

Assessment of the Impact of GST Rate Restructuring on Consumers' GST Liability in India

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Abstract

The GST rates for numerous items were recently revised, with the updated rates coming into effect on 22 September 2025. In this paper, we aim to assess the impact of GST rate restructuring on consumers' GST liability using the National Sample Survey Office's Household Consumption Expenditure Survey (HCES) for 2022-23. Depending on how rate reductions translate into lower prices, consumer behaviour is expected to change. Variations in the price and income elasticities of demand for goods and services will influence the size and composition of the consumption basket. However, we employ a static framework in which the price and income elasticities of demand for goods and services are assumed to remain constant from HCES 2022-23. Under these assumptions, the findings of this study suggest that GST liability on household consumption expenditure will decrease by 10% to 16% under the new GST rate structure compared to the previous one. The average GST liability rate will fall from 5-7% under the old structure to 4-6% under the new structure. We observe a one percentage point decline in GST liability across all MPCE fractile classes under the new GST rate structure compared to the old one.

Key Words: Goods and Services Tax (GST), Rate restructuring, household consumption expenditure, India.

JEL Codes: H22, D30, E21, D63

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1. Introduction

Government expenditure on goods and services also counts as final demand, and the government bears the relevant tax burden. Since public goods and services are exempt from the GST, the ITC for taxes paid on goods and services procured by the government cannot be claimed.

Like private investment, government investments (e.g., roads, bridges, ports, education, and health facilities) are also subject to GST. Since public services are exempt from GST, the government cannot claim ITC on taxes paid on capital goods and infrastructure inputs, unlike private entities.

Some of the final demand for goods and services comes from abroad, and all exports are zero-rated (input taxes are reimbursed to exporters). A part of domestic final demand is satisfied by importing goods and services, which attracts IGST, in addition to customs duties.

Therefore, private final consumption expenditure, government final consumption expenditure, government investments, and imports form the GST base for an economy. Unlike household consumption expenditure, itemised government expenditure and investments on goods and services are not publicly accessible. Input tax credits (ITC) for imported inputs and capital goods are also adjusted against the output tax liability. A part of household consumption expenditure also includes expenditure on imported final consumer goods.

Private final consumption expenditure makes up a larger proportion of GDP (averaging 59% between 2011-12 and 2024-25 (provisional estimate)) and includes a variety of goods and services. It is also the component most likely to respond to price fluctuations. As a result, it is analysed.

The GST rates for numerous items were recently revised, with the updated rates coming into effect on 22 September 2025. In this paper, we aim to evaluate the impact of GST rate restructuring on consumers' GST liability using the National Sample Survey Office's Household Consumption Expenditure Survey (HCES) for 2022-23. Depending on how rate reductions translate into lower prices, consumer behaviour is expected to change. Variations in the price and income elasticities of demand for goods and services will influence the size and composition of the consumption basket. However, we adopt a static framework in which the price and income elasticities of demand for goods and services are assumed to remain unchanged from HCES 2022-23.

In the next section, we outline the data cleaning process and the method of assigning GST rates to various goods and services captured in the HCES 2022-23. In Section 3, we present basic statistics. The methodology for estimating GST liability, along with the results, is presented in Section 4. We conclude the paper in Section 5.

2. Sources of Data

2.1 Data Cleaning

The National Sample Survey Office's (NSSO) Household Consumption Expenditure Survey (HCES) 2022-23 covers 448 lines of items (Table 1). Among these, 51 lines are sub-totals

and totals. We have excluded seven items from the average MPCE list because they are not part of the GST base (Table 2). Therefore, we have 390 consumption items for which average MPCEs are available for rural and urban areas.

Table 1: List of Items Covered in the NSSO's HCES 2022-23

Description	No. of Items
Total Number of Items listed in the NSSO's HCES 2022-23 (A)	448
Number of Items listed as Sub-total and Totals (B)	51
Number of Items (A-B)	397
Number of Items Excluded (C)*	7
Number of Items Considered for Average MPCE (D) (A-B-C)	390

Note: *-see table 2 for the list of items.

Source: Computed by the author based on HCES 2022-23.

Table 2: List of Items Not Attracting GST

Item Code	Item Description	Group
281	cooked meals received free in workplace	289 - served processed food: sub-total
282	cooked meals received as assistance	
401	books, journals, etc.: second hand	409-education: sub-total
539	house/garage rent (imputed)	
899	other consumer taxes & cesses	
375	clothing: second-hand	379-clothing: sub-total
395	footwear: second-hand	399-footwear: sub-total

Source: As in Table 1.

2.2 Assignment of GST Rates

Assigning GST rates to 390 goods and services cannot be done without adopting a subjective approach. Price-based rate fixation and setting GST rates based on the marketing or physical features of commodities (e.g., packaging, labelling, or product composition) make it challenging to assign specific GST rates across commodities (Mukherjee, 2024; Mukherjee, 2023). Even in the new GST rate structure, it prevails.¹ To address this challenge, we classify the GST rate structure into nine categories in the old GST rate system: exempt, very low (exempt to 5%), low (5%), lower middle (5% to 12%), middle (12%), upper middle (12% to 18%), upper (18%), high (28%), and very high (>28%).² Some items (e.g., tobacco and tobacco products, aerated waters, carbonated beverages, fruit drinks, carbonated beverages with fruit juice, and certain motor vehicles) attract a GST rate of 28% plus a GST compensation cess, and we have classified them as very high. Additionally, we categorise items that are either outside the GST at present (e.g., electricity, alcoholic beverages for human consumption) or for which the date of GST

¹ For example, articles of apparel and clothing accessories, knitted or crocheted, of sale value exceeding Rs. 2,500 per piece, attract a GST rate of 18%; otherwise, it is 5%. Similarly, footwear with a sale value not exceeding Rs. 2,500 per pair attracts a lower GST rate of 5%, whereas other footwear attracts an 18% GST rate.

