAD exemption which results in a large penalty on domestic producers (of 12.36 per cent under certain assumptions about costs). But the important and subtle point relates to scenario 3 when the excise and CVD/SAD are both exempted. This may seem apparently neutral between domestic production and imports but it is not. The imported good enters the market

[6] World Bank (2014), "Supply Chain Delays and Uncertainty in India: The hidden constraint on manufacturing growth." Report No: ACS14223, Republic of India Manufacturing Plan Implementation.
[7] There will also be gains stemming from simplification of the documentation requirements under the GST.

without the CVD/SAD imposed on it; and, because it is zero-rated in the source country, is not burdened by any embedded input taxes on it. The corresponding domestic good does not face the excise duty, but since it has been exempted, the input tax credit cannot be claimed. The domestic good is thus less competitive vis-à-vis the foreign good because it bears input taxes which the foreign good does not. In the example, the penalty on domestic producers is over 6 per cent. In effect, a policy designed to promote domestic manufacturing through excise exemption creates a perverse incentive for the exempt industry and its eventual decline.

2.21 The CVD/SAD, which is levied to offset the excise duty imposed on domestic producers, is not applied on a whole range of imports. These exemptions can be quantified. The effective rate of excise on domestically-produced non-oil goods is about 9 per cent. The effective collection rate of CVDs should theoretically be the same but is in actual fact only about 6 per cent. The difference not only represents the fiscal cost to the government of Rs 40,000 crore, it also represents the negative protection in favour of foreign produced goods over domestically produced goods.

2.22 Two defenses of CVD exemptions are typically made. First, that CVD exemptions on inputs help manufacturers by reducing their input costs. But under the current system and in future when the GST is implemented, the CVD on inputs can always be reclaimed as an input tax credit. So, CVD exemptions do not provide additional relief. In fact, they help collection efficiency because they are levied at customs. [8]

2.23 The second rationale advanced for exempting many imported goods from CVD is that there is no competing domestic production. This argument is faulty because the absence of competing domestic production may itself be the result of not having the neutrality of incentives that the CVD creates. Domestic producers may have chosen not to enter because the playing field is not level.

[8] The CVD exemption strips the tax from its effective way of taxing the informal sector – where imported inputs are used directly or indirectly by the sector.

Table 3: Effect of Countervailing Duty (CVD) Exemptions: An Illustration

	Scenario 1: *No excise exemption for domestically produced good, no CVD exemption for imported good*		*Scenario 2:* *No excise exemption for domestically produced good, CVD exemption for imported good*		*Scenario 3:* *Excise exemption for domestically produced good, CVD exemption for imported good*	
	Domestic good	***Imported good***	***Domestic good***	***Imported good***	***Domestic good***	***Imported good***
Cost of raw materials	100	100	100	100	100	100
Input tax 1/	12.36	NA	12.36	NA	12.36	NA
Total cost of raw materials 2/	100	100	100	100	112.36	100
Value added	100	100	100	100	100	100
CVD (@12.36 per cent) 3/	NA	24.72	NA	0	NA	0
Excise duty (@12.36 per cent)	24.72	NA	24.72	NA	0	NA
Total cost	224.72	224.72	224.72	200	212.36	200
Protection for domestic good	**0.0%**		**-12.36%**		**-6.16%**	

1/ Excise tax rate = 12.36 per cent. Input tax does not apply for imported good because it is zero rated in the exporting country

2/ In scenarios 1 and 2, total cost of raw materials for domestic good is unaffected by input tax because there is no excise exemption and hence credit is available for the tax. Customs duty is assumed to be 0 per cent

3/ CVD applied on total base of 200; 12.36 % of 200 = 24.72

Source: Committee's calculations

2.24 Indian tax policy is therefore effectively penalising domestic manufacturing. How can this anomaly be remedied? Simply by enacting an exemptions-free GST. In one stroke the penalties on domestic manufacturing would be eliminated because the GST (central and state) would automatically be levied on imports to ensure neutrality of incentives. In effect, India would be promoting domestic manufacturing without becoming protectionist and without violating any of its international trade obligations under the World Trade Organization (WTO) or under India's free trade agreements (FTAs).

2.25 In the meantime, the effect of the GST can be partially simulated even now by eliminating the exemptions applied to CVD/SAD. The default situation should be an exemptions-free regime. If particular sectors seek relief from the CVD/SAD, they should be required to make their case at the appropriate forums.

2.26 In a sense, India finds itself in a de facto state of negative protection on the one hand, and calls for higher tariffs on the other. It is win-win to resist these calls that would burnish India's openness credentials and instead eliminate the unnecessary and costly penalty on domestic producers.

2.27 All these three sets of costs—the CST, the CVD exemptions, and other inter-state taxes—should be viewed as undermining Make in India because in all cases, they favour foreign production to domestic production. GST can then be thought of as a trade and productivity shock and one that can be harnessed without recourse to protectionism: in effect, the GST will be eliminating negative protectionism.

2.28 This increase in inter-state trade will then have another powerful consequence. A common market will help attain convergence within India because production can be based on comparative advantage. In other words, implementing the GST will help the lagging regions catch up with the more advanced regions by making the former more profitable production destinations.

The growth effect via the boost to investment

2.29 Under the current tax system, while the Union excise duties and State VAT applies to all capital goods, input tax credits are generally limited to manufacturing plant and equipment. For example, no input tax credits are allowed for the Union excise duties on capital equipment acquired for use in transportation, infrastructure, distribution, or construction sectors because these sectors are all outside the scope of excise duties which are applicable to manufacturing only. Similarly, no credit is allowed for the State VAT on capital goods acquired by the service sector (e.g., telecommunications, transportation, finance, insurance, and IT services).

2.30 Estimates vary on how much of current investment in a given year suffers from non-creditable excise duties and/or VAT. For example, indirect tax collection data for 2014-15 indicate that the total amount of capital goods purchases for which CENVAT credit was claimed was Rs. 1.6 lakh crore, divided between goods (Rs. 1 lakh crore) and services (Rs. 0.6 lakh crore). National income accounts data suggests that investment in plant and equipment for the same year by the non-government, non-household sector was about Rs. 7.4 lakh crore. Apparently, the blocked input taxes could amount to as much as 75 per cent of total investment. What could account for the difference and could the GST fill this gap?

2.31 If the GST could provide for a more seamless and efficient crediting of taxes paid on capital goods, then capital goods prices would become effectively 12-14 per cent cheaper (because they are taxed at the standard rate of 12.5 per cent currently by the Centre), increasing the demand for capital goods, raising investment and hence growth.

2.32 Assuming an elasticity of investment demand with respect to price to be -0.5, GST, by allowing full input tax credit for capital goods, could higher investment in capital goods by 6 per cent, resulting in 2 per cent higher investment (as machinery and equipment account for around one-third of total investment), which in turn could lead to incremental GDP of 0.5 per cent, assuming an incremental capital output ratio of 4.

2.33 Prior to the introduction of GST in 1991, Canada also had an excise duty regime similar to that in India. Studies for Canada estimated this beneficial impact of GST to be 0.5 per cent as

a result of the GST at the federal level only. The extent of tax cascading in India is much greater because of more stringent rules in India for claiming tax credits.

2.34 In sum, investment is discouraged under the current system through the application of excise duties and VAT to capital goods, for which no set off or input tax credit is provided. This increases the cost of capital goods and reduces investment, which in turn leads to lower employment and output.

III. CURRENT STRUCTURE OF INDIRECT TAXES: HIGHLIGHTS

3.1 This section describes briefly the structure of current rates of domestic indirect taxes at the Centre and the States. The key takeaways are that the current tax structure is highly complex, highly leaky (riddled with exemptions in goods that we estimate to be about 2.7 per cent of GDP for the Centre and States together) characterized by significant differences between the Centre and the States, and by a rate structure that does not confirm to what the evidence suggests might be good policy. The GST, therefore, affords a unique opportunity to simplify and rationalize the structure and also eliminate serious anomalies to make it consistent with policy objectives (see paragraphs 5.56 to 5.60 and Box 3).

3.2 The details, also summarized in the Table 4, are the following:

Centre

3.3 In relation to goods, the Centre has a very complicated tax structure (Table-4), more complex than that of most of the States, characterized by:

- a multiplicity of rates, including central excise (the most important), cesses, countervailing and special additional duties;
- a multiplicity of central excise rates-8 ad valorem and several specific rates;
- extensive exemptions, amounting to about 300 items compared to say 90 for most of the States. These exemptions amount to about 1.8 lakh crore, amounting to about 1.5 per cent of GDP;
- an incomplete base that stops at the manufacturing stage; and

- an exemptions threshold of 1.5 crore with exports and exempted goods not counting towards the threshold

3.4 In relation to services too, the Centre has a complicated rate structure. Although there is one statutory rate, in practice, there are 10 other rates because of so-called "abatement" which amounts to fixing a rate different from the standard rate and not allowing further input tax credits. Abatement is necessitated in some part because of uncertainty in the base, and specifically being unable to distinguish "goods" from "services." The exemptions threshold is Rs. 10 lakh.

3.5 At the Centre, there is incomplete provision of input tax crediting for goods, and incomplete cross-crediting between goods and services.

States

3.6 In relation to goods, the States have structures characterized by:

- a base that is complete in extending all the way to the retail stage
- an exemptions threshold that varies across States between 5 and 10 lakh with a provision for "compounding" that also varies across States in design[9]
- a multiplicity of rates, including the VAT but additional taxes on inter-state trade (octroi, entry tax)
- fewer VAT rates (4 plus) and fewer exemptions (than at the Centre), with both rates and exemptions varying across States. On exemptions, there is both a set that is broadly common to all States and some state-specific ones like agriculture equipment, aquatic feed, cereals and pulses are mostly common across the States whereas Agate (Akik) stones and articles are state specific.
- a standard VAT rate for goods that in most of the States is typically about 12.5-15 per cent (compared with the standard rate of 12 per cent at the Centre)

[9] Compounding refers to the exemption of firms from the VAT chain; instead they are charged a small turnover tax without allowing for any input tax credits

Table 4: Summary of India's Indirect Tax System

Type	*Base*	*Number of*	*Rates (%) 2/*		*Base (%)*		*Collections (%)*		*Average rate (%)*		*Description of Commodities xx/*			*Threshold 3/*	*Exemptions*	
		Rates 1/	*Standard*	*Lower*	*Standard*	*Lower*	*Standard*	*Lower*	*Base-weighted*	*Collections-weighted*	*Exempted*	*Lower rate*	*Higher rate*		*Number 4/*	*value*
Goods 5/																
Centre (Excise)	manufacturing	8	12.0	6.0	59.2	39.6	84.9	11.1	8.4	11.7	Food	Textiles, mobile phones; fertilizers; some intermediates	Tobacco, petroleum products, automobiles, aerated water	1.5 crores	300	1.8 lakh crore (a)
States (VAT)	up to retail	3+	12.5-14.5	4-5.5	28.5	67	32.8	54.8	7.5	9.6	Food, goods of local importance	Intermediates; capital goods; gold & precious metals	Alcohol, petroleum, tobacco	5-10 lakhs	90	1.5 lakh crore(b)
Services																
Centre	negative list	11	12.4	4.1	65.2	34.8	86.2	13.8	9.4	11.2	Education, health, public services	construction, work contract, restaurant, transport, life insurance		10 lakhs		
States 7/		None	None													

1/ Number of ad valorem rates. There are also numerous specific rates on goods charged by the centre. For services, there is one standard rate and 10 abatements.
2/ At the centre, there are 2 lower rates which are akin to a turnover tax; the states levy a lower rate of 1 percent on gold; the center levies higher rates on luxury xars and aerated drinks
3/ Does not apply to exports and exempted goods for goods at the centre
4/ Approximate; precise amounts vary by state. Exemption lists are not identical across states.
5/ Other excises on goods include cesses, countervailing duties and special additional duties (at the Centre) and octroi (in the States).
6/ Incomplete provision of input tax crediting for goods, incomplete cross-crediting between goods and services.
7/ Authority to tax services rests with the Centre but states tax services de facto, e.g. restaurants.
xx/ negative list of services includes health care services, veterinary clinic, charitable activities (under section 12AA of the Income tax Act, 1961) and others.
(a) From tax expenditure statement.
(b) Estimated by the committee
(*)=based only on Gujarat data

Source: Compiled by Committee.

Centre and States

3.7 Another key difference between the Centre and the States, with implications for any future standard rate is that the States have a much larger portion of the base (more than 65 per cent) [10] taxed at the lower rate while the comparable number for the Centre is about 40 per cent. One reason is that States typically place intermediate goods in the lower rate category. The higher standard rate is therefore almost compelled by the fact of placing so much of the base at the lower rate.

3.8 One corollary is that the weighted average statutory rate for goods is 8.4 per cent and 7.5 per cent for the Centre and States, respectively.

IV.ESTIMATING INDIA'S REVENUE NEUTRAL RATE (RNR) UNDER THE GST

4.1 The Committee had the benefit of 3 technical approaches to estimating the RNR which are described in detail in Annexes 1-3. These will constitute the basis for the Committee's recommendations on the RNR.[11] These are briefly summarised in this section.

4.2 Before describing the recommendations, it is important to make a point relating to terminology. Throughout this report, the term RNR will refer to that single rate, which preserves revenue at desired (current) levels. In practice, there will be a structure of rates, but for the sake of analytical clarity and precision but also to facilitate comparisons across methodologies, it is more useful and appropriate to think of the RNR as a single rate. It is a given single rate that gets converted into a whole rate structure, depending on policy choices about exemptions, what commodities to charge at a lower rate (if at all), and what to charge at a very high rate. That single rate will be the focal point for the RNR. The RNR should be distinguished from the "standard" rate defined as that rate in a GST regime (which has more than one rate), which is applied to all goods and services whose taxation is not explicitly specified. Typically, the

[10] Based on data for Karnataka, Maharashtra, Andhra Pradesh, Gujarat, Tamil Nadu, Bihar, Odisha, Chhattisgarh, Delhi, Uttar Pradesh, Jharkhand, Rajasthan, Madhya Pradesh, West Bengal, Harayana and Puducherry accounting for 78.5 per cent of the VAT base.

[11] There have been other attempts at estimating the RNR, including by the Thirteenth Finance Commission and NIPFP**,** We restrict the scope of our technical inputs to the three studies described in this section as they are the most recent by way of data and methodology; they are also the three that were discussed within the Committee.

majority of the base will be taxed at the standard rate, although this is not true for the States under the current regime.

4.3 The essence of calculating the RNR is highlighted in the simple equation:

$$t=R/B$$

where t is the RNR, R is equal to revenues (both Centre and state) generated from existing sales and excise taxes, which will be replaced by the GST. The revenues to be replaced are estimated to be Rs. 3.28 lakh crore for the Centre, and Rs. 3.69 lakh crore for the States, including the revenues that will have to be compensated for the elimination of the Central Sales Tax (CST). The total amounts to Rs. 6.97 lakh crore (excluding revenues from petroleum and tobacco for the Centre, and from petroleum and alcohol for the States) or 6.1 per cent of GDP, with all numbers pertaining to 2013-14 (the date chosen for all the technical studies) and for 29 States and 2 UTs.

What all the RNR exercises attempt to do is to calculate B, the total tax base for generating the required GST revenues. The three approaches presented to the Committee can be called, respectively, the macro, the indirect tax turnover (ITT), and the direct tax turnover (DTT) based approaches.

Macro approach

4.4 The macro approach—presented by the staff of the International Monetary Fund--makes use of national income accounts data and supply-use tables to arrive at the base B. It uses the following formula:

$$B = \sum(Y + M - X) - \left[(1 - e)\sum(N + I)\right]$$

Where B is the potential GST base; Y is domestic output, (M-X) is net imports (imports minus exports); (N+I) is consumption of intermediate and capital inputs; e is the exempt output ratio (i.e. the tax base associated with inputs used in the production of exempt final consumption); and the summation is over 140 goods and services and 66 sectors, based on the 2011-12 national accounts. The following assumptions were made: (1) full compliance; (2) full pass-through of the

GST into prices; (3) no behavioral response; (4) the GST has a single positive rate, and a zero rate on exports.

4.5 Under a standard scenario exempting health, education, financial intermediation and public administration, the GST's potential base is 59 per cent of GDP. Exempting basic food items in addition (essentially unprocessed foods) reduced the potential base to 55 per cent of GDP. However, exempting petroleum or electricity increases the potential base to 67 per cent of GDP—given that such items are largely consumed as inputs rather than final consumption, their exemption increases the base due to cascading. Assuming that the maximum revenue to be replaced is 6.1 per cent of GDP, these estimates for the GST tax base, ranging from 55 per cent to 67 per cent of GDP, suggest that the GST RNR rate, itself ranges between 9.1 (0.061/0.67) and 11.1 per cent (0.061/.55).

4.6 Losses in the order of 10 to 20 per cent of potential revenues are common in OECD countries; assuming 20 per cent increases the range of the RNR from 9-11 per cent to 11-14 per cent.

4.7 In summary, this analysis suggests that the GST RNR rate ranges between 11 to 14 per cent, depending on key policy choices regarding exemptions. The scenario that corresponds closest to the proposed Constitutional Amendment bill yields an RNR of 11.6 percent after factoring in a compliance rate of about 80 per cent of potential GST revenues.

Indirect Tax Turnover Approach

4.8 This approach, presented by the National Institute of Public Finance and Policy, estimates the base in a three step process. First, it estimates the goods base at the level of the States. This base is estimated by converting data on actual collections and statutory rates into a goods base. In other words, the effective rate becomes the basis for the estimation of the goods base. In the absence of data for all the States, the key assumption is that States collect revenues at the three rates (1 per cent, 6 per cent, and 14 per cent) in such a proportion so as to yield a total taxable base of Rs. 30.8 lakh crore.

4.9 In the second stage, the services base is estimated based on turnover data of 3.25 lakh firms from the newly available MCA database (this base is estimated at Rs. 40.8 lakh crore).

4.10 In a third stage, adjustments are made to this base to remove IT-related services, because a large part of them are exported, and to remove most of real estate and financial services from the base because of the manner in which these items will be treated under the GST. This adjusted base is then subject to an input-output analysis to deduct from the base taxable inputs used for service provision and also deduct services used as inputs into taxable manufacturing. All these adjustments result in an incremental services base (incremental to whatever has already been incorporated in goods) of Rs. 8.5 lakh crore and a combined base (goods and services) of Rs. 39.4 lakh crore.

4.11 This base, in turn yields a single RNR of 17.69 per cent under the scenario of having to compensate the States for the 2 per cent CST. The corresponding standard rate under current structures of taxation is estimated at 22.76 per cent. It is worth recalling that an earlier analysis based on the same methodology by NIPFP was presented to the Empowered Committee of the GST in February 2014. That analysis yielded an estimate of the RNR of 18.86 percent and a standard rate of 25 per cent.[12]

Direct tax turnover Approach

4.12 A third approach—which was described in the Thirteenth Finance Commission--is based on using income tax data which are available for about 94.3 lakh registered entities (including companies, partnerships, and proprietorships but not charitable organizations). The data are classified into 10 sectors and 75 sub-sectors. These data allow the potential base for the GST to be calculated. Unlike the indirect tax turnover approach but like the macro approach, this approach yields a combined base for goods and services, rather than separate bases for goods and services.

4.13 The profit and loss accounts provide data on value of supply of goods and services (which is equivalent to turnover) to which can be added imports of goods and services. This

[12] "Revenue implications of GST and estimation of revenue neutral rate: Estimates for 2011-12" submitted to the Empowered Committee of State Finance Ministers in February 2014.

yields the tax base of at about Rs. 222 lakh crore in turnover terms. Deducting the exempt sectors from this base (petroleum, land component of real estate, the interest component of the financial sector, electricity, gem and jewellery, education, health, and agricultural produce) narrows the output tax base down to about Rs. 194 lakh crore.

4.14 Next, purchases are divided into 2 categories, those that reduce the base because of the availability of input tax credits and those that add to the base either because they are purchases by or from exempt sectors.[13] The former include intermediate goods and services (Rs. 183 lakh crore) and capital goods (Rs. 6 lakh crore). The latter include purchases by exempt sectors (Rs. 25 lakh crore), purchases of primary goods (Rs. 11 lakh crore) and purchases from unregistered dealers Rs. 24 lakh crore). This yields an input tax base of Rs. 130 lakh crore.

4.15 Further adjustments are made to take account of the value added of firms that will fall below the exemptions threshold (removed from the taxable base); of the alcohol sector (removed from the taxable base); and the rail sector (added to the base because this sector is not part of the data set in the first place).

4.16 Putting all these together gives a potential tax base of Rs. 58.2 lakh crore, yielding a combined RNR of 11.98 per cent.

4.17 Table 5 highlights the estimated GST base and corresponding RNR of the three approaches to estimating RNR.

Table 5: Summary of approaches to estimating RNR

Approach	GST Base (in lakh crore)	RNR (per cent)
Macro	59.9	11.6
ITT	39.4	17.7
DTT	58.2	12.0

ITT= Indirect Tax Turnover
DTT=Direct Tax Turnover

Source: Based on three approaches to estimating RNR

[13] The export sector is exempt with full refund (i.e. zero-rated).

V. RECOMMENDATIONS

5.1 Consistent with the Committee's terms of reference, we make recommendations on a number of issues: the RNR; the distribution of RNR between the Centre and States; the structure of rates; and the potential price impact of the GST. In addition, we make recommendations on other relevant issues: the bands for the GST; compensation, the treatment of precious metals, and the tax treatment of certain commodities such as alcohol, electricity, education, and health.

The Magnitude of the RNR

5.2 Three different approaches have been presented to determine the RNR. Each has it merits and drawbacks because of the underlying assumptions made and the data used. Coming up with an RNR is as much soft judgement as hard science. We cannot be confident that any one number is the right one. Moreover, there is a certain endogeneity effect—like a Heisenberg Uncertainty Principle—that the very choice of rates could affect the outcome relating to revenues, compliance, convenience, etc.

5.3 We will make our recommendations in two steps. First, we will critically evaluate each of the three approaches both in terms of the methodology and in terms of the results they generate for the RNR. We then present the Committee's recommendations for the RNR and validate these results against independent benchmarks. These recommendations will be supported by a complementary discussion on the risks associated with our estimates for the RNR.

