

## Inclusion of Petroleum Products under GST: An Analysis of Revenue Impact to Central and State Governments

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### ABSTRACT

*The biggest indirect tax reform came in India with the introduction of Goods and Services Tax (GST) law. Though all goods and services (except alcoholic liquor for human consumption) are brought under the ambit of GST, the GST council is yet to recommend five petroleum products to bring under GST law. These products are crude petroleum, motor spirit/petrol, diesel, aviation turbine fuel and natural gas. Presently, these products generate huge revenue to both central and state government(s) for having tax autonomy to these products. Central government charges central excise and cess and state governments charge value added tax resulting tax on tax effect. This study analyses revenue impact if these products are brought in GST umbrella by computing revenue neutral rate for central and state government(s). The study concludes that bringing petroleum products under GST shall reduce the revenue by many folds to both central and state government(s).*

**Keywords:** Goods and services tax (GST); Petroleum products; Petroleum Revenue; Delhi; West Bengal.

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### 1.0 Introduction

Petroleum products in India are highly taxable as compared to many developing and developed countries in the world<sup>1</sup>. A major portion of sale price of these products goes to the kitty of central and state governments as taxes.

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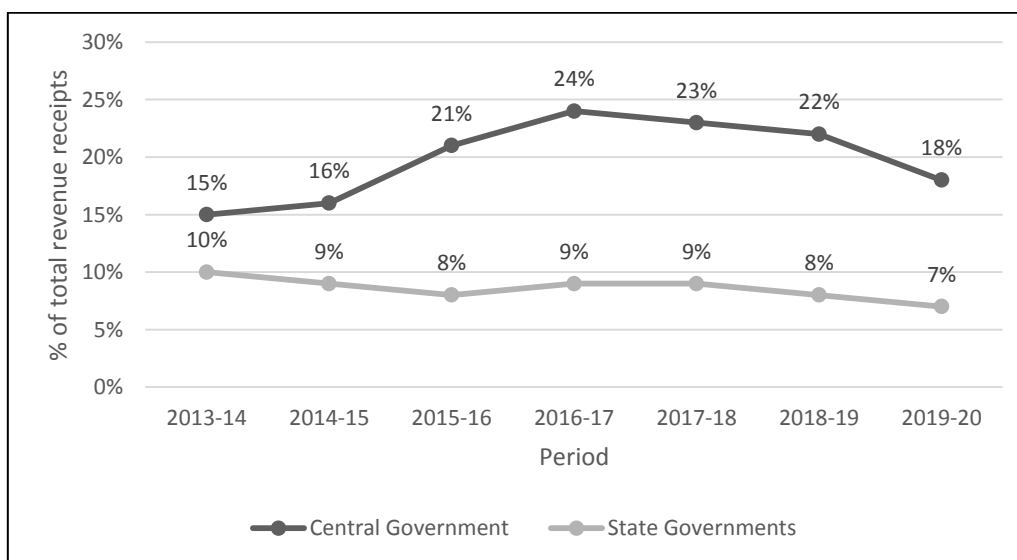
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The indirect taxes levied on these products have cascading effects under present taxation regime which results in increase of retail selling price. Since mid of June 2017, Petrol and Diesel prices are determined through a daily pricing mechanism which is based on 15-day rolling average of international rate.

With the introduction of biggest taxation reform in India, Goods and Service Tax (GST), many petroleum products are brought under the ambit of GST by taking a revenue neutral rate. However, the major revenue generating petroleum products (i.e., Petroleum Crude, Motor Spirit (MS)/Petrol, High Speed Diesel Oil (HSD), Aviation Turbine Fuel (ATF), and Natural Gas) are left untouched to bring under GST law. In other words, these petroleum products are still chargeable under old taxation regime<sup>2</sup>. Figure 1 shows Revenue from petroleum products accounts nearly 20% and 9% of total revenue for central government and state governments respectively in the last 7 years.

The central government charges customs and union excise duties on petrol, HSD, ATF and compressed natural gas. It also charges cess on crude oil and other petroleum products. State government levies sales tax/value added tax (VAT) and central sales tax (CST) on the landed price of petroleum products in the respective states.