² The GST rate higher than 28% includes GST compensation cess applicable to some selected items in the old GST rate structure. Under the new GST rate structure, GST cess will be abolished, and some selected items ('sin' goods and luxury cars) will attract the highest GST rate of 40%. The date of abolishing GST cess and enacting 40% GST on sin goods is yet to be announced.

implementation is yet to be recommended by the GST council (e.g., petrol/gasoline/motor spirit, diesel, natural gas) as “Out of GST”. Under the new GST rate structure, we classify 390 items into six categories: Exempt, Very Low (exempt to 5%), Low (5%), Lower Middle (5% to 18%), Upper (18%), and High (40%).

The distribution of items across GST rates is presented in Table 3. Table 3 shows that the number of items under the ‘exempt’ category and those at the 5% GST rate has increased under the new GST rate structure. For all other GST rate categories, the number of items has declined in the new GST rate structure.

Table 3: Distribution of Items across GST Rate Category

GST Rate Category	Old GST Rates (A)	New GST Rates (B)	B-A
(i) Exempt	90	93	3
(ii) Very Low (Exempt to 5%)	64	62	-2
(iii) Low (5%)	40	102	62
(iv) Lower Middle (5 to 12%)	34		
(v) Middle (12%)	21		
(vi) Upper Middle (12 to 18%)	28		
(vi*) Lower Middle to upper Middle (5 to 18%)	83	38	-45
(vii) Upper (18%)	87	74	-13
(viii) High (28%)	4		
(ix) Very High (>28%)	10		
(ix) High (40%)		9	
(x) Out of GST	12	12	
Total	390	390	

Note: *-For the old GST rate structure, this category comprises the GST Rates of 5% to 12%, 12%, and 12% to 18%.

Source: Computed by the author.

3. Basic Statistics

For both the old and new GST rate structures, we aggregate the item-wise average MPCE across GST rate categories and present the results in Table 4. We estimate the change in the structure of the average consumption basket across GST rate categories between the old and new GST rate structures in Table 4. We assume that the scale and composition of average MPCE across goods and services remain unchanged, as the impact of price and income elasticities has not been taken into account.

The GST rate restructuring shifts the average MPCE to the ‘Exempt to Low (5%)’ GST rate category (Table 4). The combined share of the average MPCE under the ‘Exempt to Low (5%)’ GST rate category increases from three-thirds (65%) to three-fourths (75%) between the old and new GST rate structures. The share of all other GST rate categories has declined.

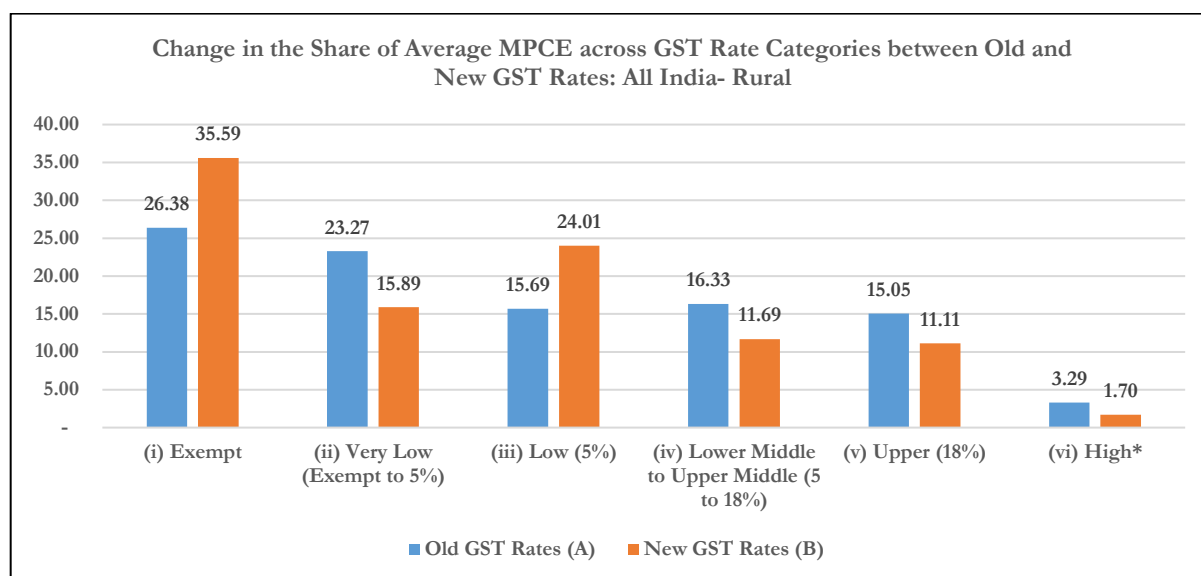
Table 4: Change in the Share of Average MPCE across GST Rate Categories between the Old and New GST Rate Structure

Change in the Share of Average MPCE across GST Rate Categories between the Old and New GST Rate Structure										
GST Rate Category	Average MPCE: Rural					Average MPCE: Urban				
	Old GST Rates	% Share in Total (A)	New GST Rates	% Share in Total (B)	B-A	Old GST Rates	% Share in Total (C)	New GST Rates	% Share in Total (D)	D-A
(i) Exempt	897	26.4	1,210	35.6	9.2	1,765	30.7	2,217	38.5	7.8
(ii) Very Low (Exempt to 5%)	791	23.3	540	15.9	-7.4	1,102	19.1	762	13.2	-5.9
(iii) Low (5%)	533	15.7	817	24.0	8.3	892	15.5	1,387	24.1	8.6
(iv) Lower Middle (5 to 12%)	383	11.3				549	9.5			
(v) Middle (12%)	93	2.7				187	3.2			
(vi) Upper Middle (12 to 18%)	79	2.3				140	2.4			
(vii) Lower Middle to Upper Middle (5 to 18%) (iv+v+vi)	555	16.3	397	11.7	-4.6	876	15.2	585	10.2	-5.1
(vii) Upper (18%)	512	15.0	378	11.1	-3.9	939	16.3	698	12.1	-4.2
(viii) High (28%)	42	1.2				70	1.2			
(ix) Very High (>28%)	69	2.0				114	2.0			
(x) High (viii+ix for Old GST) (40% for New GST)*	112	3.3	58	1.7	-1.6	184	3.2	108	1.9	-1.3
(xi) Out of GST	320		320		-	647		647		-
Total (without Out of GST)	3,400	100.0	3,400	100.0		5,757	100.0	5,757	100.0	
Exempt to Low (i+ii+iii)	2,221	65	2,567	75	10	3,759	65	4,366	76	11

Source: As in Table 1.