5.4 Our recommendation for the RNR will not be unduly guided by short-term considerations, for example, relating to compensation. The RNR should be one that achieves the objectives of the government over a horizon that is not short term. If compensation is necessary, it should be found/funded from government resources elsewhere and the GST should not have to bear the long-term burden of having to meet short-term exigencies.

5.5 The estimates presented for the national RNR, range from about 11.6 per cent under the Macro approach to 17.7 per cent under the ITT approach. Where does the truth lie?

Critical assessment of the methodology of the three approaches

5.6 Each approach has advantages and shortcomings that are described below. The Empowered Committee of the GST has had the benefit of familiarity only with the ITT approach of the NIPFP and we will dwell to some extent on this analysis. The Committee would underscore that the focus on the ITT approach does not signify that it is superior to the other two; indeed, focusing on one approach can be limiting and misleading.

5.7 Five key features drive the results of the ITT approach:

i. The assumptions of collections at the different rates determine the goods base for the States. We have obtained the actual data on such collections for16 States (Karnataka, Maharashtra, Andhra Pradesh, Gujarat, Tamil Nadu, Bihar, Odisha, Chhattisgarh, Delhi, Uttar Pradesh, Jharkhand, Rajasthan, Madhya Pradesh, West Bengal, Haryana and Puducherry) that together account for about 78.5 per cent of all States' VAT base. These data vary significantly from the assumptions underlying the ITT approach. Specifically, our data suggest that the aggregate base is distributed between the three different rates—1 per cent, 2-6 per cent, 12-15 per cent and higher rate--in the ratio of 11.6 per cent, 55.4 per cent, 28.5 per cent and 4.7 per cent. In contrast, the ITT assumed—without analyzing actual data--tax base proportions of 2 per cent, 56.15 per cent, and 41.85 per cent at the 1 per cent, 5 per cent, and 14-15 per cent, respectively.

ii. The estimation of the services base by the ITT approach does not make any allowance for purchases from the unorganized sector. Such purchases will lead to an increase in the base—via cascading--because the final value will reflect the embedded taxes which cannot be set off as input tax credit.

iii. The estimation of the services base also ignores one potentially important issue. Currently, States tax most intermediate goods at the lower rate. If these goods were shifted to the normal rate—as States have indicated they might be willing to do—there would be an effective expansion of the tax base. It may be noted that taxes on intermediates in a GST system are like withholding—collecting early on in the value added chain but refunding them later on. So, in principle, this shift of intermediate goods should not yield any additional taxes. But to the extent that the unorganized sector buys

intermediates from the organized sector, this shifting will result in greater taxes because the withheld taxes on intermediates will not be refunded later in the chain because the buyer is outside the tax chain. The lost base from these two effects—cascading and withholding—is difficult to estimate. But we cannot assume, as the ITT approach does, that this estimate should be zero. Corporate income tax data allows a guesstimate of the cascading effect.

iv. A similar withholding type effect would come into play with the elimination of all CVD exemptions which the ITT approach does not fully take into account.[14]

v. The ITT approach also does not fully incorporate into the base, sugar products and textiles[15] that are sold directly to the consumer.[16]

5.8 The DTT approach on the other hand is subject to two uncertainties: whether the output tax base has sufficiently taken account of exempted sectors, and whether the estimates of purchases from the unorganized sector—a key input that drives the final result—are reasonable.

5.9 The macroeconomic approach of the IMF suffers from being too aggregate in nature and the implied tax base of Rs. 59.9 lakh crore seems to be on the high side. One particular source of worry is that the tax base seems to increase substantially account of the exclusion of electricity and petroleum. This seems unlikely given that in both cases, there is some considerable sales to the final consumer.

5.10 But these two approaches have two important merits. They help provide a cross-check for the ITT approach; perhaps more significantly, they highlight the need to validate the estimates generated by all three approaches. We turn to this validation in the next section.

[14] The ITT approach also does not include in the base that component of imports of goods and services that is sold directly to consumers outside the dealer network. The Committee has not been able to quantify this omission.

[15] There has been some uncertainty whether the states tax textiles products, especially man-made fibres. But it appears that most—even a preponderance of--states do not. In that case, the tax base could be substantially under-estimated. Textiles going as inputs into clothing would not add to the base as clothing products are subject to tax. But textiles going into other textiles production or sold directly to the consumer would add to the potential future tax base. The uncertainty on textiles taxation stems from the fact that the Centre gave up most of its power to tax textiles (in the form of Additional Excise Duties) to the States. For example, in 2002-03, the Centre collected Rs. 4369 crore in AEDs (the nominal value of this was estimated at about Rs. 8800 crore in 2014-15), which has since shrunk to about Rs. 600-800 crores. It appears that the States did not take up the power ceded by the Centre, resulting in virtually no State-level taxation of textiles.

[16] Another issue--a technical one—is that the calculation of the base uses the statutory rate of excise of 12.36% rather than the effective rate of 9%.

5.11 All three approaches implicitly assume that there will be no benefits to the base and/or revenues from improving compliance and or improved growth consequent upon implementing the GST. But the macro approach does not assume current levels of compliance—as the other two approaches do—but a theoretical one which may or may not correspond to current reality.

Recommendations and validation

5.12 Our recommendation is based first on making adjustments to the ITT approach:[17] Rs. 3.12 lakh crore for the data-based revision to the States' VAT base; Rs. 30,000 crore for the omission of sugar; Rs. 45,000 crore for the cascading effect; and Rs. 95,000 crore for the choice of the statutory rather than effective excise rate in quantifying the base. Then, we add an adjustment for compliance efficiency gains (Rs. 2 lakh crore).

5.13 What is the basis for these adjustments?

5.14 Note that the ITT approach was based on a pure assumption about the States' VAT base which we have improved upon by collecting the relevant data for 16 States, accounting 78.5 per cent of the entire VAT base of the states.

5.15 The adjustment for sugar is based on the national income estimate for value-added in the sugar sector of Rs. 40,000 crore. We conservatively adjust this down to Rs. 30,000 crore.

5.16 Note that the authors of the ITT approach acknowledge that the withholding, cascading and compliance effects are important. But they chose to ascribe a value of zero to these effects because of uncertainty about arriving at a quantitative estimate. But that is clearly biased downwards as the authors of the approach would themselves acknowledge. We have chosen to address this bias by making some conservative estimates about the magnitude of these effects.

5.17 For the cascading effect, the ITT approach had earlier estimated an addition to the base of 10% of the incremental services base. The DTT approach estimates an addition to the base of

[17] It is worth emphasizing that the ITT approach has itself undergone revision from a previous version. Some of the important revisions in the latest version were adding real estate in to GST base and removing additional base on account of unorganized sector, sugar and textile.

about 16%. We, conservatively, estimate that the under-statement of the base would be half that assumed by the ITT approach which amounts to 45,000 crore.

5.18 For the compliance effect we draw upon cross-country experience. In Box 1, econometric analysis of that experience yields an estimate that a 1 percentage point reduction in the standard rate would increase the collection efficiency by 1 percent. The GST would lead to about a 4.1 percentage point reduction in the standard rate (in weighted terms) which would translate into a 4.1 percentage point increase in the C-efficiency or 9.3% increase in collection efficiency (based on the current C-efficiency of 0.44). This is equivalent to an expansion in the tax base of Rs. 4.3 lakh crore. Again, we assumed, conservatively, and after consulting with the CBEC, that just under half of this compliance improvement (Rs. 2 lakh crore) would be realized.

5.19 To summarize, our adjustments to the ITT approach are conservative in the following ways:

- We do not make any adjustments for the ITT approach understating the contribution of textiles to the tax base which could be substantial. The magnitude of this omission is suggested by the fact that the gross value of output and gross value added of textiles and cotton ginning are 5.9 lakh crore and 1.7 lakh crore, respectively.
- We do not increase the tax base to take account of the withholding effect;
- We include only half of the NIPFP's previous estimates of the magnitude of the cascading effect; and
- We incorporate under half the change of the compliance-enhancing effect suggested by our econometric analysis;
- We incorporate nothing for the impact of the possible growth-enhancing effect of the GST

5.20 Under GST, the compliance gains would be the following:

- At the Centre, the rate structure will be significantly simplified from more than 10 rates (for both goods and services) and numerous exemptions to 2-3 rates and fewer exemptions;

- At the Centre and the States, significant improvements in compliance will result because of the IT systems under which matching of supplier and purchase invoices will be electronic and instantaneous, reducing the scope for fraud and evasion; this will also improve compliance for direct taxes;
- General compliance will improve because of dual monitoring by the Centre and the States; and
- The comprehensive definition of taxation of goods and services should result in a smaller amount of the base falling through the cracks between "goods" and "services" as happens currently. The elimination of abatements on services will reduce overstatement of input tax credits.

5.21 The experience of all countries suggests improvements over time in GST implementation, and in India's case, a number of design features should contribute to such improvements in efficiency. These are not improvements that will take years to materialize.

5.22 Adding up these adjustments yields a single RNR of 15 per cent. However, we recognize that there may be uncertainty about the adjustments we have made. An alternative scenario is that not all of the adjustments are valid. In this case, the single RNR would be 15.5 percent (Table 6).

Table 6: Committee's recommendations compared with other approaches to estimating RNR

Approach	GST Base (in lakh crore)	RNR (per cent)	C-Efficiency
Macro	59.9[18]	11.6	0.70
ITT	39.4	17.7	0.42
DTT	58.2	12.0	0.68
Committee's (Preferred)	46.2	15.0	0.56
Committee's (Alternative)	44.2	15.5	0.53

ITT= Indirect Tax Turnover DTT=Direct Tax Turnover

Source: Different approaches and committee's calculation

[18] This base calculation corresponds closest to the policy envisaged under the Constitutional Amendment Bill.

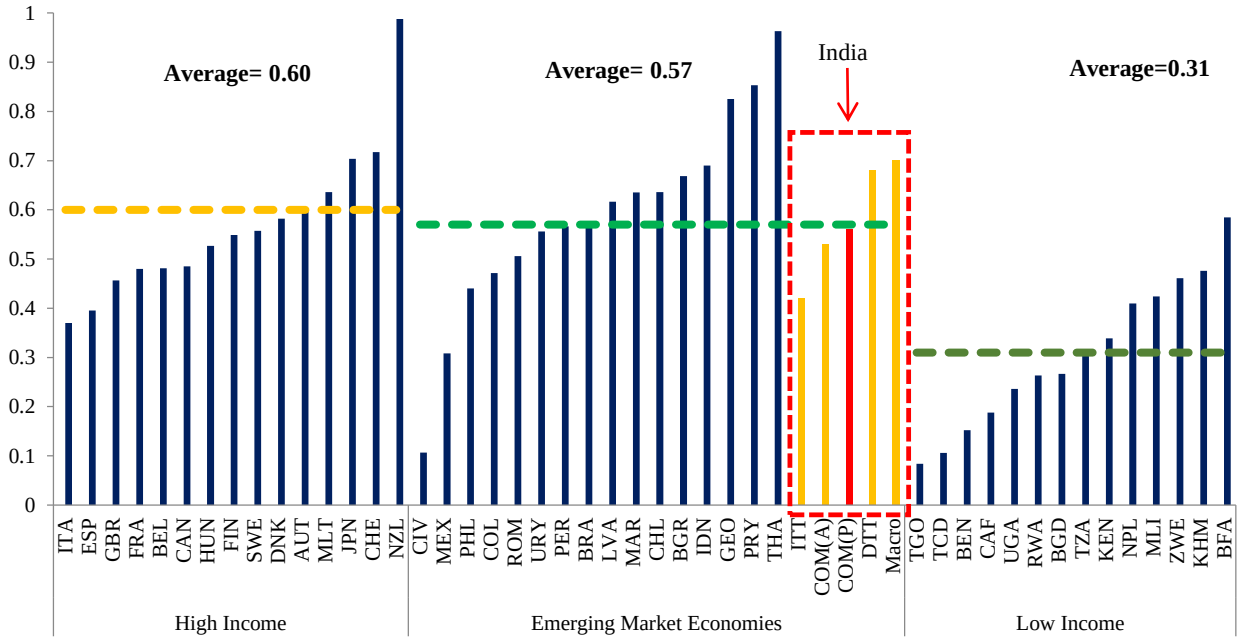
5.23 Our recommendation for the RNR is, therefore, a range for the RNR of 15-15.5%, with a strong preference for the lower end of that range.

5.24 Next we validate this recommendation. Since there is the possibility of error in all the approaches, including our recommendation, we must independently validate them against other benchmarks. One important benchmark for validation relates to the efficiency of the tax system. A commonly-used measure of performance of a VAT system is to compute a C-efficiency ratio. This is measured as:

$$\text{C-eff}=R/(S*C)$$

where R stands for revenues collected, S is the standard rate and C is total final consumption (net of value-added taxes). The denominator is a measure of the potential revenues that can be potentially collected and the numerator actual collections. C-efficiency is simply a measure of comparing actual against potential. The C-efficiency implied by the three approaches and the Committee's recommendations are then compared against C-efficiency in a number of other countries and this comparison is shown in Figure 1.

Figure 1: Collection-efficiency in Major VAT/GST Economies



Source-IMF and Committee's calculations

5.25 The average C-efficiency is about 0.6 for high income countries and 0.57 for emerging market countries, and 0.31 for low income countries. The C-efficiency implied by the macro and DDT estimates for the RNR (of 0.70 and 0.68 respectively) would place India above other emerging market countries. In contrast, the c-efficiency implied by the ITT approach of 0.40 would put India well below the average of emerging market countries and only somewhat above that for low-income countries.

5.26 Put differently, if the RNR, and the associated standard rate, of the ITT approach were reasonably estimated, it would imply that India has either come up with an effective policy base under the GST that is unusually narrow and/or Indian indirect tax administration is unusually poor relative to comparator countries. This inference would be puzzling, if not problematic, not least for implying that India's tax efficiency is closer to that of Mali than of Brazil, Chile, Indonesia or Thailand. This cross-country comparison is important evidence that the RNR estimated by the ITT approach is too high.

5.27 In contrast, the RNR estimates for the other two approaches would place India at levels comparable to other countries.[19] Our recommendations yield estimates for the RNR that are at or below the average of other EMEs. In that sense, they are conservative estimates for the RNR because they too imply similar levels of efficiency of the Indian tax system. [20]

5.28 Another consideration can be invoked to support the RNR of 15-15.5 per cent. Suppose this RNR requires to be operationalized in a two rate GST structure with a lower rate of say 12 per cent and a standard rate of 17-19 per cent, depending on how goods are allocated between the lower and standard rate.

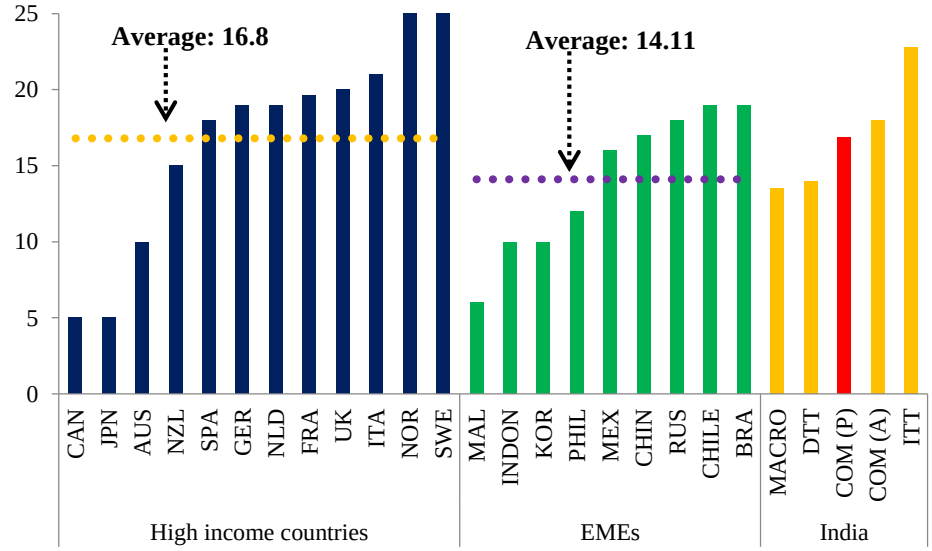
5.29 Figure-2 shows data on the standard rate of VAT in selected high income and large emerging market economies. It shows that the average standard rate for comparable EMEs is

[19] It is worth noting that the exclusion of intermediates such as petroleum and power from the GST base tend to make India's C-efficiency better than it actually is. Excluding these inputs essentially lower the standard rate by more than it lowers the foregone revenues from taxing these inputs: the measured C-efficiency improves as a result.

[20] At the center, there are likely to be large revenue and base-enhancing effects which will increase C-efficiency. These include: a decrease in the magnitude of exemptions from 300 items to 90 items in line with the recommendations of the Empowered Committee. Currently about Rs. 1.8 lakh crore are lost in central excise exemptions of which a substantial proportion can be recovered; expansion of tax base from manufacturing to retail level; bringing precious metals, gold, etc. into the tax base and taxed at the lower rate; reduction in the exemptions threshold from Rs. 1.5 crore in the case of goods to Rs. 25 lakh; this will offset the raising of the exemptions threshold for services from the current level of Rs. 10 lakh. Offsetting some of these effects will be the fact that cascading could decline because of better administrative efficiency.

14.4 per cent and the highest standard rate is 19 per cent; and even for the high-spending and therefore high-taxing advanced economies it is 16.8 per cent. An RNR of anything beyond 15 - 15.5 per cent will likely result in a standard rate of about 19-21 per cent which would make India an outlier amongst comparable emerging economies. For example, the ITT approach's RNR of 17.7 per cent would translate into a standard rate of 22.8 per cent, identifying India as having the highest GST tax rate amongst emerging market economies. Our recommendations would still place India at the upper end of the standard rates found across comparable countries. It is worth emphasizing that the GST is intrinsically a regressive tax and the higher the rate the greater the regressivity. Countries that have well developed social safety nets can better offset this regressivity but India at a lower level of development is less able to do so and hence needs to be especially mindful of rates that are out of line with international ones.

Figure 2: Standard rate of VAT in High and Emerging Market Economies



Source-IMF, Credit Suisse and Committee's own calculation

A risk analysis

5.30 Since we cannot be certain of the RNR—it is after all our best assessment or best guess—a risk assessment framework poses the question: should we err on the side of an RNR that is a little low or a little high?

5.31 One risk of setting an RNR that is low is the re-emergence of a trust deficit between the Centre and the States as happened in relation to compensation for lost CST revenues after the global financial crisis. If revenues fall short, and the fiscal position of the Centre and States is affected, the Centre will face a double whammy, with weak revenues for itself and an additional burden of having to compensate the States. And, if as a result, compensation is delayed or diluted, a trust deficit could re-emerge.

5.32 The second risk of setting a low RNR is that it could interact with slower growth and/or weaker buoyancy going forward to magnify the revenue shortfall.

5.33 On the other hand, some of these risks can be overcome. In the event of a revenue shortfall, the Centre and the States can both raise non-GST taxes (petroleum, tobacco and tobacco products, and alcohol); they can together raise GST rates; and, as a last resort, the Centre could even afford to relax its deficit target, based on the fact that was actually an investment for implementing unprecedentedly ambitious tax reform with enormous long-run gains; moreover, a moderately higher deficit due to a low GST will benefit consumers, especially poorer ones.

5.34 Second, given the unavoidable teething troubles that will afflict GST implementation, it seems inadvisable to further burden the initial stages of implementation with higher rates that will increase taxpayer displeasure, reduce compliance and increase disaffection. On balance, lower rates will facilitate compliance as our evidence in Box 1 shows. The econometric analysis suggests that a 1 percentage point reduction in the standard rate will lead to an improvement in administrative efficiency (and compliance) of 1 percentage point which in the GST setting would translate into an efficiency gain of about 15 percent.

5.35 Further, the improvement in compliance will not be restricted to indirect tax collections. The paper trail of the GST will also help direct tax administration and improve compliance in collections of corporate income taxes.

5.36 Third, the price consequences of a GST will be small, especially under a dual rate structure with essential food items exempted. As the analysis in Section V reveals, an RNR in the 15-15.5 per cent range with a lower rate of 12 per cent and a standard rate of 18 per cent would have no aggregate inflation impact. But a higher RNR with a lower rate of 12 per cent and a

standard rate of 22 per cent would increase inflation by between 0.3-0.7 percent. Care will have to be taken to ensure that the GST does not become the target of popular disaffection on the grounds that it fed higher inflation. In that respect a lower RNR is safer than a higher one, especially considering that the GST is inherently regressive relative to direct income taxes.

5.37 Fourth, there is also a perception issue. Today's GST rate is 14.36 per cent for services (now nearly 15 per cent with the Swacch Bharat cess). If the RNR is greater than 15-15.5 per cent, the rate for services will be in the 20-22 percent range which will make the GST seem like a substantial tax increase when it strictly speaking is not and should not (after all, the new rate should be revenue neutral). Optically, the GST as a rate hike should be avoided to the greatest extent possible. A lower rate will be seen as more politically acceptable and will help taxpayer compliance.

5.38 Fifth, even if the proposed RNR is on the side of being a little low, all the evidence suggests that over time, compliance will improve, so that the GST will become a buoyant source of revenue. This could happen even in the short run as discussed earlier. A marginally lower rate, if it turns out to be that way, will signal the government's confidence in the GST as a medium term tax reform. This would re-inforce the signal that the government has already sent—in a sense under-writing the GST—by committing to compensation for five years (despite the fact that when the state VATs were implemented, compensation was not required beyond the second year.)

Allocation of RNR between Centre and States

5.39 The Committee's recommendations on rates are all national rates, comprising the sum of central and state GST rates. How these combined rates are allocated between the center and states will be determined by the GST Council. This allocation must reflect the revenue requirements of the Centre and states so that revenues are protected. For example, a standard rate of 17% would lead to rates at the Centre and states of say 8 percent and 9 percent, respectively because that is roughly the ratio of GST revenues that would have to be generated by the centre and states assuming that the 2013-14 data on which these estimates are calculated remain valid.

It would be preferable to keep all other rates identical between the center and states to minimize distortions and facilitate compliance.