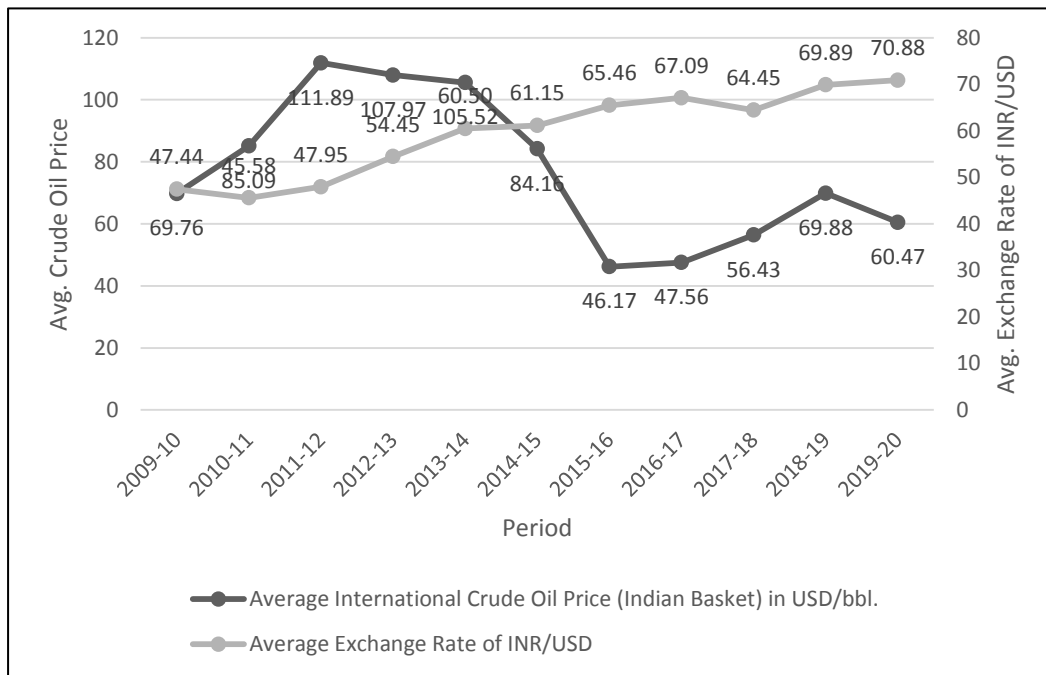
**Figure 1: Petroleum Sector's Contribution to Central and State Governments**



Source: Snapshot of India's Oil & Gas data, Ministry of Petroleum and Natural Gas, India, 2015-2021

The two major determinants of the petroleum prices are international price of crude oil (Indian basket) and foreign exchange rate. Figure 2 shows the average international crude oil price and average exchange rate for the last 11 years. Oil prices remain highly volatile during the period, but exchange rate had an upward rising trend. Central excise duty on petrol and diesel increased by a whopping 239% and 857% per litre during the period 2009-2021. This indicates revenue dependency of central government on petroleum products. The central excise duty on petrol and diesel during different times are shown in Figure 3. Though the crude oil price (Indian basket) has fallen after 2011-12, the benefit of price reduction was not passed on to the end consumer. The rise in central excise duty and fall in international crude oil price has a high negative correlation which is shown in Table 1.