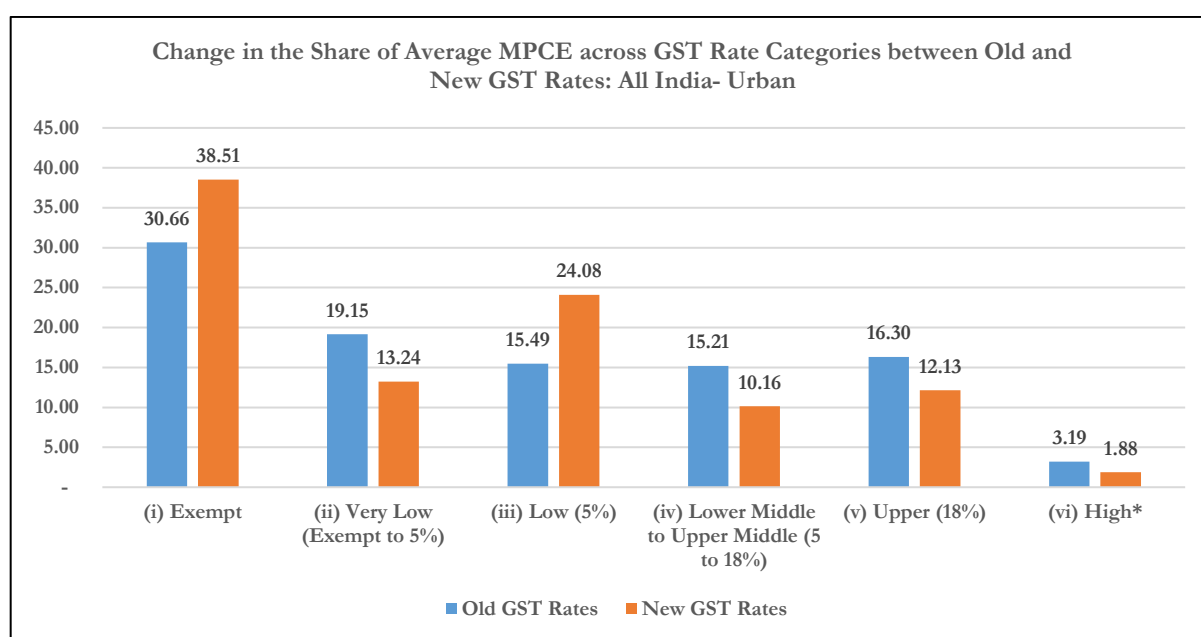
In both rural and urban areas, the share of average MPCE rises under the 'exempt' and 'low (5%)' GST rate categories under the new GST rate structure compared to the old one (Figures 1 & 2). The shares of other GST rate categories fall.

Figure 1: Change in the Share of Average MPCE across GST Rate Categories between Old and New GST Rates: All India- Rural



Source: As in Table 1.

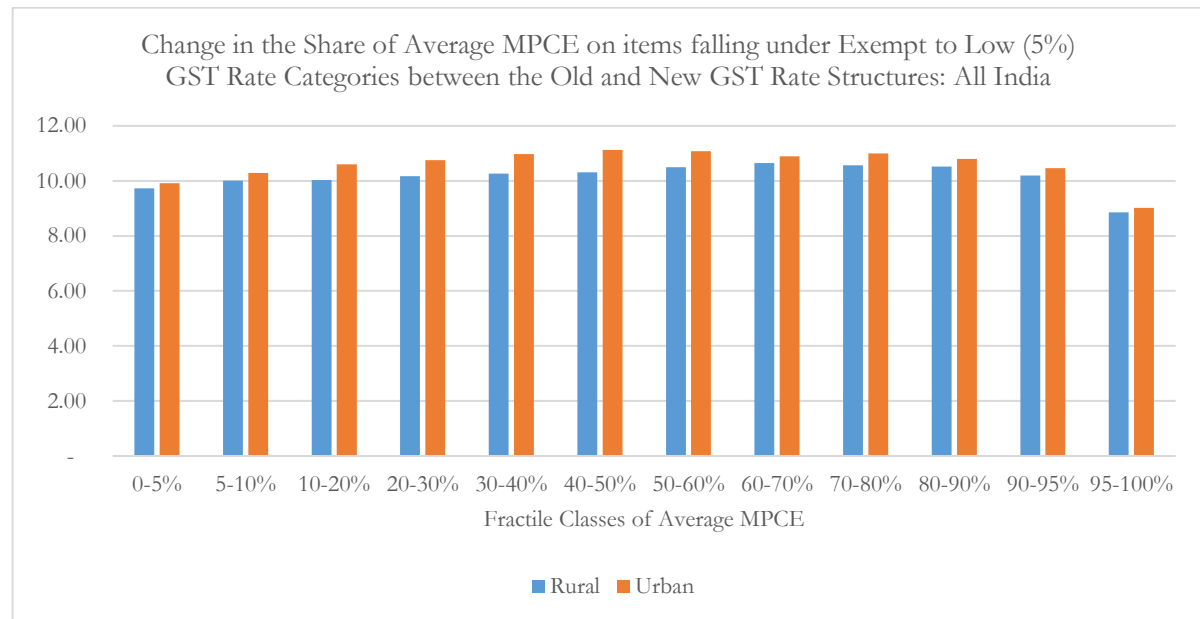
Figure 2: Change in the Share of Average MPCE across GST Rate Categories between Old and New GST Rates: All India- Urban



Source: As in Table 1.