The structure of rates

Exemptions

5.40 Given the historic opportunity afforded by the GST, the aim should be to clean up an Indian tax system that has effectively become an "exemptions raj" with serious consequences for revenues but also governance. According to the government's own figures, excise tax exemptions (and taxing goods at low rates) result in foregone revenues of Rs. 1.8 lakh crore or nearly 80 per cent of actual collections. Tentative estimates by the Committee suggest that the comparable figure for the States is about Rs. 1.5 lakh crore. Together, India loses about 2.7 per cent of GDP because of exemptions.

5.41 The Committee cannot state this in any stronger terms: if the GST is to be a success—with an uninterrupted value chain that facilitates compliance and a buoyant source of revenue—these exemptions must be plugged. Using exemptions as selective industrial policy has led to generous un-selective policy, and proliferating exemptions. The road to exemptions hell is paved with the good initial intention of restricting exemptions to a few industries.

5.42 It is also worth emphasizing that exemptions need not, and often do not, result in low or zero tax burdens. If a product is exempted, the effective tax burden will depend on all the embedded taxes on inputs going into that product. If the move to the GST results in lower rates of taxation, it is possible that eliminating exemptions might actually reduce the effective tax burden. This is especially likely in relation to small scale industries (SSIs) which are likely to come within the scope of the GST because of reductions in the exemptions thresholds. The combination of input tax credits that they can reap combined with lower standard rates might result in SSIs facing lower tax burdens. Another hidden cost of exemptions is that it leads to effective tax burdens that can vary widely across goods, leading to a multiplicity of effective tax rates.

5.43 We would recommend that:

- The exemptions list be narrow, restricted to a few goods, that are merit goods which feature prominently in the consumption basket of the poor such as food items (see Box 3 for a detailed analysis of which items deserve exemption status);
- Exemptions should also be confined to final goods because taxes on intermediates are in any case reclaimable as input credits;[21]
- Exemptions must be common across the Centre and States;
- Precious metals not be exempted to the extent they are for reasons described below;
- Area-based and CVD exemptions be phased out.

5.44 For the dual GST system to be a success, the tax base must be common across the Centre and States, otherwise tax administration becomes fiendishly complicated. Hence the importance of the recommendation that the exemptions list be common across the Centre and the States.

Lower, standard and "demerit" rates

5.45 Ideally, the GST should aspire to a single rate, which would then also be the standard rate. Since 2000, about 90 per cent of countries that have adopted a VAT have chosen to have a single rate. The tax administration benefits of having a single rate are substantial. However, in the years ahead, it may not be feasible to adopt a single rate GST system for social reasons. A 2-rate structure (or a modified 2-rate structure) may therefore be adopted. What should be the lower rate and the standard rate, and the demerit rate which would apply to a small group of luxury items?

5.46 Consider the following simple formula for determining the structure of rates:

$$R = \alpha L^G + \beta S^G + \gamma S^S + \mu D^G$$

Where R is the RNR, L^G is the lower rate on goods, S^G is the standard rate on goods, S^S the standard rate on services; and D^G the demerit rate on goods; α, β, γ, and μ are the respective shares of these four rates in the underlying tax base, and together add up to 1.

[21] Taxing intermediates will, however, have the advantage of increasing the tax base via the "withholding effect" discussed earlier.

5.47 The first point to note is that the standard rate for goods and services must be the same because that is the raison d'etre of the GST—to provide a common base for goods and services, obviating the need for defining goods and services separately.

Thus: $S^G = S^S = (R - \alpha L^G - \mu D^G) / (\beta + \gamma)$

5.48 The next point to note is that for any given RNR (that has been estimated), and a given higher rate (discussed below), the lower is the lower rate, the higher will be the standard rate.

5.49 Ideally, the lower rate should not be far lower than the RNR for two reasons. The lower the rate and the more the commodities that are taxed at this lower rate, the higher will be the standard rate just as a matter of arithmetic. In fact, this is the pattern in the States. Lower rates of 4-5 per cent with a large part of the base taxed at these rates (about 60-70 per cent) results in the necessity of high standard rates of 14-15 per cent. High standard rates make compliance considerably more difficult.

5.50 The second reason for having lower rates that are close to the RNR relates to political economy. The temptation to push commodities to the lower rate increases the lower is the low rate. The benefit for any industry group of seeking to reduce the tax on its output is directly proportional to the tax advantage: moving a product from 14 per cent to 6 per cent is worth more than moving a product from 14 to 12 per cent. And in fact the pattern in the States reflects this political economy at work.

5.51 So, if the RNR is close to 15 per cent, the effort should be to keep the low rate at about 12 (6 +6 each for the Centre and States) per cent.

5.52 As discussed earlier, a lot will depend on the magnitude of exemptions and decisions about what goods are taxed at the lower rate and at the demerit rate. One of the major items either exempted or taxed at a very low rate currently is gold, silver, and precious metals. If the Centre moves to the smaller list as recommended and the States shift more of their tax base, especially intermediate goods, toward the standard rate also as recommended, the pattern of standard rates will look roughly as follows in table 7.

5.53 To illustrate the impact of policy choices on the standard rate, we present in Table 7, the consequences for the standard rate (for the given RNR of 15 per cent) of the treatment of gold and precious metals (for details on the tax treatment of these commodities, see Box 3). As the table shows, the lower the rate that these commodities are taxed, the higher will be the standard rate that is applied to all commodities. For example, if gold is taxed at 4 percent the standard rate will be 17.3 percent. In contrast, if gold is taxed at 6 per cent, the standard rate can come down to as much as 16.9 per cent (table-8).

Table 7: RNR and Standard Rate structure for center and states (per cent)

	RNR	Lower Rate	Standard Rate (a)	Higher Rate
Goods				
Center	7	6.0	8.0	20
States	8	6.0	9.0	20
Services				
Center	7	-	8.0	-
States	8	-	9.0	-

Source: Committee's calculation.
a: This corresponds to committee's preferred scenario with rate on precious metal at 6per cent.

Table 8: Gold rate and it impact on Standard Rate

	RNR	Rate on precious metals	"Low" rate (goods)	"Standard" rate (goods and services)	"High/Demerit" rate or Non-GST excise (goods)
Preferred	15	6	12	16.9	40
		4		17.3	
		2		17.7	
Alternative	15.5	6	12	18.0	40
		4		18.4	
		2		18.9	

Source: Committee's calculation.

5.54 It is now growing international practice to levy sin/demerit rates—in the form of excises outside the scope of the GST--on goods and services that create negative externalities for the economy (for example, carbon taxes, taxes on cars that create environmental pollution, taxes to

address health concerns etc.). As currently envisaged, such demerit rates—other than for alcohol and petroleum (for the states) and tobacco and petroleum (for the Centre)—will have to be provided for within the structure of the GST. The foregone flexibility for the center and the states is balanced by the greater scrutiny that will be required because such taxes have to be done within the GST context and hence subject to discussions in the GST Council.

5.55 We recommend one demerit rate and that rate should be such that the current revenues from that high rate are preserved. Accordingly, we recommend that this sin/demerit rate be fixed at about 40 percent (Centre plus States) and apply to luxury cars, aerated beverages, paan masala, and tobacco and tobacco products (for the states). The Centre can, of course, levy an additional excise on tobacco and tobacco products over and above this high rate. These goods are final consumer goods and should be of high value (so that small retail outlets are not burdened with the complication of having to deal with multiple rates) and clearly identifiable so that there are no issues related to classification that could complicate tax compliance.

Assigning products to rates

5.56 Typically, the assignment of goods to different tax categories will be motivated by considerations of equity. Goods that account for a large share of expenditures of poorer households—for example, food-- will typically be merit goods and will either be exempt or placed in a lower rate category. A related feature will be that this share will decline for richer households.

5.57 But even if a good is a merit good, warranting an exemption or lower rate, policy makers will want to ask how effective that decision will be based on how well targeted the implicit subsidy will be, where the implicit subsidy is the difference between taxing a good at the standard tax rate and the lower or zero rate: if the poor also account for a large fraction of total expenditure on the merit good, then the subsidy will be well targeted; if, on the other hand, they

account for a small share of the total expenditure, then the subsidy decision will come with the cost that most of the benefits of the subsidy will accrue to the relatively better off. [22]

5.58 So, one can think of a commodity-wise benefit-cost analysis for determining the rate structure. The benefit could be thought of as the subsidy rate for the target group, say the bottom four deciles of the population.[23] The subsidy essentially measures how much the expenditure of the target group would be increased by exempting a good rather than taxing it at the standard rate.

5.59 The cost could be measured in relation to the principle of effective targeting. The cost is simply that proportion of the total subsidy for any particular good that does not reach the target group and instead "leaks" to the non-target group, in this case, the top 6 deciles.

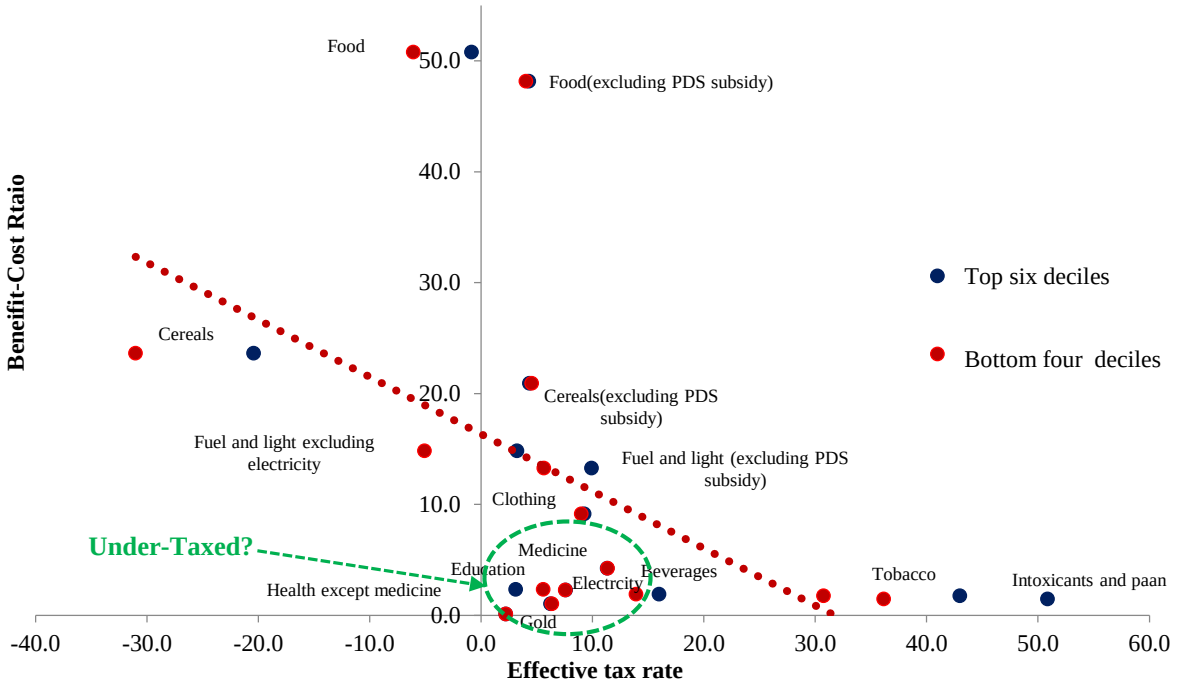
5.60 When we do a benefit-cost analysis of different commodities and compare it against the actual structure of rates, a few broad policy conclusions emerge captured in Figure 3 (Box 3 has a detailed analysis).

- A number of commodities are treated fairly under the current system. Thus, merit goods such as food items, especially cereals, pulses, edible oils, vegetables, and fuel are appropriately taxed at zero or low rates (in Figure 3, these commodities have high benefit-cost ratios and attract low taxes).

[22] Ideally, of course, if governments had well-designed transfer programs, they would achieve the desired objective of helping poorer households by providing cash transfers and sparing the tax system from having to attain equity objectives. In practice, this is not always possible and in India DBTs are still a work-in-progress. See Keen (2015).

[23] The analysis can be re-worked for other target groups, say the bottom 3 or 5 deciles.

Figure 3: Comparing "Desirable" Taxation with Actual Taxation of Selected Commodities



Source: NSS,CBEC, World Bank and Committee's calculation

- But there are a number of anomalies. The most glaring is gold, silver and precious metals. They are a strong demerit good: the very rich consume most of it (see Table 2 in Box 3 which shows that the top 2 deciles account for roughly 80 percent of total consumption) and the poor spend a small fraction of their total expenditure on it; moreover, they have become a source of macro-economic instability and less important as a savings vehicle. Indeed, it is inconsistent for the government to actively promote schemes (gold bonds and gold monetization) to wean consumers away from gold, on the one hand, and also give highly concessional tax rates to buy gold, on the other. For all these reasons, these commodities should in principle be taxed at the standard rate: instead they are taxed at about 1-1.6 percent (center plus States). This anomalous treatment must be rectified at least by raising current tax levels to 4 or 6 percent (see Box 3).
- Education, health (excluding medicines), and electricity are also not appropriately treated. They are all commodities that prima facie seem to be merit goods, warranting zero or low tax burdens. However, in India, they are mostly consumed by the rich, and

many are largely privately provided. In the case of education, the current tax structure turns out also to be regressive, with the bottom 4 deciles effectively paying greater taxes than the top 6 deciles They deserve to be taxed more like standard goods. Yet, most education and health services will be exempted under the GST. Electricity is planned to be excluded from the GST. These exemptions and exclusions—which are bad from a tax policy and administration perspective because they will break down the value added chain--merit reconsideration.

- Conversely, a number of demerit goods such as alcohol and tobacco are appropriately taxed at high rates. But the case for alcohol's inclusion in the GST relates to governance and reducing corruption. A similar argument applies to including real estate in its entirety in the GST.

Exemptions threshold

5.61 The current situation and proposed thresholds are described in Table 8. (Compounding refers to the exemption of firms from the VAT chain; instead they are charged a small turnover tax without allowing for any input tax credits). Setting an exemptions threshold has to balance three considerations.

5.62 First, minimizing the burden on small taxpayers would call for higher thresholds. Second, a high threshold also achieves social objectives because poorer households are more likely to buy from smaller outlets (such as *kirana* shops). Third, on the other hand, a high threshold not only risks foregoing revenues but also undermines the value-added chain that is so critical for the governance benefits of having a GST. The current proposal is to have a common threshold of Rs. 25 lakh for goods and services combined but raising this threshold say upto Rs. 40 lakh may be considered.

Table 9: Exemption Thresholds: Current and Proposed

	Current			Proposed under GST	
	Goods	***Services***	***Compounding***	***Goods plus Services***	***Compounding***
Center	1.5 crore; exports and exempted goods excluded from threshold	10 lakh	not permissible	25 lakh combined with no exemptions and aggregated at the level of legal entity	to be decided; but possibility of compounding from exemptions threshold (25 lakh) up to 1 crore
States	5-10 lakh	not applicable	permissible in some States for some items and at varying rates	same as above	same as above

Source: Department of Revenue

5.63 Corporate income tax data suggests that between for turnover in the Rs. 25-40 lakh crore range, there are 3.26 lakh registered entities (0.22 corporate and 3.04 non-corporates), accounting for just over Rs. 1.04 lakh crore in total turnover. The benefit cost ratio of minimizing the compliance burden relative to the revenue foregone may need to be considered. Also, the option should be given to firms to be part of the GST chain even if they are below the exemption threshold.

5.64 That said, the concern that reducing the threshold will raise the tax burden faced by small scale industries (SSIs) may need to be reviewed. Under plausible scenarios, the effective burden on SSI plants can actually decline, if the standard rate (currently around 25-26% in goods for the center and States combined) comes down, as envisaged by the Committee (see the illustrative example in the Annex Table).

Rates or Rate Bands and the issue of fiscal autonomy of States under the GST

5.65 The proposed GST bill provides for States to have a band of 2 per cent above the standard GST rate so that they have some fiscal flexibility to adapt to state-level conditions. There are two reasons why this flexibility may need to be reassessed. First, the argument for fiscal flexibility/autonomy becomes less compelling: under the proposed GST, the States still retain considerable flexibility because alcohol and petroleum—the biggest sources of revenues for the States about 29 per cent of overall States' indirect tax revenue and about 41.8 per cent of

the total revenue of States to be subsumed under GST—as well as power, real estate, health and education remain outside the scope of the GST. Even if petroleum, alcohol and tobacco are subsumed in the GST, States will retain the right to levy top-up excises on them.

5.66 In other words, the design of the GST is such that states will continue to have considerable autonomy under the proposed GST either in its current form (which has a number of exemptions and exclusions) or in a future GST regime that reduces these exemptions and exclusions because there will be scope for states to levy top-up excises. That is the sense in which, the Committee argued earlier that the Indian GST has the potential to marry the best of centralized and decentralized features of VATs in large federal systems.

5.67 Second, if States exercise this flexibility, there would be varying rates for a given product, which would create distortions across States and reduce efficiency and increase compliance costs, especially for companies planning multi-state activities. These distortions and costs must be seen against the fact that they will not lead any meaningful additional fiscal autonomy to the states.

5.68 Rate bands would also create another complication for administering the CVD: under World Trade Organization (WTO) rules, the CVD has to be the lowest of the state rates. Supposing one state charged 8 per cent and another 12 per cent. The CVD would have to be based on 8 per cent, which would immediately disadvantage production in the state charging the higher rate, undermining Make in India programme.

Potential price impact of GST[24]

5.69 In principle, the GST should have no aggregate impact on inflation and the price level because the new rate will be a revenue neutral one. Revenue neutrality may, however, not be enough to guarantee that there will be no price impact across all categories of goods and services. This is because the weights of commodities in the consumption basket (on which the CPI is based) are different from their contribution to indirect tax collections. The impact on particular goods and services will depend on the current structure of taxation (including

[24] The analysis in this section should not be considered definitive because it is based on a number of assumptions. The caveats are noted in greater detail in footnote 27 in Box 3.

exemptions) and the future structure of the GST both at the Center and the states. To estimate the impact on future inflation, we need to begin with understanding the current structure of taxes.

Current taxes on the consumption basket

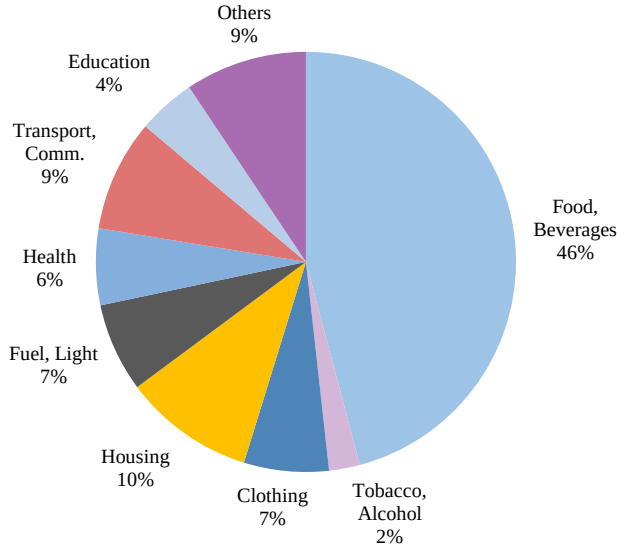
5.70 The average effective tax rate on consumption as measured by the Consumer Price Index (CPI) is 10.4%. Excluding items outside GST coverage, the rate drops to 7%, as the excluded items (e.g. alcohol, petrol and diesel) have very high tax rates. This relatively low rate reflects a number of key features.

5.71 First, categories like food and beverages, rent and clothing have large weights in CPI basket (Figure 4). These are categories that are either exempted or taxed at low rates. For example, 75% of CPI is exempt from excise, and 47% of CPI is exempt from sales tax (Figure 5)[25]. Excluding taxed items that are outside GST (e.g. alcohol, petrol and diesel), 54% of the CPI would be GST exempt.

5.72 Second, most items, where not exempted are taxed at a lower rate. Thus, in addition to exempted commodities, a further 32% is taxed at a low rate, and only 15% at a normal rate (Figure 6). The 4% taxed at a high rate are mostly the items excluded from GST, like petrol, diesel and alcohol.

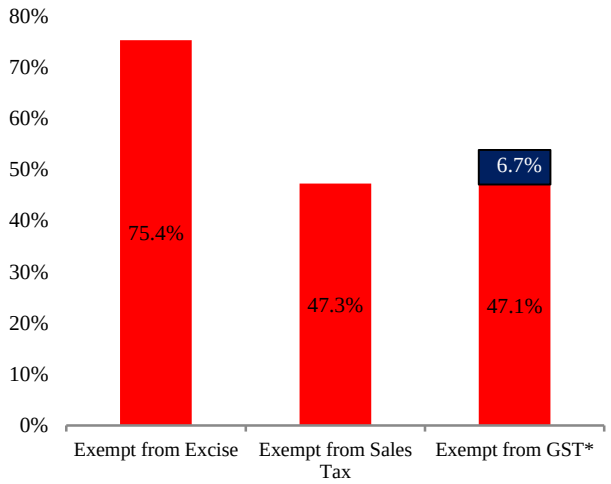
[25] We use the Excise schedule from CBEC. Sales tax rates were provided by four states: Tamil Nadu, Karnataka, Kerala and Gujarat. Items exempt from VAT in three of the four states are assumed to be exempt for this analysis.

Figure 4: Food, rent and clothing have high weight in CPI



Source: CMIE

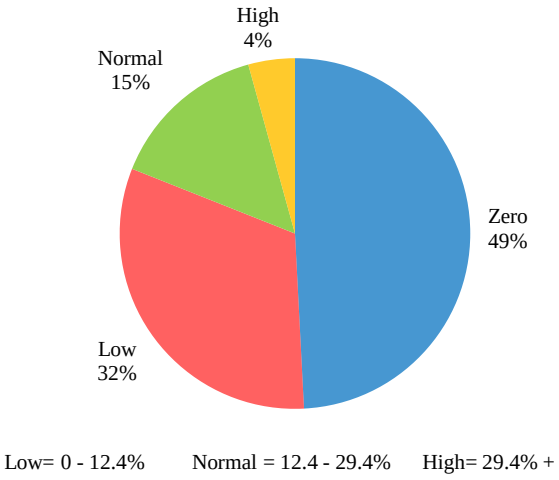
Figure 5: A large part of CPI is exempt from Excise/VAT



Source: CBEC, State Governments, Estimates

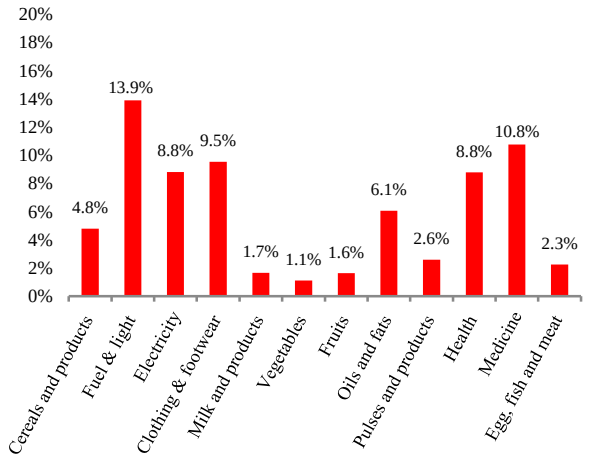
5.73 The taxation of some essential commodities in the CPI is shown in Figure 7. Most of the categories with a large CPI weight have traditionally been taxed at low rates to reflect distributional concerns; that is, these are goods and services which are important for poorer sections of society and hence are taxed at zero or low rates. In some cases, while the headline tax rate is zero, the effective tax rate is higher given the taxes on inputs. For example, the headline average tax rate on cereals is 2.3%, and vegetables and fruits is 0.5%, but adjusted for the taxes paid on inputs, the effective tax rate on cereals and vegetables rises to 4.8% and 1.1% respectively. The same holds true for electricity: this is not taxed explicitly, but the effective tax rate is 8.8%. Even after these adjustments however, these effective rates are low. Further, to some extent, even these numbers do not truly reflect the net tax burden because of the subsidies provided by the public distribution system (PDS) as described below.

Figure 6: Only 15% of CPI is taxed at a "normal" rate



Source: CBEC, State Governments, Estimates

Figure 7: Low average tax rate on most large categories



Source: CBEC, State Governments, Estimates

Distribution of taxes by income groups

5.74 These commodity-specific taxes can in turn be disaggregated by broad income groups using consumption data from the 2011-12 NSS. Figures 8 and 9 present these for the top 60 (T60) per cent of the population and bottom 40 per cent (B40) of the population, respectively.

5.75 Taxes on food are about 4 per cent for both groups. This is because even though many food items are exempt in most states, there are embedded taxes in food items such as fuel. This is an important point to emphasize: exemptions do not lead to zero taxation because embedded taxes via inputs cascade into the final product.

5.76 Because of the PDS, however, these taxes are offset by food subsidies so that the net tax rate is negative for the B40 and close to zero for the T60. The magnitude of the impact of the PDS, however, varies by states—high in Tamil Nadu and low in Gujarat. A similar pattern of negative net taxes on the B40 can be observed in fuel and light because the PDS covers kerosene.

5.77 Taxes on health turn out to be among the highest (Figure 8): and the burden is higher for the bottom 40 per cent, as bulk of healthcare expenditure is on medicines (which are taxed at a higher rate than medical services), and particularly so for the bottom 40 per cent (Figure 9). Education taxes also turn out to be regressive, as the consumption of books and school supplies

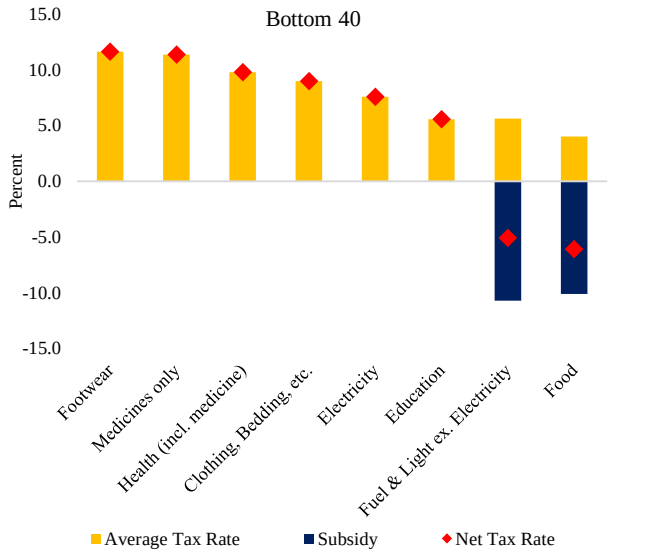
is a higher part of education spend for the bottom 40%, and tuition (mostly tax exempt) is a higher spend for the top 60%.

5.78 For clothing the average tax rates are relatively similar—about 9 %--between the two groups, and across states. In fuel and light, overall taxes are progressive but because electricity comprises a higher share of consumption of the top 60%, the exemption given to electricity benefits the top 60% more than the bottom 40%.

Figure 8: Average tax rates by category for top 60%

Source: NSSO, CBEC, State Governments, World Bank Estimates

Figure 9: Average tax rates by category for bottom 40%



Source: NSSO, CBEC, State Governments, World Bank Estimates

These are an aggregate of five states: Tamil Nadu, Kerala, Karnataka, Gujarat and Andhra Pradesh. Estimates do not take in CST, and do not also factor in inter-state movements (the numbers were calculated for each state and then added up to get a national proxy).

The price impact of the GST Regime

5.79 We analyse scenarios for both a single rate (of 14%) and two scenarios involving a dual rate GST (12% and 18%; and 12% and 22%, respectively). In the dual rate scenarios, we apply a high tax rate of 35% to about 1% of CPI (that relate to luxury goods).

5.80 In the single rate scenario, we assume that whatever attracts any duty right now would be taxed. In the dual rate scenarios, we assume that most food items are exempt except where processing is involved (e.g. cooked meals, biscuits, sugar, tea, papad, bhujia). We assume that

processed food is taxed at the low rate of 12% (this is 9.6% of the 45.9% of CPI that is food & beverages). We also assume that textiles and clothing are taxed at a low rate. We find that the normal tax rate would then apply to about 11.2% of CPI.

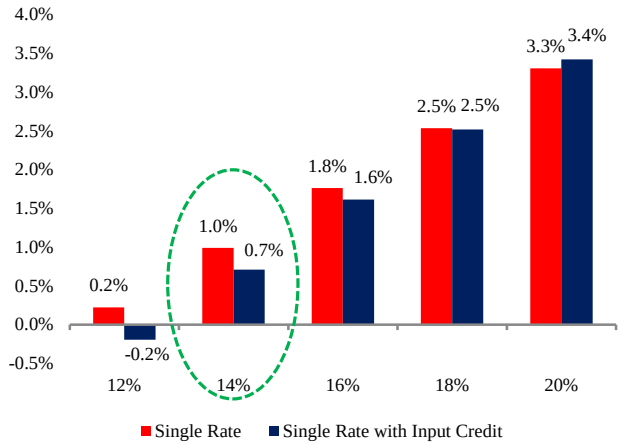
5.81 The category-wise effective tax rates for major categories in these scenarios are shown in Annex-5 (Figures 1-2), and the inflation impacts in Figures 10-14.

5.82 While assessing inflation, for each scenario we look at two outcomes: one if there is no input-tax credit[26], and the second with input-tax credit. In each of the three scenarios, we assume that a change in the tax rate would drive the supplier to change pricing. In some cases, even if the headline tax rate does not change (particularly for the exempt categories) if the taxes on inputs go up, the producer may be motivated to raise prices. For example, if taxes on fertilizers go up, the rice or cotton producer may take price increases. The reality may fall between the two alternatives: even if GST credits start flowing in relatively fast, some producers may still price on the headline rate.

5.83 We have also not factored in producers' pricing power in assessing the impact on inflation: some may not have the pricing power to take price increases (e.g. prices that are determined globally, say a cotton farmer that sees an increase in input prices), while others, like producers of personal products, may not cut prices even if they see a reduction in their tax rates.

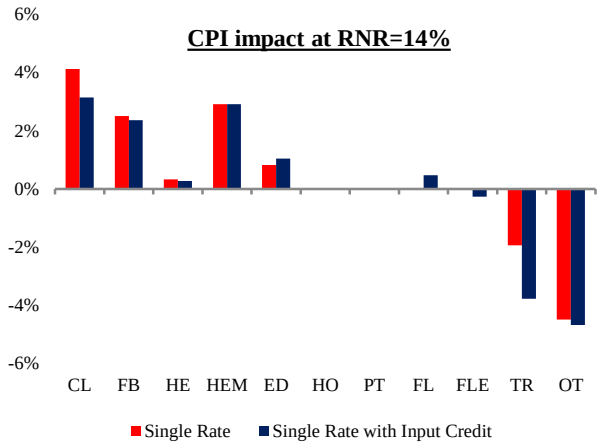
[26] We use the CSO's Input-Output Table (IOT) for 2007-08 (this is the latest available); the 299 CPI items were then manually mapped to the 130 IOT categories.

Figure 10: CPI would have high sensitivity to single RNR



Source: CBEC, State Governments, Estimates

Figure 11: Scenario 1: some categories to see inflation



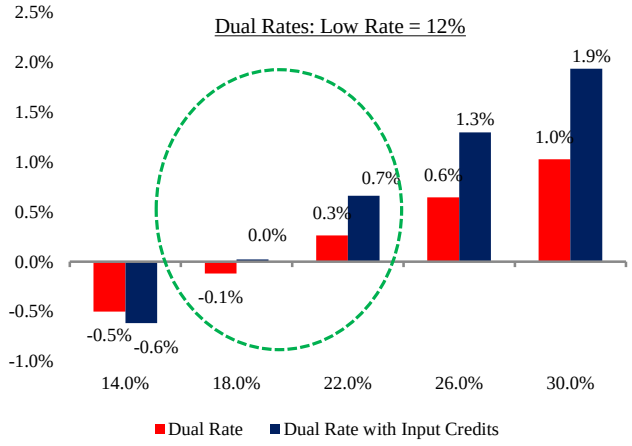
Source: CBEC, State Governments, some Estimates

Category codes: HE = Healthcare (excluding Medicines); HEM: Healthcare (Medicines); FL = Fuel & Light; CL = Clothing; FB = Food & Beverages; TR = Transport & Communication; ED = Education; HO = Housing; OT = Others (personal products, etc); PT = Paan & Tobacco

5.84 Single-rate GST: The higher the single rate, the greater the price impact. For example, a 14% rate would drive CPI higher by 1.0% if the producers don't factor in the input-tax credit and 0.7% if they do. An 18% single rate would increase prices by 2.5% with or without input tax credits. (Figure 10 shows the sensitivity to various rates). The items that may see the largest increase in prices are clothing and medicines (Figure 11). The (small) increase in food and beverages is largely because a number of even primary food items are currently taxed in some states (though not in all). As we have assumed the current tax rate to be an average of state tax rates, the average tax rate jumps from low single digits to the RNR, a substantial increase.

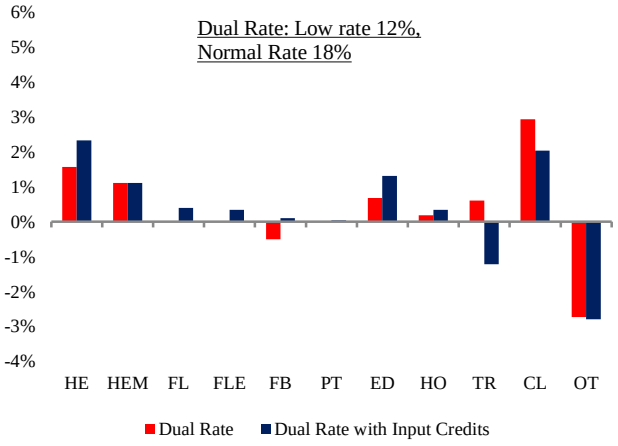
5.85 Dual-rate GST with a lower rate of 12 per cent and a standard rate of 18 per cent: This rate structure would correspond broadly to an RNR of about 15-15.5 per cent. As one can expect, this has low inflation impact given the small part of CPI that gets taxed at the normal tax rate (Figure 12 shows the sensitivity). An 18% standard rate would impact CPI by -0.1% if all producers reacted to headline tax changes and 0% if they reacted after adjusting for input tax credits as well. Under this dual rate structure, food and beverages would see virtually no price increase and neither would fuel and light, which would be especially important for protecting poorer consumers (Figure 13).

Figure 12: Dual rate sensitivity (Normal on 11% of CPI)



Source: CBEC, State Governments, some Estimates

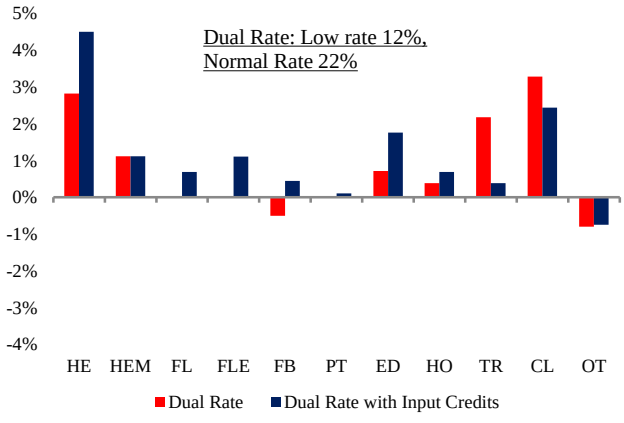
Figure 13: Scenario 2: Less than 3% inflation for items seeing price rise



Source: CBEC, State Governments, some Estimates

5.86 Dual-rate GST with a lower rate of 12% and standard rate of 22%: This rate structure would correspond broadly to an RNR of about 17-18%. The inflation impact in this scenario lies in between the first and second scenarios: a 22% standard rate would drive a CPI increase of 0.3% if all producers reacted to headline tax changes and by 0.7% if they adjusted for input taxes: the increase is a reflection of hidden taxation, i.e. the headline taxes may be low, but an increase in input taxes would raise inflation. Health (excluding medicines) would see the highest increases (Figure 14).

Figure 14: Scenario 3: Only health to see high inflation



Source: CBEC, State Governments, some Estimates

Concluding observations

5.89 The experience in a number of economies like Australia, New Zealand and Canada, was that GST implementation drove a step increase in prices: this boosted inflation for a year, and once these prices came into the base, inflation declined, indicating low persistence of this inflation.

5.90 For India, one broad conclusion is that under a dual rate GST, the aggregate impact on inflation will depend on the RNR and the standard rate. An RNR in the 15-15.5 % range with a lower rate of 12% and a standard rate of 18 percent would have negligible inflation impact. A higher RNR with a lower rate of 12% and a standard rate of 22 percent would have 0.3-0.7% impact on aggregate inflation. However, under both these scenarios, if food and fuel and light were exempted, and with the PDS in operation, the price impact on these items of consumption for the poor can be minimal.

5.91 These aggregate calculations would depend on a number of details in the design of the eventual GST, including:

a) Final synchronized exemption lists;
b) The choice of categories to which low-rates are applied;
c) Exemption threshold for enterprises: a low threshold would mean that more producers/sellers pay GST, and thus re-price their goods/services, whereas a high threshold would bring that down (some categories like food could be particularly sensitive to this choice). In many categories the bulk of the goods/service are accessed through suppliers/outlets that don't pay tax (e.g. if all barbers/beauticians paid service tax, collections would be Rs 5000-plus crore, but the collections are about Rs. 100 crore);
d) How many suppliers react just to the headline rate and have the pricing power to either take price increases or hold on to prices even when they are net beneficiaries of GST implementation;
e) Given the large impact of PDS on food and fuel and light, the impact on the bottom 40% can be offset by state governments making changes to the PDS.

f) New GST features: currently excise and VAT cannot be offset, and cascade; in addition, VAT credits cannot be carried across states. Both these characteristics would change in the GST regime, and affect the eventual inflation.

5.92 However, to ensure that producers do not take advantage of the GST, the government might consider setting up mechanisms to monitor the price impact, especially of sensitive items, as was done by Australia. The Competition Commission of India should be especially vigilant in identifying anti-competitive producer behavior that hurts consumers via excessive price increases.

Compensation

5.93 Under the proposed agreement on the GST, the Centre has agreed to compensate the States for any shortfall in their indirect tax collections in the transition from the current state VAT and other taxes to the unified GST. This compensation will be provided for 5 years. In the earlier experience of implementing the state VATs the Centre provided compensation for three years but at a declining rate: 100 per cent of the shortfall in 2005-06, 75 per cent and 50 per cent in the following two years respectively.

5.94 In the aggregate, of course, the States should not suffer any loss in revenues because that is intrinsic to the calculation of a revenue neutral rate. That is, if the RNR for the States is set appropriately, States as a whole should have the same revenue as before. But there are two situations why shortfalls may arise. First, the aggregate RNR might be set too low. In this case, of course, the GST Council may have to decide to raise rates going forward but interim shortfalls will have to be compensated.

5.95 A more likely scenario is for shortfalls to be experienced by individual States even if States as a whole experience revenue neutrality. Now, by definition, the move from the status quo to the GST will involve a shift in revenues from producing States to consuming States, from manufacturing to services, and within manufacturing from intermediate and capital goods toward final goods. This distributional shift is unavoidable because it is in some ways intrinsic to the move to the GST. Most States will stand to gain and it is likely that poorer States will be

beneficiaries because they consume more, on average, than they produce; and their economies are more services-than manufacturing-based.

5.96 But pinning down exactly which particular States will gain is not easy because disaggregated state-wise data that would allow reliable computation of the current and future tax base for the States is simply not possible. Moreover, the taxable base of States will also depend on rules on supply of goods and services and changing behavior of firms in response to these rules (for example, headquarters and where supplied). For these reasons, this report has chosen not to provide state-wise RNR calculations.

5.97 But we undertake an illustrative exercise in Box 2 to show that anxieties of some of the major States may be unwarranted and that the compensation requirements may well turn out to be minimal. We project the likely future tax base of goods consumption using NSS data and likely future tax base of services by estimating urban incomes. We find that the share of the future tax base for States is very similar to their share in current GST revenues. For those States that receive a large share of current revenue because they have a large manufacturing base, their anxieties can be reassured on the grounds that such States are also likely to have a large base in services going forward.

5.98 Notwithstanding the above, there need to be clear rules on compensation to avoid glitches and controversy in the implementation of GST and to reassure the States so that they too can embark on GST implementation with enthusiasm and confidence.

5.99 Compensation will have to be provided for the shortfall between the actual level of collection (RA) in any particular year and the collection level to be protected (RP) in that year. The challenge will be in identifying the latter.

5.100 Under the system used to provide compensation for the transition to the state VAT, the formula used for compensation was the following: the three best annual growth rates of *revenue* collected in the previous six years was taken, was averaged, and then used for the calculation of RP, namely the future revenue to be protected. This method had the virtue of simplicity because state governments knew in advance the actual revenue they could expect to receive in the coming year and could hence plan accordingly.

5.101 Going forward, there might be one issue in applying the same methodology to GST compensation. In some of the last five years, revenues witnessed unusually high levels of growth because of the combination of high real GDP growth and high inflation. The average of the highest three revenue growth figures for the last three years (for the States as a whole) was over 16.8 per cent; and the corresponding average of highest three nominal GDP growth figures was 13.4 per cent.

5.102 Looking ahead, this picture could change dramatically both because real GDP growth has slowed but more important because inflation has declined dramatically and is expected to remain low. For example, in FY2016, nominal GDP growth is expected to be about 9.5 per cent and the forecast for the period ahead is in the range of 11 per cent and rising slowly on expectations of a pick-up in real GDP growth. Now, if historical buoyancy prevails, this will lead to substantially lower collections which would be normal and which should not be attributed to the GST and hence would not necessarily need to be compensated.

5.103 Hence, the formula for GST compensation going forward would have to take account of two factors: on the one hand, erring on the side of generous compensation would provide reassurance and certainty to the States on revenue availability and help them better plan their expenditures; on the other hand, the formula should take account of the dramatically changed outlook for nominal GDP and hence revenue growth for both the Centre and the States.

Other issues

5.104 The Committee has not been asked explicitly to analyze all issues relating to GST, some of which have been reflected in the Constitutional Amendment Bill. But the Committee would be remiss if it did not state its views on some important issues, for example, the exclusion of alcohol from the scope of taxable items in the Constitutional Bill. Political compulsions may require the exclusion of alcohol in the current conjuncture. But this is at odds with the aim of improving governance and reducing rent-seeking which is pervasive in relation to alcohol.

5.105 Leaving that aside, there is still little reason to exclude alcohol constitutionally. Far better to leave it in, and to allow the Centre and States at some future date to decide collectively to

bring alcohol within the GST net—like foreseen for petroleum products. To leave it out is to rule out even the possibility of choice for all time which cannot be good policy.

5.106 Another misconception pervades discussions of bringing alcohol in the GST. Bringing alcohol into the scope of the GST need not take away the right of States to tax alcohol. As is envisaged for tobacco, it is perfectly possible—and indeed desirable—for some basic tax to be levied on alcohol within the GST, and allow States to levy top-up sin taxes on alcohol for other revenue or social reasons. In other words, bringing alcohol within the scope of GST would not curtail States' fiscal autonomy in this area.

5.107 The same applies to real estate which is also a major arena of rent-seeking. Bringing electricity into the GST could also improve the competitiveness of Indian manufacturing. And, as argued in detail in Box 3, reducing the exemptions on health and education services in the GST would be more consistent with social policy objectives than the status quo.

VI. CONCLUSIONS

6.1 This is a historic opportunity for India to implement a game-changing tax reform. Domestically, it will help improve governance, strengthen tax institutions, facilitate "Make in India by Making One India," and impart buoyancy to the tax base. It will also set the global standard for a value-added tax (VAT) in large federal systems in the years to come.

6.2 The GST has been an initiative that has commanded broad consensus across the political spectrum. It has also been a model of cooperative federalism in practice with the Centre and states coming together as partners in embracing growth and employment-enhancing reforms. It is a reform that is long awaited and its implementation will validate expectations of important government actions and effective political will that have, to some extent, already been "priced in."

6.3 Getting the design of the GST right is therefore critical. Specifically, the GST should aim at tax rates that protect revenue, simplify administration, encourage compliance, avoid adding to inflationary pressures, and keep India in the range of countries with reasonable levels of indirect taxes.