The shift in the composition of the consumption basket towards lower GST rate categories persists across all fractile classes (Tables 5 & 6). The share of the average MPCE increases from 'exempt' to 'Low (5%)' GST rate categories by an average of 10 percentage points between the old and the new GST rate structure across all fractile classes (Figure 3).

Figure 3: Change in the Share of Average MPCE on items falling under Exempt to Low (5%) GST Rate Categories between the Old and New GST Rate Structures: All India



Source: As in Table 1.

Table 5: Change in the Share of Average MPCE across GST Rate Categories between the Old and New GST Rate Structures: All India (Rural)

Change in the Share of Average MPCE across GST Rate Categories between the Old and New GST Rate Structures: All India (Rural)													
Fractile Class	0-5%	5-10%	10-20%	20-30%	30-40%	40-50%	50-60%	60-70%	70-80%	80-90%	90-95%	95-100%	All
(i) Exempt	8.16	9.07	9.43	9.87	10.05	10.18	10.06	10.02	9.72	9.36	8.83	6.44	9.21
(ii) Very Low (Exempt to 5%)	-6.21	-7.08	-7.41	-7.85	-8.05	-8.18	-8.07	-8.10	-7.86	-7.58	-7.12	-5.07	-7.38
(iii) Low (5%)	7.78	8.01	8.02	8.15	8.27	8.31	8.50	8.73	8.70	8.74	8.48	7.49	8.33
(iv) Lower Middle to upper Middle (5 to 18%)	-3.23	-3.66	-3.91	-4.14	-4.31	-4.44	-4.67	-4.83	-4.91	-5.07	-5.00	-4.78	-4.64
(v) Upper (18%)	-5.50	-5.27	-4.94	-4.85	-4.73	-4.53	-4.40	-4.26	-3.97	-3.63	-3.24	-2.08	-3.94
(vi) High*	-1.00	-1.07	-1.18	-1.18	-1.22	-1.34	-1.43	-1.56	-1.69	-1.82	-1.95	-1.99	-1.58
Share of Exempt to Low (sum of (i) to (iii))	9.73	10.00	10.03	10.17	10.26	10.31	10.50	10.65	10.56	10.52	10.19	8.85	10.16

Source: As in Table 1.

Table 6: Change in the Share of Average MPCE across GST Rate Categories between the Old and New GST Rate Structures: All India (Urban)

Change in the Share of Average MPCE across GST Rate Categories between the Old and New GST Rate Structures: All India (Urban)													
Fractile Class	0-5%	5-10%	10-20%	20-30%	30-40%	40-50%	50-60%	60-70%	70-80%	80-90%	90-95%	95-100%	All
(i) Exempt	9.13	9.55	9.70	9.87	9.59	9.30	8.96	8.53	8.06	7.38	6.60	4.76	7.84
(ii) Very Low (Exempt to 5%)	-7.16	-7.59	-7.75	-7.82	-7.58	-7.22	-6.95	-6.53	-6.09	-5.43	-4.66	-3.09	-5.90
(iii) Low (5%)	7.94	8.33	8.65	8.70	8.97	9.05	9.07	8.89	9.03	8.85	8.51	7.35	8.60
(iv) Lower Middle to Upper Middle (5 to 18%)	-3.78	-4.08	-4.48	-4.68	-4.91	-5.08	-5.15	-5.13	-5.33	-5.40	-5.42	-4.82	-5.05
(v) Upper (18%)	-5.12	-5.16	-5.00	-4.88	-4.89	-4.84	-4.67	-4.43	-4.19	-3.96	-3.49	-3.01	-4.17
(vi) High*	-1.01	-1.06	-1.12	-1.19	-1.17	-1.21	-1.27	-1.33	-1.48	-1.45	-1.54	-1.19	-1.31
Sum of (i) to (iii)	9.91	10.29	10.60	10.75	10.98	11.13	11.08	10.89	11.00	10.80	10.46	9.02	10.53

Source: As in Table 1.

3. Estimation of GST Liability

We consider two scenarios for estimating GST liability under the old and new GST rate structures. In scenario I, we assume that items (or groups of items) falling under any tax category are subject to the lower bound tax rate of that category. This gives us a lower bound on the tax burden borne by consumers. In scenario II, we assume that items of consumption falling under any tax category are subject to the upper bound tax rate for that category. This provides an upper bound on the tax burden consumers bear. As discussed earlier, assigning specific tax rates to consumption items is challenging due to the complexities of the GST rate structure. For our analysis, we exclude items falling into the 'Out of the GST' tax category. Including items that are not subject to GST may give us a distorted picture of consumers' tax burden under the GST. We also exclude the average MPCE corresponding to 'Out of GST' items from the overall average MPCE to estimate the adjusted average MPCE. It is also worth noting that the average MPCE reflects the market value of the consumption basket and therefore includes the GST burden. We assume that the scale and composition of the consumption basket, both in aggregate and across fractile classes, remain unchanged between the old and new GST rate structures. We estimate the GST liability rate (in %) as the GST liability (in Rs.) divided by the adjusted average MPCE (in Rs.).

We estimate the tax burden (average tax liability) using the following methodology:

$$\text{Market Value of Consumption } (P_m * Q) = P_p * (1+t) * Q$$

$$\text{Tax Liability} = P_p * Q * t = (P_m * Q * t) / (1+t) \quad (1)$$

$$\text{Tax Liability as \% of Adjusted Average MPCE} = \text{Tax Liability} / \text{Average MPCE excluding Average MPCE on 'Out of GST' items}$$

Where,

P_m is the market price of goods and services

P_p is the producer's price of goods and services

t is the tax rate

Q is the quantity of consumption

This analysis is based on three vital assumptions. First, we assume that consumers purchase all taxable goods and services from GST-registered entities. Second, taxpayers pass through (shift) the entire tax liability or relief to consumers. Therefore, there will be no difference between statutory and effective GST rates. Third, there is no cascading of taxes in the system. Estimating the cascading of taxes in the GST regime is beyond the scope of the present paper.³ Without an estimate of the cascading impact of taxes, this paper captures only the direct effect of GST. However, the methodology developed by

³ Cascading of taxes in the GST regime arises due to keeping primary energy sources (petrol, diesel, aviation turbine fuel [ATF], natural gas, crude petroleum, and electricity) out of the preview of the GST either for the time being or permanently, exemption of a selected list of goods and services from the GST, and annual turnover-based thresholds for GST registration. In the cascading of taxes, the producer's price with cascading will be greater than the producer's price without cascading. Therefore, given Q and t in equation 1, tax liability will be higher for consumers under tax cascading than without.