6.4 There is first a need to clarify terminology. The term revenue neutral rate (RNR) will refer to that single rate, which preserves revenue at desired (current) levels. In practice, there will be a structure of rates, but for the sake of analytical clarity and precision it is appropriate to think of the RNR as a single rate. It is a given single rate that gets converted into a whole rate structure, depending on policy choices about exemptions, what commodities to charge at a lower rate (if at all), and what to charge at a very high rate. The RNR should be distinguished from the "standard" rate defined as that rate in a GST regime which is applied to all goods and services whose taxation is not explicitly specified. Typically, the majority of the base (i.e., majority of goods and services) will be taxed at the standard rate, although this is not always true, and indeed it is not true for the states under the current regime.

6.5 Against this background, we would draw a few important conclusions.

- Because identifying the exact RNR depends on a number of assumptions and imponderables; because, therefore, this task is as much soft judgement as hard science; and finally also because the prerogative of deciding the precise numbers will be that of the future GST Council, this Committee has chosen to recommend a range for the RNR rather than a specific rate. For the same reason, the Committee has decided to recommend not one but a few conditional rate structures that depend on policy choices made on exemptions, and the taxation of certain commodities such as precious metals. The summary of recommended options is provided in Table 10 below.

Table 10: Summary of Recommended Rate Options (in per cent)

	RNR	Rate on precious metals	"Low" rate (goods)	"Standard" rate (goods and services)	"High/Demerit" rate or Non-GST excise (goods)
Preferred	15	6	12	16.9	40
		4		17.3	
		2		17.7	
Alternative	15.5	6	12	18.0	40
		4		18.4	
		2		18.9	

Source: Committee's calculations.
Note : All rates are the sum of rates at center and states

- On the RNR, the Committee's view is that the range should between 15 percent and 15.5 percent (Centre and states combined) but with a preference for the lower end of that range based on the analysis in this report. The Committee has noted the risks both of setting rates that are marginally high and low. On balance, however, it is easier to address the consequences of erring on the side of marginally low rates.
- On structure, in line with growing international practice and with a view to facilitating compliance and administration, India should strive toward a one-rate structure as the medium-term goal.
- Meanwhile, we recommend a three-rate structure. In order to ensure that the standard rate is kept close to the RNR, the maximum possible tax base should be taxed at the standard rate. The Committee would recommend that lower rates be kept around 12 per cent (Centre plus states) with standard rates varying between 17 and 18 per cent.
- It is now growing international practice to levy sin/demerit rates—in the form of excises outside the scope of the GST--on goods and services that create negative externalities for the economy. As currently envisaged, such demerit rates—other than for alcohol and petroleum (for the states) and tobacco and petroleum (for the Centre)—will have to be provided for within the structure of the GST. The foregone flexibility for the center and the states is balanced by the greater scrutiny that will be required because such taxes have to be done within the GST context and hence subject to discussions in the GST Council. Accordingly, the Committee recommends that this sin/demerit rate be fixed at about 40 percent (Centre plus states) and apply to luxury cars, aerated beverages, paan masala, and tobacco and tobacco products (for the states).
- This historic opportunity of cleaning up the tax system is necessary in itself but also to support GST rates that facilitate rather than burden compliance. Choices that the GST Council makes regarding exemptions/low taxation (for example, on gold and precious metals, and area-based exemptions) will be critical. The more the exemptions that are retained the higher will be the standard rate. There is no getting away from a simple and powerful reality: the broader the scope of exemptions, the less effective the GST will be. For example, if precious metals continues to enjoy highly concessional rates, the rest of the economy will have to pay in the form of higher rates on other goods, including essential ones. As the table shows, very low rates on precious metals would lead to a high

standard rate closer to 20 percent, distorting the economy and adding to inflationary pressures. On the other hand, moderately higher taxes on precious metals, which would be consistent with the government's efforts to wean consumers away from gold, could lead to a standard rate closer to 17 percent. This example illustrates that the design of the GST cannot afford to cherry pick—for example, keeping a low RNR while not limiting exemptions--because that will risk undermining the objectives of the GST.

- The GST also represents a historic opportunity to rationalize the tax system that is complicated in terms of rates and structures and has become an "Exemptions Raj," rife with opportunities for selectivity and discretion. Tax policy cannot be overly burdened with achieving industrial, regional, and social policy goals; more targeted instruments should be found to meet such goals, for example, easing the costs of doing business, public investment, and direct benefit transfers, respectively; cesses should be reduced and sparingly used. Another problem with exemptions is that, by breaking up the value-added chain, they lead in practice to a multiplicity of rates that is unpredictable, obscured, and distortionary. A rationalization of exemptions under the GST will complement a similar effort already announced for corporate taxes, making for a much cleaner overall tax system.
- The rationalization of exemptions is especially salient for the center, where exemptions have proliferated. Indeed, revenue neutrality for the center can only be achieved if the base for the center is similar to that of the states (which have fewer exemptions—90 products versus 300 for the center). If policy objectives have to be met, instruments other than tax exemptions such as direct transfers could be deployed.
- The Committee's recommendations on rates summarized in the table above are all national rates, comprising the sum of central and state GST rates. How these combined rates are allocated between the center and states will be determined by the GST Council. This allocation must reflect the revenue requirements of the Centre and states so that revenues are protected. For example, a standard rate of 17% would lead to rates at the Centre and states of say 8 percent and 9 percent, respectively. The Committee considers that there are sound reasons not to provide for an administration-complicating "band" of rates, especially given the considerable flexibility and autonomy that states will preserve under the GST, including the ability to tax petroleum, alcohol, and other goods and

services. Even in the future, when these products are brought into the GST, states should and will retain fiscal autonomy by being able to levy top-up taxes on demerit goods.

- Implementing the GST will lead to some uncharted waters, especially in relation to services taxation by the states. Preliminary analysis in this report indicates that there should not be large shifts in the tax base in moving to the GST, implying that overall compensation may not be large. Nevertheless, fair, transparent, and credible compensation will create the conditions for effective implementation by the states and for engendering trust between the Centre and states;
- The GST also represents a historic opportunity to Make in India by Making One India. Eliminating all taxes on inter-state trade (including the 1 percent additional duty) and replacing them by one GST will be critical to achieving this objective;
- Analysis in the report suggests that the proposed structure of tax rates will have minimal inflationary consequences. But careful monitoring and review will be necessary to ensure that implementing the GST does not create the conditions for anti-competitive behavior;
- Complexity and lags in GST implementation require that any evaluation of the GST—and any consequential decisions—should not be undertaken over short horizons (say months) but over longer periods say 1–2 years. For example, if six months into implementation, revenues are seen to be falling a little short, there should not be a hasty decision to raise rates until such time as it becomes clear that the shortfall is not due to implementation issues. Facilitating easy implementation and taxpayer compliance at an early stage—via low rates and without adding to inflationary pressures--will be critical. In the early stages, if that requires countenancing a slightly higher deficit, that would be worth considering as an investment which would deliver substantial long-run benefits. Moreover, the counterpart of revenues falling short will be gains to consumers, especially poorer ones.
- Finally, the report has presented detailed evidence on effective tax burdens on different commodities which highlights that in some cases they are inconsistent with policy objectives. It would be advisable at an early stage in the future, and taking account of the experience of the GST, to consider bringing fully into the scope of the GST commodities that are proposed to be kept outside, either constitutionally or otherwise. Bringing alcohol and real estate within the scope of the GST would further the government's objectives of

improving governance and reducing black money generation without compromising on states' fiscal autonomy. Bringing electricity and petroleum within the scope of the GST could make Indian manufacturing more competitive; and eliminating the exemptions on health and education would make tax policy more consistent with social policy objectives.

6.6 There is a legitimate concern that policy should not be changed easily to suit short term ends. But there are enough checks and balances in the parliamentary system and enough pressures of democratic accountability to ensure that. Moreover, since tax design is profoundly political and contingent, it would be unwise to encumber the Constitution with the minutiae of policy that limits the freedom of the political process in the future: the process must retain the choice on what to include in/exclude from the GST (for example, alcohol) and what rates to levy. The credibility of the macroeconomic system as a whole is undermined by constitutionalising a tax rate or a tax exemption. Setting a tax rate or an exemptions policy in stone for all time, regardless of the circumstances that will arise in future, of the macroeconomic conditions, and of national priorities may not be credible or effective in the medium term. This is the reason India—and most credible polities around the world--do not constitutionalise the specifics of tax policy. The GST should be no different.

6.7 The nation is on the cusp of executing one of the most ambitious and remarkable tax reforms in its independent history. Implementing a new tax, encompassing both goods and services, to be implemented by the Centre, 29 states and 2 union territories, in a large and complex federal system, via a constitutional amendment requiring broad political consensus, affecting potentially 2-2.5 million tax entities, and marshalling the latest technology to use and improve tax implementation capability, is perhaps unprecedented in modern global tax history. The time is ripe to collectively seize this historic opportunity.

Box 1. Estimating the association between rates and compliance

Many considerations will go into the determination of the revenue neutral rate, but one of them will also be the impact of rates on compliance. Theory suggests that increases in rates will lead to reduced tax compliance. But is there any evidence from the experience of VAT itself?

Based on data provided by the IMF, the Committee undertook a simple econometric analysis to test whether tax rates and compliance were correlated. Data was provided for 86 countries, developed and developing. Compliance was measured in two ways: collection efficiency (CE) and revenue productivity (RP). CE is measured as:

$$C\text{-eff} = R/(S*C)$$

where R stands for revenue collected, S is the standard rate and C is total final consumption net of VAT collections. The denominator is a measure of the potential revenues that ought to be collected and the numerator actual collections. C-efficiency is simply a measure of comparing actual against potential. Revenue productivity (RP) simply replaces final consumption with GDP in the denominator.

Simple regressions of the following form were run:

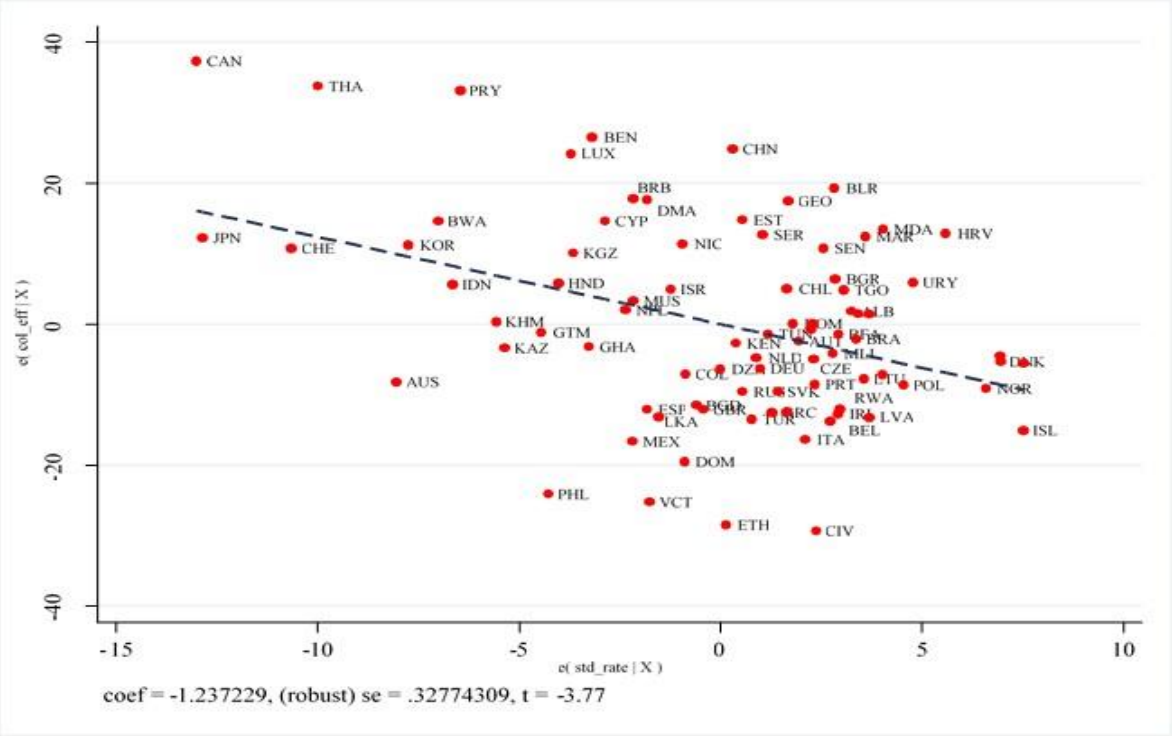
$$CE\ (RP) = \alpha + A*S + B*\ln(Y) + DUM + \mu$$

Where the left hand side is either collection efficiency or revenue productivity; α is the intercept term; S is the standard rate; Y is the per capita GDP of a country which controls for other factors—such as quality of tax administration--that can affect collection efficiency; and DUM is a dummy for country groups arranged according to income to again control for certain group characteristics that might affect compliance; and μ is the standard error term.

The regressions are shown in Tables 1 and 2. There is a very strong association between the standard tax rate and all measures of compliance even after controlling for per capita GDP and group dummies (Figure 1). For example, for collection efficiency the coefficient (A) is about (-) 1.22. This suggests that a 1 percentage point increase in the standard rate worsens

compliance by 1.22 percentage points.[27]

Figure 1: Regression of collection efficiency on standard rate, after controlling for per capita GDP and group dummies for income groups



Source: Committee's calculation

This has an important implication for the RNR in India. It suggests that a lower RNR will not lead to as much of a loss in revenue as a simple calculation suggests. For example, if the standard rate were reduced by say 4.1 percentage points in weighted terms that should increase C-efficiency by 4.1 percentage points (using the conservative regression estimate of 1 rather than 1.22) which amounts to about 9.3 per cent given the current C-efficiency ratio of 0.44. Better compliance could therefore fetch potential additional revenues of nearly Rs 4.3 lakh crore.

[27] The same regressions were carried out for more recent data (for the year 2012) for a set of 36 countries. The results are similar with a strong and significant negative association between collection efficiency and standard rates, although the coefficient is slightly smaller (close to 1).

Table 1: Regression Results of Collection Efficiency

	(1) Estimation 1	(2) Estimation 2
Log per capita GDP	7.16***	7.20**
	(1.40)	(2.89)
Standard Rate	-1.24***	-1.22***
	(0.33)	(0.35)
Constant	2.15	-0.64
	(13.04)	(24.85)
Income Group FE	No	Yes
Observations	84	84
Adjusted R^2	0.293	0.276

Standard errors in parentheses
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$
Collection efficiency (Revenue/(Standard Rate* Consumption))

Table 2: Regression Results of Productivity

	(1) Estimation 3	(2) Estimation 4
Log per capita GDP	2.66*	1.02
	(1.34)	(2.46)
Standard Rate	-0.81***	-0.85***
	(0.29)	(0.31)
Constant	27.87**	38.29*
	(12.53)	(21.51)
Income Group FE	No	Yes
Observations	84	84
Adjusted R^2	0.088	0.076

Standard errors in parentheses
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$
Productivity (Revenue/(Standard Rate* GDP))

Box 2: Will There be Large Compensation Requirements? An Illustrative Exercise

The GST will necessarily entail some shift in revenues from production to consumption and from manufacturing toward services. This shift is desirable but has raised concern especially from the major manufacturing producing States that they might suffer some loss in revenues. As noted earlier, it is nearly impossible to construct reliable tax bases—both new and old—at the level of the States, especially for consumption of services. Hence, this report has refrained from estimating state-specific RNRs.

But we can shed some light on this question by looking at proxies for the likely future tax base of States. This future tax base will be based on consumption rather than production. So, we need to find proxies for the States' share in consumption of taxable goods and taxable services. We turn to the NSS—which measures consumption--to calculate taxable goods consumption. We define each state's share in taxable consumption of goods as S^G_i where G the superscript refers to goods and i the subscript refers to the State.

Since it is difficult to distinguish taxable from non-taxable services in the NSS, we turn to urban incomes as a proxy for taxable services. After all, urban incomes will be a key determinant of spending on business-to-consumer (B2C) services such as financial services, restaurants, advertising, real estate, professions services etc all of which are taxable.

We compiled data on urban populations of the major States and on urban income, the latter by multiplying urban population by state per capita domestic product[28]. This will under-estimate urban incomes to the extent that urban per capita incomes are disproportionately greater than rural per capita incomes especially in more urbanized States. We define, analogously to goods, each state's share in total consumption of services as S^S_i.

Then each state's share of the total potential GST tax base (goods and services) can be defined as:

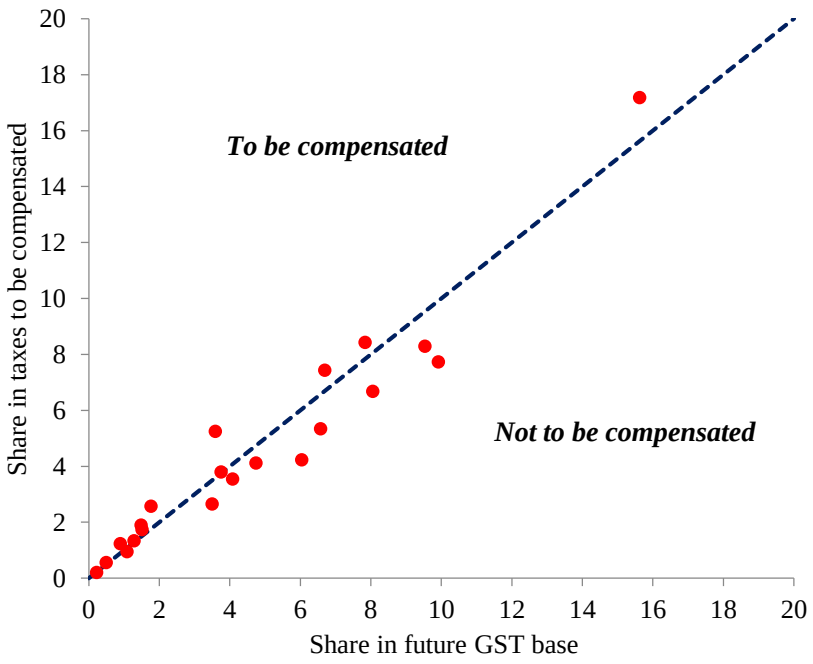
$S^T i = \alpha S^G_i + (1-\alpha) S^S_i$

[28] At current market prices for 2011-12.

Where α refers to the share of goods and (1-α) the share of services, respectively in the overall GST base.

We plot in Figure 1 below, each state's share in the total GST revenues to be compensated (on the y-axis) (current tax base) against the state's share of total potential GST tax base (future tax base) as defined above (on the x-axis). In this figure the weights assigned to goods and services are 45 per cent and 55 per cent, respectively. A 45 degree line is also fitted to the chart which shows points on the line where the current and future tax base are likely to be the same. All points above the line denote States that will potentially need to be compensated. The chart has two interesting and potentially significant implications for compensations:

Figure 1: Share of revenues to be compensated and share of potential GST base



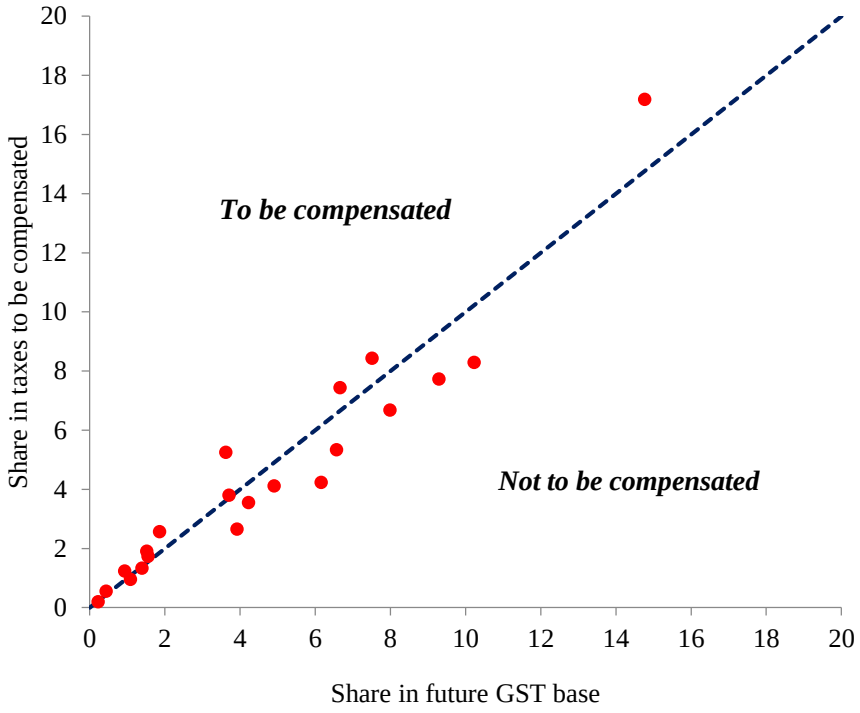
Source: NSS, CSO and Committee own calculations

- First, most of the points are below or close to the 45 degree line, and where they are above the line, they are not very far above it. This suggests that on aggregate there will not be a huge re-shuffling of taxable revenues
- Second, the largest manufacturing States and the ones that currently get a lion's share of revenues either lie below the line, suggesting that far from needing compensation they

will actually be benefitting from the move to the GST; or in the one case, where it is above, it is actually very close to the line, implying a small compensation requirement.

We do a sensitivity analysis by changing the goods and services base to 50-50 and the results are shown in Figure 2. In this case, too, the main conclusions described above continue to hold.

Figure 2: Share of revenues to be compensated and share of potential GST base (robustness)



Source: NSS, CSO and Committee own calculations

In sum, we cannot be sure that the GST will lead to large shifts in the tax base away from the advanced manufacturing States but the evidence presented above should provide some reassurance that these shifts will not be seriously adverse for the country as a whole and also for the large manufacturing States because they will also be substantial consumers of services.

Box 3. Evidence-based tax policy? Incorporating social policy objectives in the GST

Once the RNR is known, it has to be operationalized by making decisions relating to: exemptions, the structure of rates, including how many rates to have, and whether to have a separate lower rate for merit/essential goods and a higher rate for de-merit or sin goods; and the threshold below which firms will not have to be part of the GST tax administration.