Mukherjee and Rao (2015) could help estimate the total (direct and cascading) incidence of GST if the appropriate data is available.

We present the results of average GST liability rates in Tables 7 and 8. The scenarios in the tables exclude the GST compensation cess, as its proceeds are used to compensate states or cover the revenue shortfall from projected SGST collection. We observe that the average estimated GST liability rate decreases from 5-7% under the old GST rate structure to 4-6% under the new GST rate structure in both rural and urban areas (Tables 7 & 8). In rural areas, the estimated average GST liability declines from Rs. 165-229 under the old structure to Rs. 132-199 under the new structure. Consequently, the estimated decrease in GST liability is 13% to 20%. In urban areas, the estimated average GST liability decreases from Rs. 287-378 under the old structure to Rs. 231-329 under the new structure. If rural consumers' savings of Rs. 29-33 in GST liability under the new structure are spent, for example, on items attracting an 18% GST rate, the estimated decrease in GST liability will be 10% to 16%. Similarly, in urban areas, the reduction will be 11% to 16%. Therefore, based on the assumptions, it is likely that GST liability on household consumption expenditure will decrease by 10% to 16% under the new GST rate structure compared to the previous one.

We estimate GST liability rates for consumers across fractile classes based on the average MPCE and the scenarios presented in Appendix Tables A.1 and A.2 (with GST compensation cess). Compared to the old GST rate structure, the GST liability rate falls under the new GST rate structure if the scale and composition of the consumption basket remain unchanged between the old and new structures. Both under the old and new GST rate structures, in rural areas across all scenarios, the GST liability rate increases with higher fractile classes. This shows that GST is progressive for rural areas. In urban areas, it is also progressive under scenario I. In urban areas under scenario II with the old GST rate structure, we observe that GST liability rates are lower for fractile classes P_{50} - P_{95} than for lower fractile classes in the same category. Also, under the new GST rate structure, GST liability rates are lower for fractile classes from P_{50} - P_{95} than for lower fractile classes in the same category. We observe that across all scenarios, regions, and fractile classes, GST liability rate will fall by 100 basis points (or one percentage point) between the old and new GST rate structures. Given the scale and composition of consumers' consumption baskets across fractile classes, GST liability rates vary.

Table 9: Average GST Liability Rates
for Old and New GST Rate Structures across Fractile Classes (%) (with GST Cess)

Fractile Class of MPCE	Rural				Urban			
	Scenario I		Scenario II		Scenario I		Scenario II	
	Old GST Rates	New GST Rates	Old GST Rates	New GST Rates	Old GST Rates	New GST Rates	Old GST Rates	New GST Rates
P ₅ (0-5%)	4.6	3.6	6.6	5.6	4.8	3.8	6.7	5.6
P ₁₀ (5-10%)	4.6	3.6	6.6	5.6	4.9	3.9	6.8	5.7
P ₂₀ (10-20%)	4.7	3.7	6.7	5.6	4.9	3.9	6.8	5.7
P ₃₀ (20-30%)	4.7	3.7	6.7	5.6	4.9	3.9	6.8	5.7
P ₄₀ (30-40%)	4.7	3.7	6.8	5.7	4.9	3.9	6.8	5.7
P ₅₀ (40-50%)	4.8	3.8	6.8	5.7	4.9	3.9	6.7	5.6
P ₆₀ (50-60%)	4.8	3.8	6.9	5.8	4.9	3.9	6.7	5.6
P ₇₀ (60-70%)	4.9	3.8	6.9	5.8	4.9	3.9	6.7	5.6
P ₈₀ (70-80%)	4.9	3.9	6.9	5.8	4.9	3.9	6.6	5.6
P ₉₀ (80-90%)	4.9	3.9	7.0	5.9	4.9	3.9	6.6	5.5
P ₉₅ (90-95%)	4.9	3.9	7.0	6.0	4.9	3.9	6.6	5.6
P ₁₀₀ (95-100%)	5.0	4.3	7.2	6.4	5.4	4.8	7.2	6.3
All	4.9	3.9	6.9	5.9	5.0	4.0	6.8	5.7

Source: Computed by the author

Table 7: Estimation of GST Liability under the Old and New GST Rate Structure based on Average MPCE **without GST Compensation Cess**:
All India – Rural

GST Rate Category	Old GST Rate Structure					New GST Rate Structure				
	Average MPCE (Rs.)	GST Rates (%)		Estimated GST Liability (Rs.)		Average MPCE (Rs.)	GST Rates (%)		Estimated GST Liability (Rs.)	
		Scenario I	Scenario II	Scenario I	Scenario II		Scenario I	Scenario II	Scenario I	Scenario II
(i) Exempt	897	Exempt	Exempt	0	0	1,210	Exempt	Exempt	0	0
(ii) Very Low (Exempt to 5%)	791	Exempt	5	0	38	540	Exempt	5	0	26
(iii) Low (5%)	533	5	5	25	25	817	5	5	39	39
(iv) Lower Middle (5 to 12%)	383	5	12	18	41					
(v) Middle (12%)	93	12	12	10	10					
(vi) Upper Middle (12 to 18%)	79	12	18	8	12					
(vi*) Lower Middle to Upper Middle (5 to 18%)						397	5	18	19	61
(vii) Upper (18%)	512	18	18	78	78	378	18	18	58	58
(viii) High (28%) (without GST Cess)	112	28	28	24	24					
(viii*) High (40%)						58	40	40	17	17
(ix) Out of GST	320					320				
Total	3,720			165	229	3,720			132	199
Total - (ix)	3,400					3,400				
Estimated GST as % of Av. MPCE#				5	7				4	6
Estimated Fall in the GST Liability (%)**									20	13

Note: *-This is under the New GST Rate Structure. **-Estimated Fall in the GST Liability (%) = (New GST Liability – Old GST Liability) / Old GST Liability*100. #-Excluding Average MPCE on ‘Out of GST’

Source: Computed by the author

Table 8: Estimation of GST Liability under the Old and New GST Rate Structure based on Average MPCE **without GST Compensation Cess**:
All India – Urban

GST Rate Category	Old GST Rate Structure					New GST Rate Structure				
	Average MPCE (Rs.)	GST Rates (%)		Estimated GST Liability (Rs.)		Average MPCE (Rs.)	GST Rates (%)		Estimated GST Liability (Rs.)	
		Scenario I	Scenario II	Scenario I	Scenario II		Scenario I	Scenario II	Scenario I	Scenario II
(i) Exempt	1,765	Exempt	Exempt	0	0	2,217	Exempt	Exempt	0	0
(ii) Very Low (Exempt to 5%)	1,102	Exempt	5	0	52	762	Exempt	5	0	36
(iii) Low (5%)	892	5	5	42	42	1,387	5	5	66	66
(iv) Lower Middle (5 to 12%)	549	5	12	26	59					
(v) Middle (12%)	187	12	12	20	20					
(vi) Upper Middle (12 to 18%)	140	12	18	15	21					
(vi*) Lower Middle to Upper Middle (5 to 18%)						585	5	18	28	89
(vii) Upper (18%)	939	18	18	143	143	698	18	18	107	107
(viii) High (28%) (without GST Cess)	184	28	28	40	40					
(viii*) High (40%)						108	40	40	31	31
(ix) Out of GST	647					647				
Total	6,404			287	378	6,404			231	329
Total - (ix)	5,757					5,757				
Estimated GST as % of Av. MPCE#				5	7				4	6
Estimated Fall in the GST Liability (%)**									19	13

Note: *-This is under the New GST Rate Structure. **-Estimated Fall in the GST Liability (%) = (New GST Liability – Old GST Liability) / Old GST Liability*100. #-Excluding Average MPCE on ‘Out of GST’

Source: Computed by the author

In the old GST rate structure, according to the NSSO's HCES 2022-23, we assign a GST rate of higher than 28% for 10 items (viz., soda drinks, bidi, cigarettes, gutka, zarda, kimam, surti, leaf tobacco, hookah tobacco, cheroot, snuff, other tobacco products, motor car, jeep⁴). We assume that the sum of the average MPCE on these items is subject to a GST rate of 30% in Scenario I and 45% in Scenario II (Appendix Tables A.1 & A.2). Under the new GST rate structure, except for bidi, all other items attract a 40% GST rate. Under the old GST rate structure, due to differences in GST compensation cess rates for these items, it was difficult to assign a specific tax rate, which compelled us to set two alternative rates (30% and 45%) for two scenarios. In the new GST rate structure, this ambiguity no longer exists. The rise in GST liability from P₉₅ to P₁₀₀ is significantly higher than that of P₉₀ to P₉₅ (Table 10, Figures 4 & 5). This is mainly driven by the average MPCE on items in the high tax bracket for P₁₀₀ fractile class (Table 10). Consumption of soda drinks, cigarettes, and motor car, jeep is relatively higher for P₁₀₀ as compared to P₉₅. This is driving a higher GST liability rate for the P₁₀₀ fractile class than for P₉₅.

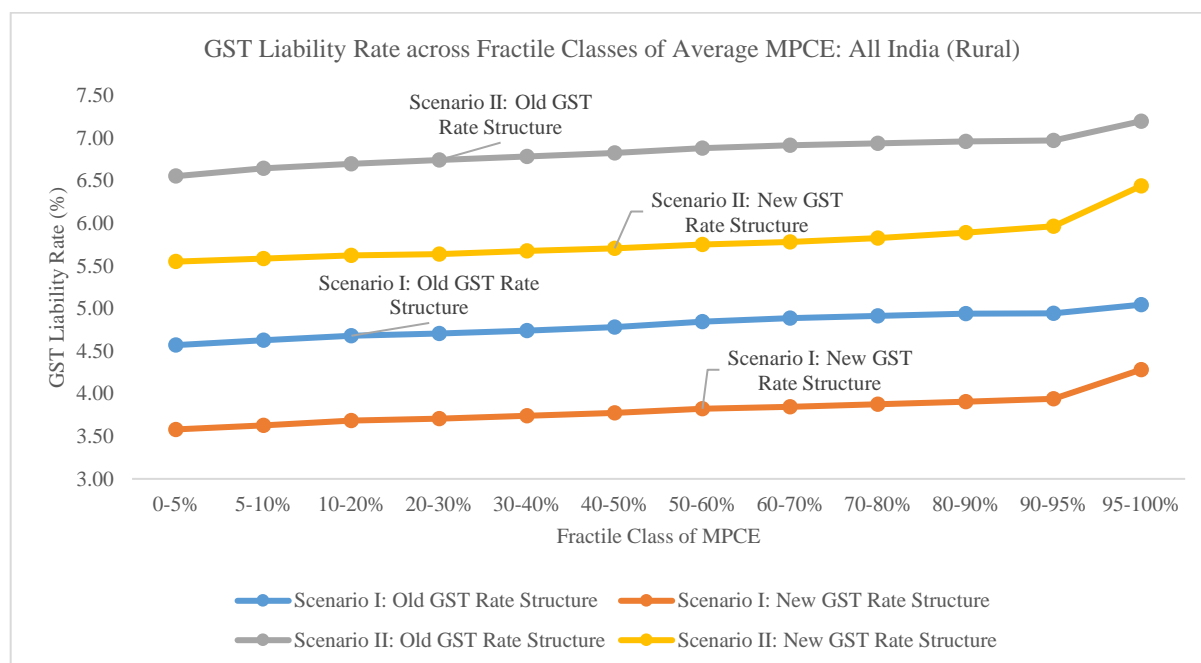
Table 10: Average MPCE on selected items falling under the Higher GST Rates for Fractile Classes P₉₀ to P₁₀₀ (in Rs.)