Typically, the assignment of goods to different tax categories will be motivated by considerations of equity. Goods that account for a large share of expenditures of poorer households—for example, food--will either be exempt or placed in a lower rate category. But these decisions have to be underpinned by analysis and evidence. This section undertakes such an analysis and then compares the outcome of this analysis with current policy. In other words, the question is whether current tax policy is consistent with social objectives in relation to a number of key commodity groups:

- Food and beverages (and sub-groups)
- Clothing
- Fuel and light (excluding power)
- Medicines
- Gold and precious metals
- Power
- Education
- Non-medical health
- Alcohol
- Tobacco

These groups have been chosen because they are of special interest in the context of the GST: either they are exempted (food, gold (Centre), power, non-medicine health, and education); or they are taxed at a lower rate (clothing, gold (States), medicines); or they are charged at very high, demerit rates (petroleum, tobacco, and alcohol).

Two concepts provide the starting point for making policy decisions based on evidence: equity and effectiveness.

Equity allows for categorization of goods as merit/essential/sensitive (hereafter "merit"), etc.

Goods that account for a high share of expenditure of the poorer households will typically be merit goods; and a related feature will be that this share will decline for richer households.

But even if a good is a merit good, warranting a lower or zero rate, policy makers will want to ask how effective that decision will be based on how well targeted the implicit subsidy will be, where the implicit subsidy is the difference between taxing a good at the standard tax rate and the lower or zero rate: if the poor also account for a large fraction of total expenditure on the merit good, then the subsidy will be well targeted; if, on the other hand, they account for a small share of the total expenditure, then the subsidy decision will come with the cost that most of the benefits of the subsidy will accrue to the relatively better off. [29]

So, one can think of a commodity-wise benefit-cost analysis for determining the rate structure. The benefit could be thought of as the subsidy rate for the target group, say the bottom four deciles of the population.[30] The subsidy essentially measures how much the expenditure of the target group would be increased by exempting a good rather than taxing it at the standard rate.

The cost could be measured in relation to the principle of effective targeting. The cost is simply that proportion of the total subsidy for any particular good that does not reach the target group and instead "leaks" to the non-target group, in this case, the top 6 deciles.

We depict this benefit cost analysis graphically in Figure-1 for different group of commodities. We want to focus on the groups (and related sub-groups) that are going to be the focus of important policy choices in the GST mentioned earlier. The data are from the 2011-12 thick NSS household expenditure survey.

The vertical axis measures the benefit—the effective subsidy rate, which is the subsidy as a share of the total expenditure of the target group. The horizontal axis depicts the costs measured as the share of total subsidy on any given product that leaks to the non-target group.

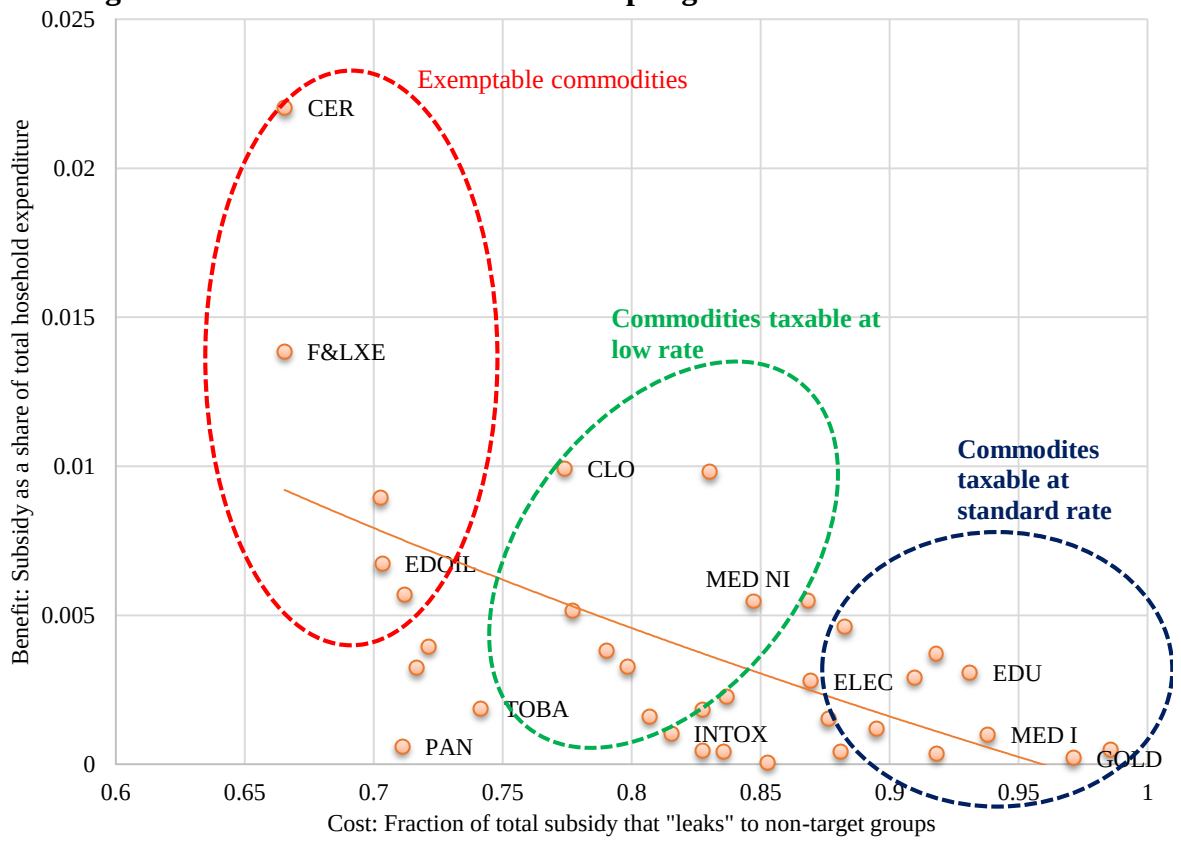
Three circles are drawn to highlight desirable evidence-based choices: commodities in the north-

[29] Ideally, of course, if governments had well-designed transfer programs, they would achieve the desired objective of helping poorer households by providing cash transfers and sparing the tax system from having to attain equity objectives. In practice, this is not always possible and in India DBTs are still a work-in-progress. See Keen (2015).

[30] The analysis can be re-worked for other target groups, say the bottom 3 or 5 deciles.

west corner of the graph circled in red are socially worthy of exemption because the benefits are high and the costs are low. These include cereals, vegetables, pulses, edible oils, and fuel and light (excluding electricity). Conversely, commodities in the south-east corner of the graph, circled in blue are less worthy of being treated favorably in tax terms because the benefits are low and the costs high. These include gold, non-medicine health services, education, and power. In the middle are commodities, circled in green, that lie somewhere in between that are perhaps worthy of being included at the lower tax rate. These include milk, poultry products and perhaps clothing.[31]

Figure 1- Benefit Cost Calculus of Exempting Selected Commodities from GST



CER: Cereals
F&LXE: Fuel & Light ex. Electricity
MED I: Health except Medicine
OHCs: Other household consumables
S&S: Salt and sugar
EDU: Education
ELEC: Electricity
TOBA: Tobacco
INTOX: Intoxicants
PAN: Pan
CLO: Clothing
MED NI: Medicine
TOI: Toilet articles
GOLD: Gold
CONV: Conveyance

Source: NSS 68th round data

[31] Strictly speaking, the benefit calculation should deduct the extra burden on the target group because the RNR will go up as a result of the implicit subsidy. The RNR will go up to a greater extent the more the leakage that occurs to non-target households.

The data that underlie this graph are presented in Table 1 for the commodities of policy interest. In each table, the share of each commodity in total expenditure of the target group (bottom 40 percent, B40) and the non-target group (the top 60 percent, T60) is presented. This is a measure of equity.

Table 1: Categorizing Commodities according to Equity and Effectiveness Criteria

Commodity	***EQUITY***: Expenditure on commodity as share of total expenditure on all commodities		***EFFECTIVENESS****: Share of total expenditure on commodity accounted for by target group*	
	Bottom 4 deciles	*Top 6 deciles*	*Bottom 4 deciles*	*Top 6 deciles*
Food	38.3%	25.9%	24.7%	75.3%
excluding PDS subsidy	36.5%	25.5%	24.2%	75.8%
Cereals	15.7%	7.0%	33.4%	66.6%
excluding PDS subsidy	14.2%	6.6%	30.1%	62.8%
Fuel & Light ex. Electricity	9.9%	4.4%	33.5%	66.5%
excluding PDS subsidy	9.0%	4.1%	32.5%	67.5%
Clothing	7.1%	5.4%	22.6%	77.4%
Medicines	4.5%	5.0%	16.8%	83.2%
Education	2.2%	6.6%	6.9%	93.1%
Electricity	2.0%	3.0%	13.1%	86.9%
Beverages(non-alcoholic)	1.6%	1.9%	16.3%	83.7%
Tobacco	1.3%	0.9%	25.8%	74.2%
Intoxicants including pan	1.2%	1.0%	21.3%	78.7%
Health (except medicine)	1.0%	2.5%	7.9%	92.1%
Gold	0.2%	1.2%	2.9%	97.1%

Note:
1) The consumption categories are arranged in the decreasing order of benefit-cost ratio.
2) The category "food" includes cereals, cereal substitutes, pulses and products, egg, fish and meat; vegetables, fruits, processed food, packaged food, salt and sugar
3) The category "Fuel and light excluding PDS subsidy excludes the consumption of Kerosene (PDS)
4) The category Cereals excluding PDS subsidy excludes consumption of Rice-PDS and Wheat/Atta-PDS

Source: NSS

The table 1 also presents the share of the total expenditure on a commodity group that is accounted for by the target and non-target groups. This provides a measure of effectiveness because the greater the expenditure accounted for by the non-target group the more the subsidy will not reach the target group.

We can then compare how these commodities should be treated in terms of equity and effectiveness and how they are in terms of the current effective tax rate on these same commodities (Figure 2).

When measuring the tax on an exempted good, it is important to remember that the effective tax need not be zero. If a good is exempted, it will not be able to claim tax credits on the taxes embedded in it by way of the inputs that have gone into it. If rice flour is exempted, for example, the tax paid on milling will be reflected in the price paid by the final consumer. This, of course, would not be the case, if that good were charged a lower tax rate because in this case input tax credits would be availed of. In other words, the difference between a good being taxed at a lower rate say, 5 per cent and exempted could be less than 5 per cent (5-0) because of embedded taxes.[32]

How do we measure embedded taxes? As part of inputs for this Committee, the World Bank, as an illustrative exercise, computed the embedded taxes for 11 categories of goods for the bottom 4 and top 6 deciles based on input-output tables and detailed data for five large States: Andhra Pradesh, Gujarat, Kerala, Karnataka, and Tamil Nadu.[33] In Figure 2, the benefit cost ratio of exempting a good is shown on the Y axis and the effective tax rate on the X axis. In principle, the higher the benefit cost ratio, the lower should be the tax. The line of best fit is downward sloping, indicating that tax policy is broadly sensible.

Food, fuel, and clothing

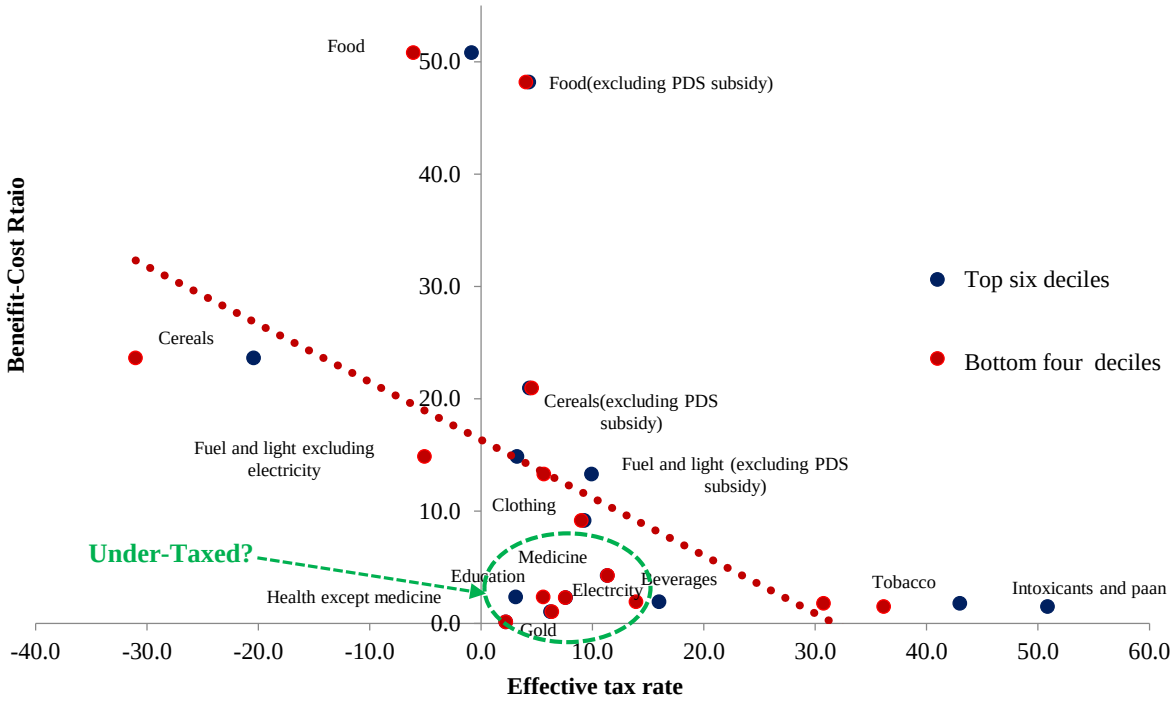
A number of commodities are treated fairly under the current system. Thus, merit goods such as

[32] So, for example, if the embedded taxes on a commodity is e (expressed in per cent), and t is the standard rate, then the effective subsidy rate of exempting a good is (t-e)/E, where E is the total expenditure of the target group. In contrast, if that good is taxed at the lower rate l, then the subsidy rate is (this ratio should be (t-(l-e))/E instead) because input tax credits will be available on the embedded taxes.

[33] The calculations in Figure 2 are somewhat tentative and subject to a number of caveats. There remains some uncertainty about the assignment of tax rates to commodities in the data in the National Sample Survey, CPI and the Input-Output table. This would have to be reviewed and refined in future work. Second, a key benefit of the GST will be the ability for producers to claim input tax credits regardless of where their inputs are produced. The calculations have not fully reflected the input taxes (except for petroleum products), and given that not all input taxes can currently be claimed this means that current tax rates are effectively higher than what is reflected. Third, another factor that would increase the effective tax rates is central sales tax on the movement of goods between States. In future work, this will need to be captured. Fourth, the calculations use 2011-12 consumption aggregates but 2015 tax rates. Finally, the calculations assume not only perfect compliance, but also ignored threshold effects. Businesses below the VAT/Excise thresholds are not liable to collect tax, and this leads taxes to be over-estimated, especially for the B40 who would be more likely to shop in businesses below the threshold.

food items, especially cereals, pulses, edible oils, vegetables, and fuel are appropriately taxed at zero or low rates. Conversely, a number of demerit goods such as alcohol and tobacco are appropriately taxed at high rates.

Figure 2: Comparing "Desirable" Taxation with Actual Taxation of Selected Commodities



Source: NSS,CBEC, World Bank and Committee's calculation

In the case of food and fuels, the PDS system helps make the system fair. For example, taking account of the PDS, the effective tax rate on the bottom 4 deciles is -7.4% for food as a whole, -32% for cereals, and – 5.7% for fuel and light excluding power. The PDS has therefore served as reasonably effective social policy.

Clothing is also an anomaly but not as striking as the other commodities mentioned above. It is taxed currently at about 3-3.5 percent even though it does not constitute as large an expenditure item for the poor. On balance, it warrants being taxed at the lower rate by both the center and the States.

Gold, silver and precious metals

Currently, gold, silver and precious metals face no central excise and most States tax these

commodities at the non-standard rate of 1 per cent. There could be two reasons to under-tax these metals: for reasons of equity and to promote savings. Consider each in turn.

It turns out that there is very little achieved by way of equity and a high cost is paid for exempting these commodities from taxation. Figures 3 and Table 2 illustrate these points. Gold as a consumption good constitutes a small portion of the total expenditure of the poor and a much higher share of the expenditure of the rich (Figure 3). It has the characteristics of a luxury good than an essential good. For example, the richest decile spends 3.5 per cent of its expenditures on gold, silver, and precious metals. In contrast the poorest decile spends about 0.03 per cent.

Table 2 highlights how ineffective or unfair is the implicit gold subsidy. It shows the expenditure of these commodities of each decile as a share of total gold expenditures. The top decile accounts for over 63 per cent of total gold expenditure. And this is a serious under-estimate because we know that NSS is very ineffective at capturing the expenditure of the very rich. Cumulatively, the top 2-3 deciles account for an overwhelming share of total gold consumption and therefore appropriate nearly all the subsidy given to gold.

Table-2 Share of Different Deciles in Gold Consumption

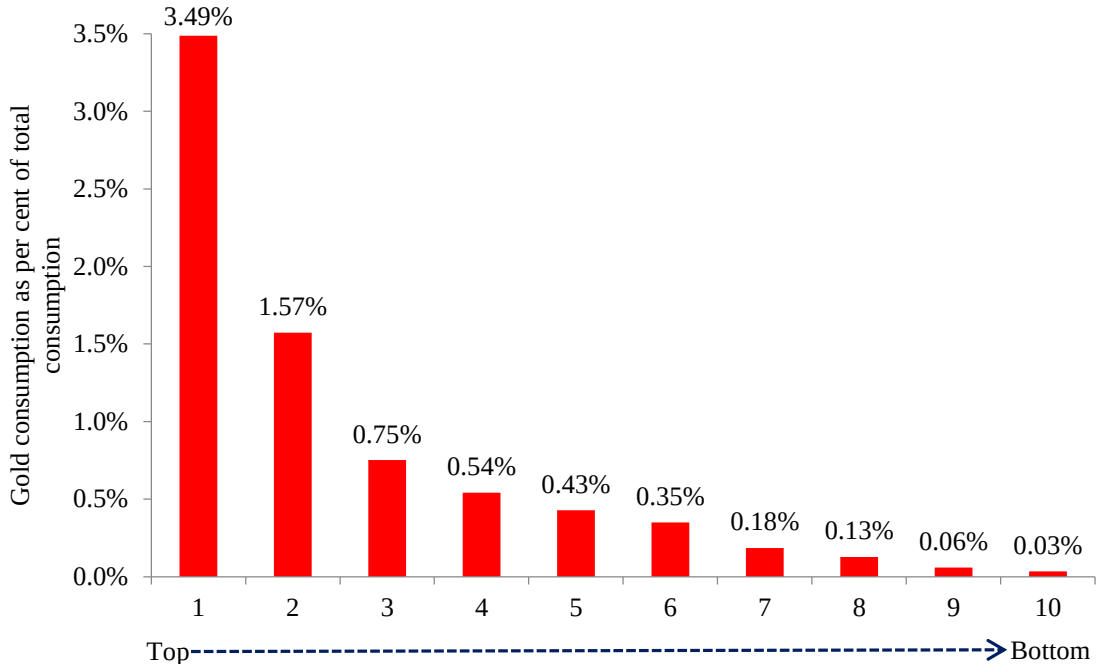
	Decile	% share in gold consumption	Cumulative share
Top	1	63.4	63.4
	2	16.4	79.7
	3	6.9	86.6
	4	4.5	91.1
	5	3.4	94.5
	6	2.6	97.1
	7	1.3	98.4
	8	0.9	99.4
	9	0.4	99.8
Bottom	10	0.2	100.0

Source: NSS, committee's calculation

A second reason for favouring gold and precious metals could be to promote savings. At a time when there were few savings instruments, it may have made sense to incentivize the purchase of

gold via a lower rate in order to promote savings. But today, this objective has been overtaken by two developments: on the one hand, the emphasis is on proper financial inclusion via the Jan Dhan Yojana which would also serve as the more effective means of promoting savings; on the other hand, gold far from being a desired savings instrument has become a problem, with large gold purchases and imports becoming a cause of macro-economic instability.

Figure 3- Share of Gold in the Total Consumption Expenditure of Different Deciles



Source: NSS, committee's calculation

Recognizing this, the government has recently tried to wean consumers away from gold via the gold monetization and gold bond schemes. It would be perverse and contradictory to use taxes to incentivize the holding of gold, and undo what the government is trying to do via these gold schemes. At the very least, tax policy should be neutral on consuming precious metals.

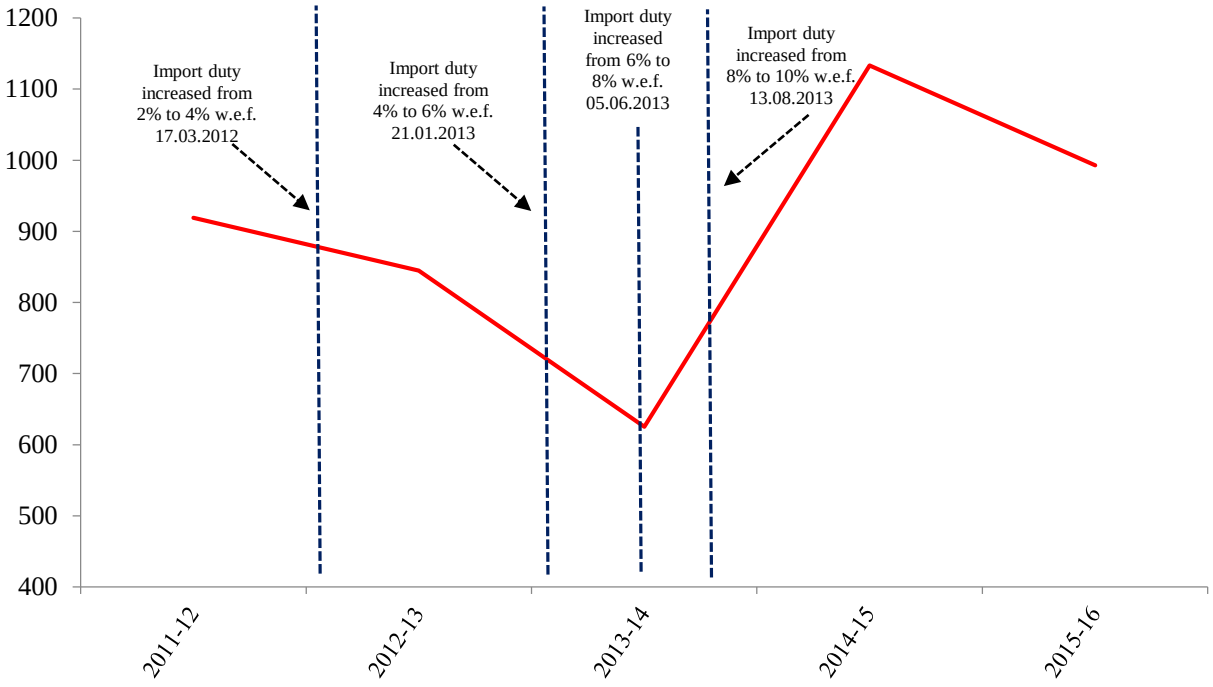
Thus, on grounds of equity and effectiveness of targeting, on grounds of consistency of policy, gold should be taxed at the standard rate (bullion can be exempted from the GST). Instead, it is taxed at 1 percent, dramatically highlighting the incongruity of policy.

The final point to make, of course, is that the more rational gold taxation can be, the lower will be the standard rate which will be critical in creating a buoyant and compliance friendly GST. As

shown in Table 8, the standard rate could come down to as much as 16.8 per cent if gold is taxed at 12 (6+6) per cent.

There might be concerns that increasing taxes on gold will lead to increased smuggling and evasion. This is a legitimate concern. But there is some evidence on how serious the impact of increased taxes might be. Import duties have been increased several times in the recent past on gold. These too are tax increases. In Figure 4 below, we plot the imports of official gold since 2011-12 and highlight the timing of import duty increases. The chart clearly shows that there is no seriously deleterious impact on gold imports in response to tariff increases. To some extent, there will be declines in consumption and imports if taxes increase but these are modest and manageable. The notion that there will be rampant evasion and smuggling if the taxation of gold is increased is not borne out by the data.

Figure 4: Gold imports in India (in MT)



Number for 2015-16 is annualized

Source: CBEC

Power, health, and education

Some key sectors have been excluded or exempt from the scope of GST. These include power, health and education probably on the grounds that these are public goods, publicly provided, and of importance to relatively poorer sections of the population. But what evidence do we have on the underlying assumptions justifying such a policy?

Figure 2 suggests that these sectors are perhaps under-taxed currently (They lie well below and to the left of the line of the best fit). The design of tax policy, thus, needs to more carefully take account of evidence. For all three sectors, the benefits of exemptions (even without taking account of any embedded taxes) for the poorer sections is small because these items constitute a small share of their total expenditure. For the top 6 deciles, these sectors are three times as important as they are for the bottom 4 deciles. Moreover, the top 6 deciles also consume such an overwhelming large share of these services (probably privately provided) that nearly all the benefits of the implicit subsidy go to the relatively well off. In the case of education, the current tax structure turns out also to be regressive, with the bottom 4 deciles effectively paying greater taxes than the top 6 deciles. These commodities deserve to be taxed more like standard goods. Yet, today, they face low taxes and they are planned to be excluded from the GST.

Thus, tax policy in the name of the poor turns out to be poor or ineffective social policy. And the cost is a tax base that is narrow, exemptions-ridden, and in the case of power, the cost also includes breaking up the value added chain because it is an important intermediate input. In the medium run, of course, direct benefit transfers or better public provision of essential services would relieve tax policy of the burden of having to meet social objectives. But even in the short run, greater attention needs to be devoted to finding better instruments of social policy, and leaving tax policy to meet broad macro-economic objectives.

Annex 1: Macro-Approach to Estimating RNR

The contemplated GST is a consumption tax of the VAT type. It would tax value added at each stage of the production-distribution chains of goods and services, with a credit/refund for taxes on inputs. The provision of a credit/refund to intermediate and capital inputs is the single most important design element of the GST; and, given the assumption of revenue neutrality, it is what mostly distinguishes it from the current system of federal/States sales and excise taxes, and what makes it a fundamental reform of the indirect tax system in India.

The revenue implication of such reform can be analyzed using a simple macroeconomic framework, written as t=R/(C+G), where: t is the tax rate to be estimated, R is the revenue target, and C and G are, respectively, private and government final consumption of goods and services. In India's case, given the revenue neutrality assumption, R is equal to revenues (both federal and state) generated from existing sales and excise taxes, which India wants to replace with the GST. Assuming that R is known, policy decisions on the GST base become the Centre of policy discussions and design, and are intimately linked to the estimation of the RNR.

National accounts data on final consumption, or supply and use tables can be used to estimate the equation above. They should yield similar results, but the latter provides more insight into how the GST is likely to affect various sectors of the economy, and is particularly relevant, if not necessary, when exemptions or lower rates are part of the options considered during the design phase.

The macroeconomic approach to estimating the RNR has a number of advantages relative to a methodology based on firm-level data, from tax returns or other sources. First, the existing system of sales and excise taxes, which combines federal and state level taxes, produce insufficient information for estimating value added at the firm level for the whole economy, mainly because it is riddled with exemptions and exceptions, and administrative data are of poor quality. National accounts data provide a more accurate picture of sectoral value-added and final consumption.

Second, firm-level data do not always separate intermediate and capital inputs, which may receive different tax treatment under the GST – the methodology by A. Modi, which relies on tax

returns of the corporate income tax, is interesting in that it uses depreciation schedules for income tax purposes as proxies for long-term capital consumption. Third, firm-level data rarely, if ever, contain a clear separation between supplies to export markets (which would be taxed at zero per cent under the GST), and supplies to domestic markets, which would be fully or partially taxed. Again, this is easily addressed with national accounts data.

One of the main disadvantages of the macroeconomic approach is that national accounts data do not reflect misreporting of the tax base and the tax liability, while tax returns do (implicitly). Another disadvantage is that sectoral analysis using national accounts data is usually limited, relative to firm-level data—where, for example, mixed supplies such as taxed/exempt by the same firm can be analyzed more effectively.

As noted above, estimating the RNR requires clarity on policies regarding the revenues to be subsumed by the GST and the GST base; but these are still the subject of some debate, and are likely to remain until late in the policy process. A useful analysis then consists in examining the potential revenue impact of the GST for India as a whole under various base scenarios, starting first with a very broad base. The macro approach outlined above was applied using the following formula:

$$PB=\sum(Y+M-X)-(1-e)\sum(N+I)$$

PB is the potential GST base; Y is domestic output, (M-X) is net imports (imports minus exports); (N+I) is consumption of intermediate and capital inputs; e is the exempt output ratio (i.e. the tax base associated with inputs used in the production of exempt final consumption); and the summation is over 140 goods and services and 66 sectors, based on 2011-12 national accounts. The following assumptions were made: (1) full compliance; (2) full pass-through of the GST into prices; (3) no behavioral response; (4) the GST has a single positive rate, and a zero rate on exports.

Under a standard scenario exempting health, education, financial intermediation and public administration, the GST potential base is 59 of GDP. Exempting basic food items in addition (essentially unprocessed foods) reduced the potential base to 55 of GDP. However, exempting petroleum or electricity increases the potential base to 67 of GDP—given that such items are

largely consumed as inputs rather than final consumption, their exemption increases the base due to cascading. These estimates suggest that the GST RNR rate, assuming maximum revenue to be replaced of 6 of GDP, ranges between 9 and 11.

Among the assumptions listed above, compliance is perhaps the most important factor to consider. Although the design of the GST is likely to improve compliance—even assuming no changes in administration, the federal/state coordination of the GST will improve information for cross-verification, especially regarding inter-state transactions—experience suggests that some losses to poor compliance and enforcement should be expected. Losses in the order of 10 to 20 of potential revenues are common in OECD countries; assuming 20 increases the range of the RNR from 9-11 to 11-14.

In summary, this analysis suggests that the GST RNR rate ranges between 10 to 15, depending on key policy choices regarding exemptions, and a compliance rate of about 80 of potential GST revenues.

Annex 2: Indirect Tax Turnover-based approach to estimating RNR

The taxes to subsumed into GST and the corresponding revenues earned are summarised in Tables 1 and 2 below. The reported revenue for the Centre includes the entire revenue from Tobacco products. However, since a part of the revenue on tobacco products is to be realized through non-rebatable excises, for the purposes of the present exercise, it is assumed that one fourth of the revenue from tobacco products would be realized from GST.

Table 1: Summary of Revenue to be compensated for all States combined

(Rs crore)

Tax Heads	Revenue to be Compensated
CST (including ITC adjustment)	38338
VAT & Sales Tax (excluding Non-VAT)	278232
Non VAT (collected on services/works contract)	1047
Entertainment Tax	2138
Lottery, Betting & Gambling	608
Luxury Tax	1946
Entry Tax not in lieu of octroi	15896
Entry Tax in lieu of octroi	20772
Toll tax not in lieu of service charges	552
Cesses & Surcharges	4742
Advertisement Tax	1
Purchase Tax	4559
ITC Reversal	11677
TOTAL	**535722**
Revenue to be Compensated (4 per cent)	**407167**
Revenue to be Compensated (2 per cent)	**368829**

To derive the tax base for GST, we have broken down the exercise into two parts – one, to derive the base corresponding to goods, we have used the revenue collections from individual States, the tax rates applicable in these States and some assumptions based on discussions with States regarding the composition of turnover taxable by the 1 per cent rate, the lower rate and the standard rate. The assumptions adopted are 2 per cent of total base taxable at 1 per cent, 56.15 per cent taxable at the lower rate and the rest taxable at the standard rate. For each state, taxes have been classified into two groups – taxes, the base of which can be added to the taxable base in GST and taxes, whose base might not add to the taxable base under GST. The first category we have VAT, entry tax not in lieu of octroi, entertainment tax. Rest of the levies are classified in the second category. This is because, taxes such as entry tax in lieu of octroi would be levied

over and above VAT or GST and hence would not provide additional base to the tax. Similar would be the case of purchase tax for instance. VAT revenue is further bifurcated into revenue from commodities which will be brought into tax under GST and those that would remain outside the base, i.e, liquor, diesel, petrol and ATF. We have used weighted average tax rates for the estimation of taxable turnover from the data on tax collected under entry tax not in lieu of octroi and VAT excluding those which would not form part of the GST, viz., liquor, diesel, petrol and ATF. Further, since state VAT is applied on a base inclusive of excise duty, the base is deflated by 1.1236 to derive the base net of taxes.[34] To this is added an estimate of the likely base from entertainment tax assuming the tax rate is 30 per cent. This gives us the base corresponding to the taxation of goods under GST. Adding across all States, we get a base for the goods part of GST.

Table 2: Revenues of the Central Government: 2013-14 (Rs crore)

S. No.	Type of duty	Shared with States	Not shared with States			Total	
		Basic	NCCD	Education cess*	Others		Tobacco Correction
1	**CE duty**						
a)	Non Pol (excluding Tobacco products)	53672	1913	2441	2675	60701	
b)	Tobacco products	14855	1319	528	1153	17855	44637.5
	Total CE duty {Non Pol} [a)+b)]	68527	3232	2969	3828	78556	
2	**CVD (Non-Pol)**	77965	479	3663	883	82990	
3	**SAD (Non-Pol)**	24837	0	0	0	24837	
4	**Service Tax**	150417	0	4319	0	154736	
5	**TOTAL**	**321746**	**3711**	**10951**	**4711**	**341119**	
6	**Total revenue to be compensated**					**327728**	
6i	**Non Tobacco revenues to be compensated**					**323264**	
6ii	**Tobacco products revenue at 10 per cent**					**4463.75**	

Note: * includes secondary and higher education cess.
Source: Provided by CBEC.

[34] The headline rate of tax for central excise was 12.36 per cent in 13-14.

Turning to the services component, to derive the total turnover of services that would be subject to GST, we have used to data sources: the activity code wise information on sales from the MCA database and the turnover derived from the service tax collection. The MCA data needed some cleaning and updation which is summarised below.

In this database, the activity codes assigned to companies was as per 2004 NIC code. On examining the data it was found that some companies did not have a valid activity code as per the NIC classification. Further, since the data for 2013-14 appeared incomplete since fewer companies where reflected for 2013-14 when compared to 2012-13, the data available for 2013-14 has been augmented by using information from 2011-12 and 2012-13. Before attempting these corrections, it would be useful to examine the data that is available for each of these years.(Table 3) The total number of firms reporting data in 2011-12 and 2012-13 appear to be much larger than those reporting for 2013-14. However, if one compares the number of firms with valid activity code and working in the supply of services, the differences are not that large – 3.56 lakh in 2012-13 as against 3.25 lakh in 2013-14. A comparison of turnovers suggests that while the overall turnovers in 2011-12 and 2012-13 are higher than those in 2013-14, the turnover of firms reporting to be service providers with a valid code is comparable to the turnover available for 2013-14.

Table 3: A comparison of MCA data

	2011-12	**2012-13**	**2013-14**
Number of Firms			
1. Firms with no valid code	34720	34059	21996
2. Firms not engaged in services	169042	175154	0
3. Firms in services	331124	356752	325013
4. Firms in service but not included due to coverage[35]	71813	76128	0
Total	606699	642093	347009
Turnover (Rs crore)			
1. Firms with no valid code	1058035	22941162	730001
2. Firms not engaged in services	50129647	14171531	0
3. Firms in services	3062734	3778774[36]	3412732
4. Firms in service but not included due to coverage	1043559	1161634	0
Total	55293975	42053102	4142732

Source: computed from data provided by Ministry of Corporate Affairs

[35] Companies associated with electricity, gas and steam and construction for instance are excluded from the analysis
[36] Data for one company appeared spurious it increased from Rs 89 crore in 2012-13 to Rs 115 lakh crore in 2013-14 and then dropped to Rs 180 crore in 2013-14. For purposes of comparison this value was corrected.

Using the concordance tables, companies first are classified as per the NIC code for 2008. Further, since it was noted that a number of companies which filed returns in 2012-13 did not file returns in 2013-14, an attempt is made to undertake some corrections to get a more comprehensive base for 2013-14. These are discussed below.

Step 1: For all companies reporting information in 2012-13 but not for 2013-14 and had a valid activity code, the data from 2012-13 has been extrapolated using the average growth rate for 2013-14 when compared to 2012-13.

Step 2: For all companies for which there was no description and/or no valid activity code, all companies with turnover above Rs 100 crore have been individually explored and classified into an appropriate activity code. These companies account for 89.88 per cent of the total turnover of uncoded companies.

Table 4 below summarises the numbers after each of these steps and Table 7 provides estimates of the size of the additional base subsequent to all corrections using MCA database.

Table 4: Computing Total Turnover for the year 2013-14

(Rupees in crore)

Steps	Turnover
1.Data provided for 2013-14	**3412732**
2.Including companies for which data from 2012-13 was extrapolated for companies with valid activity code	**3974753**
3.Turnover without activity code in 2012-13	**1511747**
4.Turnover classified through assigning activity codes in 2012-13	**1358755**
5.Taxable turnover from step 4 (in 12-13 prices)	**377204**
6.Taxable turnover in 13-14 prices	**405707**
7.Total turnover from MCA after all corrections (2013-14)	**4083607**

This information relates to companies alone. Since the tax would be payable by non-corporate service providers as well, we have used information from service tax collection to correct any shortfall from the MCA related estimates. Further, for all the services, two kinds of adjustments have been made, viz., deduction for taxable inputs used for service provision and deduction of services provided when used as inputs into taxable activities. For these corrections, the input-output table for 2006-07 has been used to derive service specific input-output ratios (see table 5).

In addition to the above, there are three sector specific corrections made in the data

1. For computer related services, it has been argued that a sizeable part of the turnover is associated with exports- this component will not add to the taxable base for GST. Based on an IBEF study, the domestic supply of computer services is 30 per cent of total sales value of computer related activities and hence this 30 per cent is included in this study for arriving at the net additional base available for taxation.
2. From decisions taken so far, it appears that taxation in the real estate sector would be limited to the extent to which it is taxed today through taxation of works contracts and pre-completion sales of properties. To incorporate this view, the turnover from service tax collections is given primacy.
3. For financial services, there are two difficulties. First, the coverage of financial services tends to be incomplete being largely limited to fee based services. The present regime of taxation of financial services within Service Tax too is of this form. There is no clear indication to suggest that a radically new approach would be adopted in the proposed GST regime. Therefore, the base corresponding to the present service tax regime is considered a more appropriate base to incorporate into GST RNR estimation in both cases- PROWESS and MCA based estimates. Second, as per the input output table, more than 80 per cent of total financial services are used as inputs. But since a significant part of financial services are in the form of embedded services, the possibility of taking input tax credit can be limited. So using the ratio of FISIM to total financial services, the extent of financial services used as inputs is reduced from 80 per cent to 50 per cent.

In addition to the above, since services provided by railways are not captured within either of these methods, the base is augmented to the extent of passenger services and transport of exempt services.[37]

[37] Transport of taxable services is not included since this would be a wash transaction – while railways would collect revenue, the taxpayer who pays this tax would claim credit against subsequent transactions.

Table 5: Input Coefficients and the Adjusted Base: MCA Database

NIC 2008	Range	Taxable i-o ratio	Share of sales used as inputs	Net additional base available for taxation
19	Bottling of LPG/CNG		1	0
35	Power transmission line infrastructure		1	0
46	Trade		1	0
47	Commission agent services & Retail outlets		1	0
491	Rail Transport	0.1582	0.8175	1553
492	Road Transport	0.1130	0.5328	24979
493	Transport via Pipeline	0.1130	0.5328	16376
50	Water Transport	0.1803	0.4931	5778
51	Air Transport	0.2265	0.4523	24462
521	Storage and Warehousing	0.0739	0.9894	1397
522	Other transport service activities	0.0624	0.6605	4910
55	Hotel and Restaurant	0.1833	0.1887	36394
61	Post & Telecommunication	0.1020	0.7716	49069
62 & 63	Computer related activities	0.0425	0.1256	116242
64, 65 & 66	Banking and other financial services	0.0361	0.6151	110927
42, 68, 77	Real Estate	0.5523	0.4202	126995
72 & 85	Research & Development and Education	0.0075	0.0112	50295
70, 73, 74, 78, 79, 80 & 82	Business services	0.0788	0.9947	7550
84	Public administration	0.0000	0.0000	3781
86	Health	0.2256	0.0231	2177
93, 94	O.com, social & personal services	0.1123	0.4170	43668
	Others / Undifferentiated services	0.0765	0.3567	118838
Total				**745390**
Total after all corrections[38]				**853235**

The total base for GST from the above methods therefore can be summarised as;

The RNR corresponding to the proposed design, with CST compensated at 2 per cent is summarised in the table below. The results presented contain four scenarios. The GST bill proposes that in the short term, the States would be enabled to levy a 1 per cent tax on inter-state

[38] Two corrections are incorporated here – correction for revenue from railways and for base corresponding to restaurants which is already included in the base for goods computed from the state side.

sale of goods. Scenario 1 presents a case where there is no such levy while scenario 2 presents the case where such a levy does exist. Further, in each of these cases, the results report an RNR for whether there is a single rate GST or a two rate GST. In single rate case, the entire base is taxed at the same rate. In the two rate case, the base currently taxed at the lower rate and 1 per cent in the States is retained in the same categories and the rest of the base is taxable at the standard rate. The lower rate is assumed to be 6 per cent for Centre and 6 per cent for the States.

Table 6: Additional base for GST: Alternative estimates

	Value (Rs crore)	As of relevant GVA
Incremental Services Base (MCA)	853235	15.87
Services GVA (2011-12 series)	5376045	
Total GST Base (MCA)	3936610	37.57
GVA Total	10477140	

Table 7: Revenue Neutral Rates: Alternative Scenarios

	2 per cent	
	Single rate	Standard rate
Scenario 1		
Centre	**8.33**	**10.42**
State (Average)	**9.37**	**12.34**
Total	17.69	22.76
Scenario 2		
Centre	**8.33**	**10.42**
State (Average)	**8.88**	**11.44**
Total	17.21	21.86

To consider an alternative case within scenario 1, if one proposes a 30 per cent tax on all transport vehicles (15 per cent for the Centre and 15 per cent for the States), and retain only the 1 per cent tax on gold and bullion, what will the RNR look like. From the National Accounts Statistics, output of manufacturing in organised sector in transport equipment is Rs 652251 crore. Assuming that value added subsequent to manufacturing, including trader margins and transport costs is 10 per cent of this value, the value of sales of transport vehicles is Rs 717476 crore.[39] Assuming that this part of the base is taxed at 15 per cent each by both Centre and States, the

[39] The figures for exports and imports for transport vehicles suggest that there is a net export in this segment. If this be the case then the downward correction in the RNR would be smaller.

RNR got the rest of the base would be 6.81 per cent for the Centre, 8.09 per cent for the States adding up to 14.91 per cent overall as compared to 17.69 per cent reported above.

To understand what these numbers indicate, it would be useful to look at the composition of the revenues from the States. The composition indicates that 19 per cent of the revenue to be compensated is not adding to the taxable base for the States. Now if the RNR exercise were to be undertaken only with the first set of taxes, then the RNR for the States would turn out to be considerably lower than if we sought to find the resources to compensate for all the other taxes in category II as well. (Table 9)

Table 8: Decomposition of state revenues

I. Revenue adding to base, of which	**297312**
a. VAT	279278
b. Entry tax not in lieu of octroi	15896
c. Entertainment tax	2138
II. Revenue not adding to the base, of which	**71517**
a. CST	38338
b. Lottery, betting and gambling	608
c. Luxury tax	1946
d. Entry tax in lieu of octroi	20772
e. toll taxes	552
f. cesses and surcharges	4742
g. Advertisement tax	1
h. purchase tax	4559

Considering the single rate case in scenario 1 above, the RNR excluding revenues from II above would be 7.55 per cent with the overall RNR being 15.88 per cent. Assuming that the rate structure for taxation in the state is 1 per cent, 5 per cent and 12.5 per cent, on bullion, lower rate and standard rate, the corresponding average statutory tax rate would be 9.05 per cent incorporating the fact that VAT is levied on a base inclusive of excise. In other words, the RNR gets placed below the average tax rate. On the other hand, if one sought to find resources for all the taxes incorporated in category II, then the RNR increases to 9.37 for the States and 17.69 overall.