Item description	All India: Rural			All India: Urban		
	P ₉₀ (80-90%)	P ₉₅ (90-95%)	P ₁₀₀ (95-100%)	P ₉₀ (80-90%)	P ₉₅ (90-95%)	P ₁₀₀ (95-100%)
soda drinks	3.74	5.48	6.50	5.32	6.35	8.17
bidi	13.9	14.15	14.49	3.64	3.94	3.13
cigarettes	17.05	23.28	39.71	37.65	47.12	88.67
gutka, zarda, kimam, surti	21.93	22.61	20.41	12.9	14.97	12.99
leaf tobacco	5.88	5.33	4.63	1.81	1.71	1.71
hookah tobacco	1.29	1.79	2.04	0.39	0.3	0.14
cheroot	0.14	0.23	0.35	0.01		
snuff	0.12	0.25	0.18	0.09	0.04	0.05
other tobacco products	6.51	7.76	6.25	4.62	3.51	5.29
motor car, jeep	7.34	19.42	223.12	46.96	90.87	835.55

Source: As in Table 1.

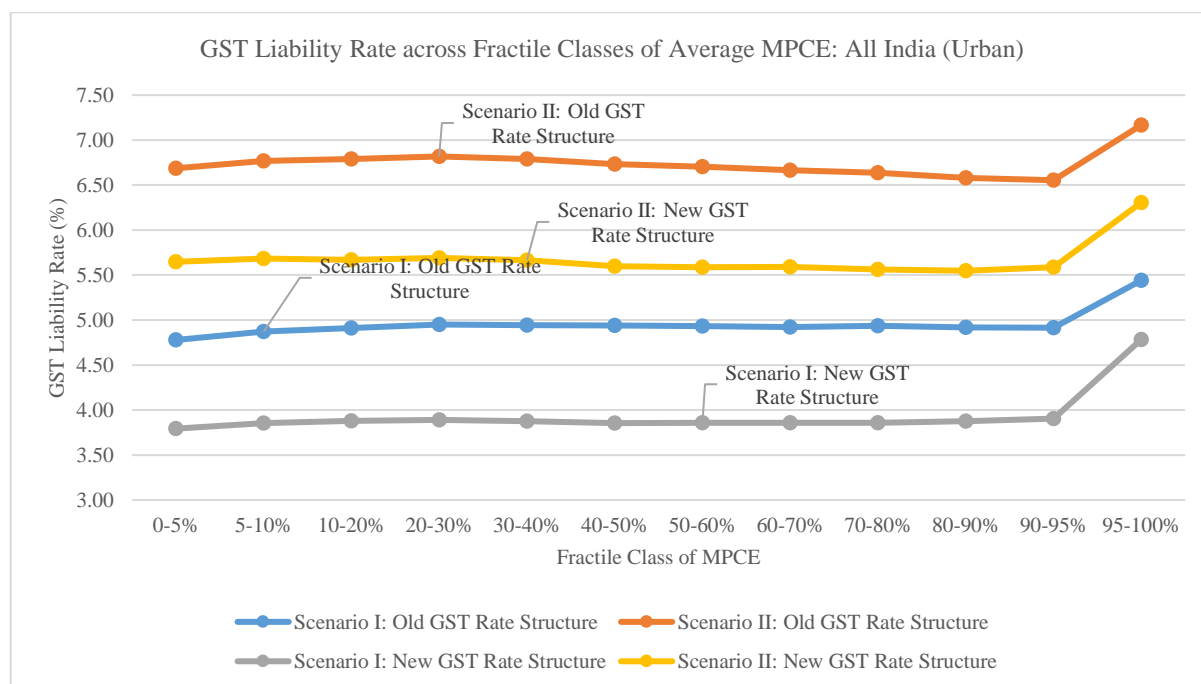
⁴ Since sales data on motor cars by their length, engine capacity and price are not available to us, we assume that the majority of motor vehicles attract GST cess in the old GST rate structure. Under the new GST rate structure, we assume that a significant share of car sales will be subject to a 40% GST rate.

Figure 4: GST Liability Rates across Fractile Classes of Average MPCE: All India (Rural)



Source: Computed by the author.

Figure 5: GST Liability Rates across Fractile Classes of Average MPCE: All India (Urban)



Source: Computed by the author.

We summarise the analysis results in Table 11.

Table 11: Estimated Results of the Analysis

Description	Without GST Compensation Cess							
	Old GST Rate Structure		New GST Rate Structure		Old GST Rate Structure		New GST Rate Structure	
	Rural				Urban			
	Scenario I	Scenario II	Scenario I	Scenario II	Scenario I	Scenario II	Scenario I	Scenario II
Average MPCE (Rs.)	3,720	3,720	3,720	3,720	6,404	6,404	6,404	6,404
Adjusted Average MPCE (Rs.)*	3,400	3,400	3,400	3,400	5,757	5,757	5,757	5,757
Estimated GST Liability (Rs.)	165	229	132	199	287	378	231	329
Estimated GST Liability Rate (%)**	4.9	6.7	3.9	5.9	5.0	6.6	4.0	5.7
Estimated Fall in GST Liability (%)##			20.0	13.1			19.5	13.0
Adjusted Estimated Fall in GST Liability (%)##			16.2	10.5			15.9	10.7
Description	With GST Compensation Cess							
	Old GST Rate Structure		New GST Rate Structure		Old GST Rate Structure		New GST Rate Structure	
	Rural				Urban			
	Scenario I	Scenario II	Scenario I	Scenario II	Scenario I	Scenario II	Scenario I	Scenario II
Average MPCE (Rs.)	3,720	3,720	3,720	3,720	6,404	6,404	6,404	6,404
Adjusted Average MPCE (Rs.)*	3,400	3,400	3,400	3,400	5,757	5,757	5,757	5,757
Estimated GST Liability (Rs.)	165	235	132	199	288	389	231	329
Estimated GST Liability Rate (%)**	4.9	6.9	3.9	5.9	5.0	6.8	4.0	5.7
Estimated Fall in GST Liability (%)##			20.0	15.3			19.8	15.4
Estimated Fall in GST Liability (%)##			16.6	12.4			16.2	12.6

Notes: *-Adjusted Average MPCE (Rs.) = Average MPCE (Rs.) – Average MPCE on ‘Out of GST’ items (Rs.)

** -Estimated GST Liability Rate (%) = Estimated GST Liability (Rs.)/Adjusted Average MPCE (Rs.)*100

-Estimated Fall in GST Liability (%) = (Estimated GST Liability (Rs.) under Old GST Rate - Estimated GST Liability (Rs.) under New GST Rate)/Estimated GST Liability (Rs.) under Old GST Rate*100

-Adjusted Estimated Fall in GST Liability (%) – This is estimated after adjusting for the additional spending on goods and services attracting a GST rate of 18% from the resulting additional purchasing power from reduced GST liability of consumers.

5. Conclusions

Depending on how rate reductions translate into lower prices, consumer behaviour is expected to change. Variations in the price and income elasticities of demand for goods and services will influence the size and composition of the consumption basket. However, we employ a static framework in which the price and income elasticities of demand for goods and services are assumed to remain constant from HCES 2022-23. Under these assumptions, the findings of this study suggest that GST liability on household consumption expenditure will decrease by 10% to 16% under the new GST rate structure compared to the previous one. The average GST liability rate will fall from 5-7% under the old structure to 4-6% under the new structure. We observe a one percentage point decline in GST liability across all MPCE fractile classes under the new GST rate structure compared to the old one. The GST rate reductions are expected to enhance consumers' purchasing power.

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Appendix

Table A.1: Estimation of GST Liability under the Old and New GST Rate Structure based on Average MPCE with GST Compensation Cess: All India - Rural

GST Rate Category	Old GST Rate Structure					New GST Rate Structure				
	Average MPCE (Rs.)	GST Rates (%)		Estimated GST Liability (Rs.)		Average MPCE (Rs.)	GST Rates (%)		Estimated GST Liability (Rs.)	
		Scenario I	Scenario II	Scenario I	Scenario II		Scenario I	Scenario II	Scenario I	Scenario II
(i) Exempt	897	Exempt	Exempt	0	0	1,210	Exempt	Exempt	0	0
(ii) Very Low (Exempt to 5%)	791	Exempt	5	0	38	540	Exempt	5	0	26
(iii) Low (5%)	533	5	5	25	25	817	5	5	39	39
(iv) Lower Middle (5 to 12%)	383	5	12	18	41					
(v) Middle (12%)	93	12	12	10	10					
(vi) Upper Middle (12 to 18%)	79	12	18	8	12					
(vi*) Lower Middle to Upper Middle (5 to 18%)						397	5	18	19	61
(vii) Upper (18%)	512	18	18	78	78	378	18	18	58	58
(viii) High (28%)	42	28	28	9	9					
(viii*) High (40%)						58	40	40	17	17
(ix) Very High (>28%) (with GST Cess)	69	30	45	16	22					
(x) Out of GST	320					320				
Total	3,720			165	235	3,720			132	199
Total - (x)	3,400					3,400				
Estimated GST as % of Av. MPCE#				5	7				4	6
Estimated Fall in the GST Liability (%)**									20	15

Note: *-This is under the New GST Rate Structure. **-Estimated Fall in the GST Liability (%) = (New GST Liability – Old GST Liability) / Old GST Liability*100. #-Excluding Average MPCE on ‘Out of GST’

Source: Computed by the author

Table A.2: Estimation of GST Liability under the Old and New GST Rate Structure based on Average MPCE with GST Compensation Cess: All India - Urban

GST Rate Category	Old GST Rate Structure					New GST Rate Structure				
	Average MPCE (Rs.)	GST Rates (%)		Estimated GST Liability (Rs.)		Average MPCE (Rs.)	GST Rates (%)		Estimated GST Liability (Rs.)	
		Scenario I	Scenario II	Scenario I	Scenario II		Scenario I	Scenario II	Scenario I	Scenario II
(i) Exempt	1,765	Exempt	Exempt	0	0	2,217	Exempt	Exempt	0	0
(ii) Very Low (Exempt to 5%)	1,102	Exempt	5	0	52	762	Exempt	5	0	36
(iii) Low (5%)	892	5	5	42	42	1,387	5	5	66	66
(iv) Lower Middle (5 to 12%)	549	5	12	26	59					
(v) Middle (12%)	187	12	12	20	20					
(vi) Upper Middle (12 to 18%)	140	12	18	15	21					
(vi*) Lower Middle to Upper Middle (5 to 18%)						585	5	18	28	89
(vii) Upper (18%)	939	18	18	143	143	698	18	18	107	107
(viii) High (28%)	70	28	28	15	15					
(viii*) High (40%)						108	40	40	31	31
(ix) Very High (>28%) (with GST Cess)	114	30	45	26	35					
(x) Out of GST	647					647				
Total	6,404			288	389	6,404			231	329
Total - (x)	5,757					5,757				
Estimated GST as % of Av. MPCE#				5	7				4	6
Estimated Fall in the GST Liability (%)**									20	15

Note: *-This is under the New GST Rate Structure. **-Estimated Fall in the GST Liability (%) = (New GST Liability – Old GST Liability) / Old GST Liability*100. #-Excluding Average MPCE on ‘Out of GST’

Source: Computed by the author

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