Table 9: Impact on RNR of design of GST

	State rate	Overall rate
RNR excluding II	7.55	15.88
Effective tax rate for States	9.05	
RNR for finding revenue for II as well	9.37	17.69

Annex 3: Direct Tax Turnover Approach to Estimating RNR

At the producer level, the GST base is equivalent to the value added which is the value that a producer adds to his raw materials or purchases before selling the new or improved product or service. That is, the inputs (the raw materials, transport, rent, advertising, and so on) are bought, people are paid wages to work on these inputs and, when the final good or service is sold, some profit is left. So value added can be looked at from the additive side (wages plus profits) or from the subtractive side (output minus inputs).

2. Value added = wages + profits = output – input. If the tax rate on this value added is't', there are four basic forms that can produce an identical result:

1) *t* (wages + profits) : the additive – direct (accounts) method;
2) *t* (wages) + *t* (profits): the additive – indirect method[40],
3) *t* (output – input) : the subtractive – direct (accounts) method; and
4) *t* (output) – *t* (input) : the subtractive – indirect (the invoice or credit) method.

3. While there are four possible ways of levying a VAT, in practice, the method used (number 4) never actually calculates the value added; instead, the tax rate is applied to a component of value added (output and inputs) and the resultant tax liabilities are subtracted to get the final net tax payable. This is sometimes called the "indirect" way to assess the tax on value added. Since in actual practice, input tax credit will be allowed only on the basis of invoice, we use the subtractive – indirect method for calculating the GST base and the consequential, revenue neutral rate (RNR). The present exercise is an attempt to calculate the single RNR using this method. Mathematically,-

$$\text{Total Revenues (R)} = t^* (\text{output}) - t^* (\text{inputs})$$
$$= t^* (\text{output} - \text{inputs})$$
$$= t^* (\text{Base})$$
$$\text{or, Single RNR, } \mathbf{'t'} = R / \text{Base}$$

[40]This method is so called because value added itself is not calculated but only the tax liability on the components of value added is calculated.

4. For the purpose of estimating the RNR, we use the extensive producer level data in the form of profit and loss accounts available with the Income Tax Department. These accounts relate to 94**, 31, 508 business entities** for the financial year ending on 31st March, 2013 (financial year 2013-14)[41]. These entities comprise of all companies, partnership firms and proprietorships but do not include charitable organizations. The activities of these entities are classified into 10 sectors and further sub classified into 75 sub-sectors. We assume that these 94**, 31, 508 entities** constitute the universe of the GST taxpayers. This sample does not include taxpayers who have filed their tax returns in paper form[42] or engaged in charitable activities or wholly engaged in agriculture. The summary of the data is presented in Table 1.

5. The computation of the GST base under the SI method involves the following steps:

a. The receipt items on the credit side of the Profit and Loss Account, which would be liable to output tax, are identified and appropriately adjusted for indirect taxes to arrive at the **'value of supply of domestically produced goods and services (net of indirect taxes)'** (hereinafter referred to as **'net value of supply of domestically produced goods and services'**);

b. Since imports are liable to GST at the point of importation, the '**value of imports'** is aggregated with the **'net value of supply of domestically produced goods and services'** to arrive at the **'net value of domestically available goods and services'**.

c. Since exports are zero rated in a GST regime, the value of exports is reduced from the **'net value of domestically available goods and services'** to arrive at the **'net value of goods and services available for domestic consumption'** or the **'aggregate output tax base'**.

d. Similarly, the expense items on the debit side of the Profit and Loss Account, in respect of which input tax credit would be potentially available, are identified and appropriately adjusted for indirect taxes to arrive at the **'value of purchase of intermediate goods and services'.**

e. Under the GST Model, full and immediate input credit is proposed to be allowed for GST paid on purchase of capital goods in the year of purchase. Therefore, the **'value of**

[41] These accounts have been electronically filed with the Income Tax Department along with their return of income for assessment year 2014-15. They relate to returns filed up to 30th June , 2015.

[42] This does not affect the estimation results since these are very small taxpayers with low turnover; therefore, they are likely to be below the threshold limit of Rs 40 lakh envisaged under the GST.

purchase of capital goods' is aggregated with the **'value of purchase of intermediate goods and services'** to arrive at **'gross value of purchase of intermediate goods and services'.**

f. Since no input tax credit would be available in respect of purchases made from unregistered dealers, the **'value of purchases from the unregistered dealers'** is reduced from the **'gross value of purchase of intermediate goods and services'** to arrive at the **'aggregate input tax base'.**

g. Under the proposed GST Model, several sectors will be exempt from the scope of GST; these are petroleum, land component of real estate, the interest component in the financial sector, electricity, gem and jewellery, education and health services, and agricultural produce. Reflecting this, appropriate downward adjustments have been made to both the output and input tax base.

h. The threshold limit is proposed to be increased to Rs 40 lakh for both goods and services. Therefore, appropriate downward adjustment to the GST base is made to also reflect this.

i. The **'aggregate output tax base'** is reduced by the **'aggregate input tax base'** to arrive at the **'GST Base'.**

Table 1: Summary of Data

Sl. No.		Description	Unit	All Sectors	Taxable Sectors
A	**Sample Size**		in nos	9431508	9087529
B	**Net value of supply of domestically produced goods and services**				
	1	**Sale of Goods**	Rs. In crs	18055276	15180098
	2	**Sale of Services**	Rs. In crs	2818183	2764294
	3	**Other operating revenues**	Rs. In crs	896139	889567
	4	**Financial services (in case of finance company) excluding interest**	Rs. In crs	49998	49991
	5	**Commission**	Rs. In crs	63526	63480
	6	**Other income** (excluding rent, interest, dividend, profit on sale of fixed assets, profit on sale of securities liable to STT, profit on sale of other investments, agricultural income and profit on account of currency fluctuation)	Rs. In crs	336661	332841
	7	**Total**	Rs. In crs	**22219783**	**19280272**
C	**Purchases from Primary and Secondary Sector**				
	1	**Purchases** (net of refunds and duty or tax, if any) including primary goods	Rs. In crs	**14879025**	**12969557**
D	**Specified services**				
	1	Freight	Rs. In crs	300557	282113
	2	Consumption of stores and spare parts	Rs. In crs	241393	214741
	3	Repairs to building	Rs. In crs	23320	21642
	4	Repairs to machinery	Rs. In crs	99921	81977
	5	Insurance	Rs. In crs	31067	28232
	6	Workmen and staff welfare expenses	Rs. In crs	46761	43121
	7	Entertainment	Rs. In crs	1469	1401
	8	Hospitality	Rs. In crs	1385	1336
	9	Conference	Rs. In crs	2421	2306
	10	Sales promotion including publicity (other than advertisement)	Rs. In crs	55018	53507
	11	Advertisement	Rs. In crs	67801	66471
	12	Commission	Rs. In crs	65424	63818
	13	Royalty	Rs. In crs	36562	34021
	14	Professional / Consultancy fees / Fee for technical services	Rs. In crs	102244	93883
	15	Hotel , boarding and Lodging	Rs. In crs	12055	11943
	16	Traveling expenses other than on foreign traveling	Rs. In crs	69477	66842
	17	Foreign traveling expenses	Rs. In crs	12656	12387
	18	Conveyance expenses	Rs. In crs	24968	23963
	19	Telephone expenses	Rs. In crs	27831	27003
	20	Guest House expenses	Rs. In crs	499	449
	21	Club expenses	Rs. In crs	137	128
	22	Festival celebration expenses	Rs. In crs	1200	1166
	23	Gift	Rs. In crs	414	374
	24	Audit fee	Rs. In crs	7290	7042
	25	**Total** (D1 to D24)	Rs. In crs	**1231869**	**1139866**
E	**Miscellaneous Services**				
	1	Other expenses	Rs. In crs	**2211903**	**1723601**
F	**Total value of inputs on which input tax credit could be available**		Rs. In crs	**18322797**	**15833024**

6. The **"net value of supply of domestically produced goods and services"** is the aggregate of the value of (i) sale of goods; (ii) sale of services; (iii) other operating expenses; (iv) financial services (excluding interest) provided by financial companies; (v) Commission; and (vi) other income. The item 'other income' as reported in the accounts excludes rent, interest, dividend, profit on sale of fixed assets, profit on sale of securities liable to STT, profit on sale of other investments, agricultural income and profit on account of currency fluctuation. In practice, a large number of professional entities report their gross receipts under this item since they do not view themselves as carrying on business or engaged in sales. Since all goods and services (except a small negative list) are proposed to be included in the GST base, the value of supply of goods and services must therefore, include the item 'other income'. However, receipts by way of rent, dividend, interest, profit on sale of fixed assets, profit on sale of investment liable to STT, profit on other investment, profit on currency fluctuation and agricultural income have been excluded from the value of the supply of goods and services because either they represent accretion to savings or have been effectively netted out in the calculation of the input base eligible for input tax credit.

7. The "**net value of supply of domestically produced goods and services"** by all sectors is estimated to be Rs**. 222,19,873 crore** in the financial year 2013-14. However, diamond cutting, petroleum, rice and flour mill and power and energy sectors (hereafter collectively referred to as "exempt sectors") are proposed to be exempt from GST. After adjusting for the "exempt sectors", the **"net value of supply of domestically produced goods and services"** for the taxable sectors is estimated to be **Rs 192, 80,272 crore**.

8. Input tax base comprises of all goods and services used as intermediate inputs in the production of goods and services and on which output tax has been paid. The **'value of purchases of intermediate goods and services' by all sectors** is the aggregate of the expenditure on items listed in Table-1. These purchases can be classified as purchases from the primary sector, secondary sector and tertiary sector. The aggregate of purchases by all entities from these three sectors is estimated to be Rs 183, 22,797 crore during the financial year 2013-14. After adjusting for the exempt sectors, the aggregate of purchases by taxable sectors is estimated to be Rs 158, 33,024 crore.

9. In the case of **purchases from the primary sector** (i.e. primary goods) like cereals and plantation crops, no input tax credit would be allowed since these goods would be exempt from GST. If for some reason, the agriculturist falls within the scope of the GST, he would be liable to collect GST for which the purchaser in our sample would be eligible to claim input credit. However, agriculturists do not ordinarily file an income tax return, and therefore, their sales do not form part of the output base estimated above. In either case, purchases of primary goods in this exercise would not be entitled to any input tax credit. The value of such purchases by the taxable sectors is estimated to be Rs.11, 04,545 crore during the financial year 2013-14.

10. As regards **purchases from secondary sector** is concerned, they are generally made from both registered and unregistered dealers. To the extent these are acquired from registered dealers, full input tax credit would be available. However, where purchases of trading goods and raw materials are made from unregistered dealers, no input tax credit would be available since no output tax would have been paid by the registered dealer purchaser. Since there is no bifurcation of purchases from registered and unregistered dealers in the Profit and Loss Accounts, the amount of purchases from unregistered dealer needs to be estimated. Based on anecdotal information, it is estimated that 10 per cent of the purchases of trading goods and raw materials from the secondary sector is acquired from unregistered dealers on which no input credit would be available. The value of such purchases from unregistered dealers, by taxable sectors, is estimated to be Rs 11, 86,501 cores during the financial year 2013-14.

11. Similarly, value of **specific services and miscellaneous services purchased** by taxable sectors, from unregistered dealers, are estimated to be 25 per cent and 40 per cent, respectively. This translates to Rs 4, 36,619 crore and Rs 6, 89,440 crore, for specific services and miscellaneous services, respectively. The aggregate purchase of services from unregistered dealers is determined at Rs 11, 26,059 crore.

12. Accordingly, the '**value of purchases from unregistered dealers'** in 2013-14 for taxable sectors is determined at Rs.23, 12,560 crore. Since no input tax credit would be allowed

on these purchases, the same is deducted from the value of purchases of intermediate goods and services for determining the GST base.

13 In the design of the GST, several **exemptions** are envisaged. In particular, these relate to primary goods including unprocessed food, health, education, petroleum, land component of real estate, alcohol and power and energy. The impact of these exemptions has been factored in the calculation of GST. In the case of some of these exemptions, the producers are not required to file their income tax returns and, therefore, do not form part of the sample. Accordingly, while no adjustment is required to be made to the output tax base, a downward adjustment has been made to the input tax base. In all other cases, downward adjustment has been made to both the output tax and input tax base.

14. In terms of the proposed GST Model, the tax base will include **real estate** to the extent that the present scheme of taxation will continue. In the light of this, the value of rental services has been excluded from both the output tax and the input tax base. However, in the case of land, no information is separately available for the amount embedded in real estate services. Since the value of land is included in both the output tax and input tax base, this amounts to a wash transaction having no impact on the GST base.

15. Under the GST, a **threshold exemption** is proposed to be provided for registration of dealers. Since no decision has yet been taken on the level of the threshold exemption, we assume that the same will be fixed at Rs 40 lakh. Table -2 shows the distribution of taxpayers across turnover. As would be noted, there are 7442736 dealers with turnover below Rs 40 lakh accounting for a total turnover of Rs 3,00,377 crore only. Effectively, 79 per cent of the total dealers accounting for approximately 1.35 per cent of the total turnover base will remain outside the GST net. Calculated on a pro-rata basis, the value addition by these dealers is estimated at Rs 63,109 crore and the GST base is reduced accordingly.

Table 2: Distribution across Turnover

Turnover	Corporate		Non-Corporate		Total	
	Number of cases	Total Turnover (in Rs. crs)	Number of cases	Total Turnover (in Rs. crs)	Number of cases	Total Turnover (in Rs. crs)
Less than 0	0	0	0	0	0	0
Between 0 and Rs 10 lakh	356036	3186	6077867	81777	6433903	84964
Between Rs 10 lakh and Rs 25 lakh	35152	5898	647707	105854	682859	111751
Between Rs 25 lakh and Rs 40 lakh	21875	7010	304099	96652	325974	103662
Between Rs 40 lakh and Rs 1 crore	51385	34476	616905	412195	668290	446671
Between Rs 1 crore and Rs 2 crore	41455	59682	461638	653155	503093	712837
Between Rs 2 crore and Rs 5 crore	48910	158340	378129	1182874	427039	1341213
Between Rs 5 crore and Rs 10 crore	31696	226691	155235	1081062	186931	1307752
Between Rs 10 crore and Rs 100 crore	60571	1891079	124932	2800947	185503	4692026
Above Rs 100 crore	14130	12579433	4186	1146675	18316	13726108
Total	661210	14965794	8770698	7561190	9431908	22526984

16. The comprehensive GST is intended to bring within its fold **rail transport services** also. The rail transportation sector is entirely under the Ministry of Railways which is not required to file a tax return. Therefore, the sample does not include rail services. Accordingly, based on the information contained in the National Accounts (2014), the GST Base in respect of rail services is estimated at Rs 79,759 crore.

17. In the light of the aforesaid discussions, the step-wise calculation of the GST Base for base year 2013-14 is presented in Table -3. As would be noted, **the GST base is determined at Rs 58, 15,262 crore.** The implicit value addition is estimated to be 31 per cent of the total output tax base. **Consequently, the RNR for the Centre and the State is estimated to be 5.64 per cent and 6.34 per cent, respectively. The combined RNR is determined at 11.98 per cent.**

Table 3: Estimate of RNR for GST: SI Method

			Unit	Amount
A	Sample Size		Nos	9431508
B	Output Tax Base			
	1	Net value of supply of domestically produced goods and services	Rs. In crs	22219783
	2	Value of imports	Rs. In crs	1744465
	3	Total value of goods and services (1+2)	Rs. In crs	23964248
	4	Value of supply by exempt sectors	Rs. In crs	2939511
	5	Value of exports	Rs. In crs	2177633
	6	Aggregate Output Tax Base (3-4-5)	Rs. In crs	18847105
C	Input Tax Base			
	1	Value of purchase of Capital goods	Rs. In crs	606609
	2	Value of purchase of intermediate goods and services	Rs. In crs	18322797
	3	Gross value of intermediate goods and services (1+2)	Rs. In crs	18929406
	4	Value of purchases by exempt sectors	Rs. In crs	2489773
	5	Value of purchases of primary goods	Rs. In crs	1104545
	6	Value of purchases from unregistered dealers	Rs. In crs	2312560
	7	Aggregate Input Tax Base (3-4-5-6)	Rs. In crs	13022528
D	Estimated value addition by dealers below threshold exemption of Rs 40 lakhs		Rs. In crs	63109
E	Estimated value addition attributable to alcohol sector		Rs in crs	25965
F	Estimated value addition by Rail Sector			79759
G	GST Base (B6-C7-D-E+F)		Rs. In crs	5815262
H	Revenues to be compensated			
	1	Centre	Rs. In crs	327728
	2	States	Rs. In crs	368829
	3	Combined (1+2)	Rs. In crs	696557
I	Revenue Neutral Rate (RNR)			
	1	Centre	in percent	**5.64**
	2	State	in percent	**6.34**
	3	Combined	in percent	**11.98**
J	GST Productivity Ratio		11345056	0.51
K	GST C-Efficiency Ratio		9698671	0.60

Annex 4: The Possible Impact of the GST on Small Scale Industries (SSIs)

Sl. No.	Description	Existing Position	Under GST	Remarks
1	**Central tax rate**			
	a. Output	12	8	We assume that the GST rate would be 8 percent each for Centre and States
	b. Input	12	8	
2	**State tax rate**			
	a. Output	13.5	8	
	b. Input	5	8	
3	Base value of Inputs	60	60	
4	UED on Inputs	7.2	4.8	
5	Value of inputs for State VAT	67.2	60	
6	Input VAT	3.36	4.8	
7	Value Addition	32.8	32.8	We assume that the value addition is 32.8
8	Base value of Output (Row 3 + Row 7)	100	92.8	In the existing regime, the output is exempt and no input credit is allowed. UED on inputs become a cost for the taxpayer and therefore included as part of value addition.
9	UED on Output	0	7.42	The output is exempt and therefore there is no UED on output
10	Output VAT (Row 8 * Row 2a)	13.5	7.42	
11	Aggregate Value addition (excluding embedded taxes, if any) (Row 3 + Row 7)	92.8	92.8	
12	Price to the consumer (Row 8 + Row 9 + Row 10)	113.5	107.65	
13	Combined Tax Incidence (Row 9 + Row 10 plus Row 4 if Row 9 is zero)	20.7	14.85	
14	Rate of tax incidence (Row 13 divided by Row 11)	**22.31%**	**16.00%**	

Note: Under GST, the tax incidence on small-scale industries would be lower in spite of withdrawal of exemption. Similarly the price of the products manufactured by SSIs would be lower under the GST regime if the SSIs pass on the benefit of lower tax incidence to consumers. Alternatively, their profitability would increase. Therefore, the new GST regime without SSI exemption will be more beneficial to SSIs.

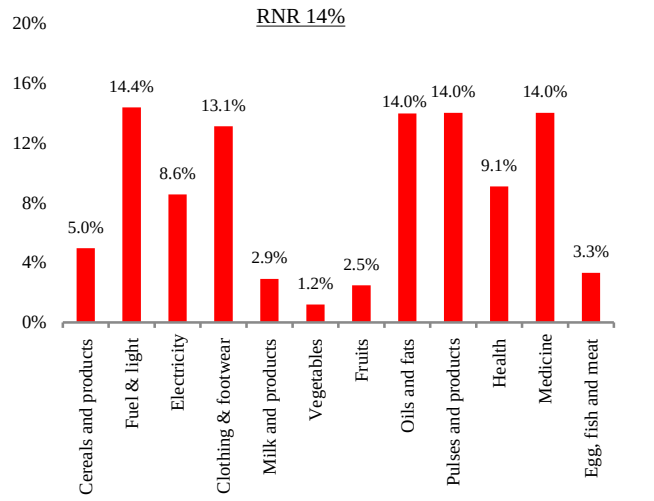
Annex 5: Effective tax rates by commodities under 3 GST scenarios

Figure 1 (Scenario 1: a single rate GST of 14%)

Figure 2 (Scenario 2: a dual-rate GST, with a low rate of 12%, a standard rate of 18%, and a high rate of 35%)

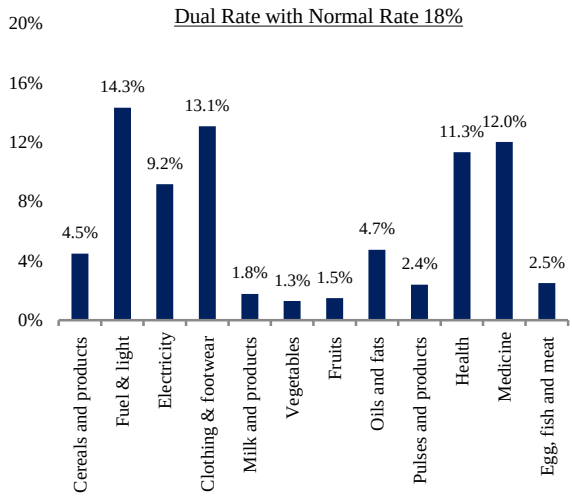
Figure 3 (Scenario 3: Scenario 2 with just the standard rate changed to 22%).

Figure 1: Effective tax rates in Scenario 1



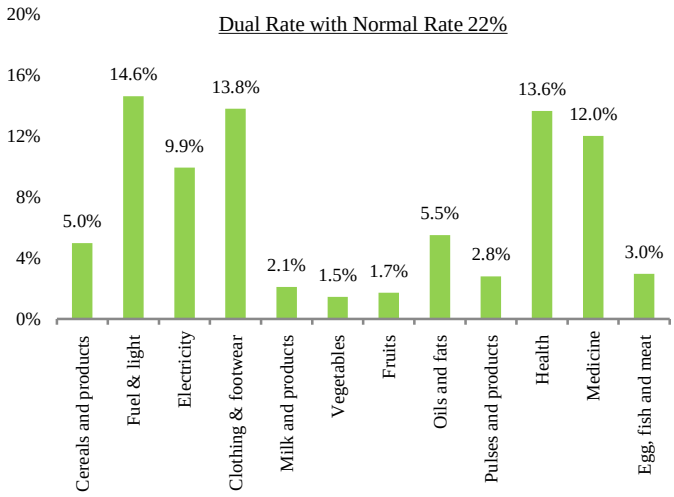
Source: CBEC, State Governments, Estimates

Figure 2: Effective tax rates in Scenario 2



Source: CBEC, State Governments, Estimates

Figure 3: Effective tax rates in Scenario 3



Source: CBEC, State Governments, Estimates

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