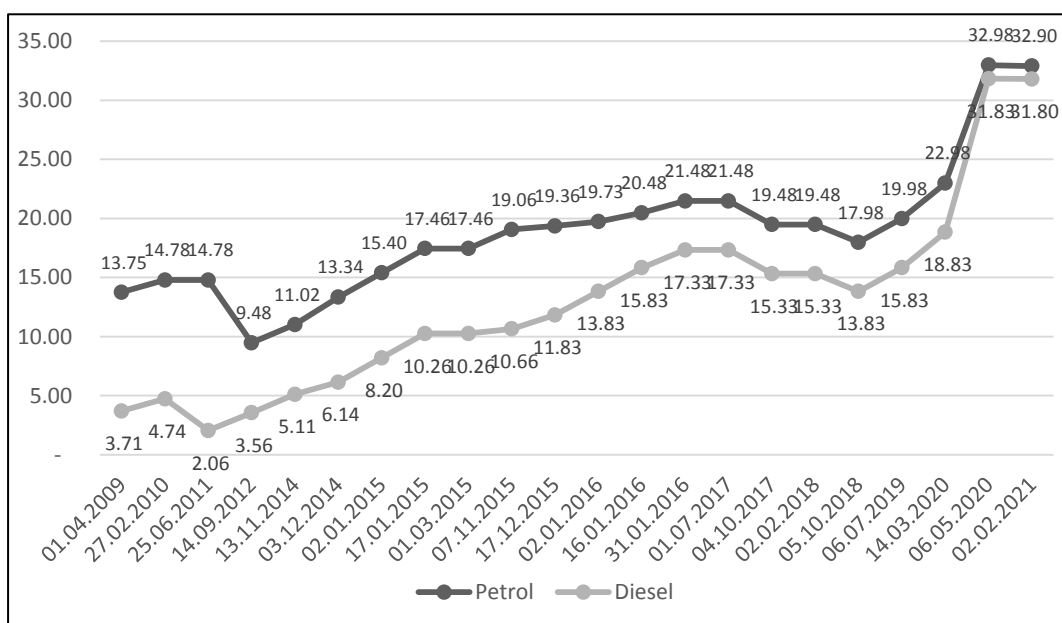
**Figure 2: Average International Crude Oil Prices and Average Exchange Rates**



*Source: Indian Petroleum and Natural Gas Statistics, 2012-19*

Even after passing nearly four years of implementation of GST law, the GST Council is yet to recommend for inclusion of left-out petroleum products<sup>3</sup> under the ambit of GST<sup>4</sup>. May be, the fear of losing revenue by bringing these products under GST is so high that no states have yet proposed the same in GST Council (Bose, P. September 2018).

**Figure 3: Central Excise Duty on Petrol and Diesel (in INR)**



Source: Rajya Sabha Unstarred Question No. 3329, answered on 24<sup>th</sup> March, '21

**Table 1: Correlation matrix (Pearson)**

Variables	Avg. Rate of Central Excise on Petrol (INR/Litre)	Avg. Rate of Central Excise on HSD (INR/Litre)	Exchange rate (INR/USD)
Avg. Rate of Central Excise on Petrol (INR/Litre)	1		
Avg. Rate of Central Excise on HSD (INR/Litre)	0.988	1	
Avg. Crude Oil Price (USD/bbl.)	-0.952	-0.915	1

Significance level  $\alpha=0.05$

Source: Authors' own computations

## **2.0 Review of Literature and Objective of the Study**

Gulati N. & Adhana D.K. (2020) in their study suggests bringing petroleum products under GST to curb the rising fuel prices. Mukherjee S. (2020) in his study projected revenue of petroleum products under GST Model (for central government). Ibrahim K.K. & Shana P. (2018) discussed about fuel taxes in India and suggested to include petroleum products in GST to bring-down its retail sales price. In another study by Mukherjee, S. & Rao, R.K. (2015) it was found that petroleum products if kept outside GST umbrella, shall have a cascading effect. It also suggests policy options to include these products under GST thereby reducing cascading and under recoveries of oil marketing companies. Another study has concluded that India's energy taxation needs to be redesigned for better management of public finance as the country is shifting away from fossil fuels (Gambhir *et al.*, 2021). In an article titled, *On Fuel Price, Crude Fact*, Shri Sushil Kumar Modi has stated that petrol and diesel may not be included in the GST for the next 8-10 years for loss of revenue to states. However, no study is found which makes forecast of revenue at central and state level under GST law. In this backdrop the present study has following objectives:

- a) To forecast revenue under present taxation system for left-out petroleum products for central and state government(s);
- b) To determines revenue neutral rate of petroleum products under GST, including cess; and
- c) To compare revenues under present taxation system and under GST regime.

The next part describes the methodology of study and sources of data. In the chapter 4, we project the future revenue under present tax system and calculate revenue neutral rate under GST, including cess. Also, we compare the revenue under both the option. In 5<sup>th</sup> chapter we conclude based on our analysis made therein.

## **3.0 Methodology of Study and Sources of Data**

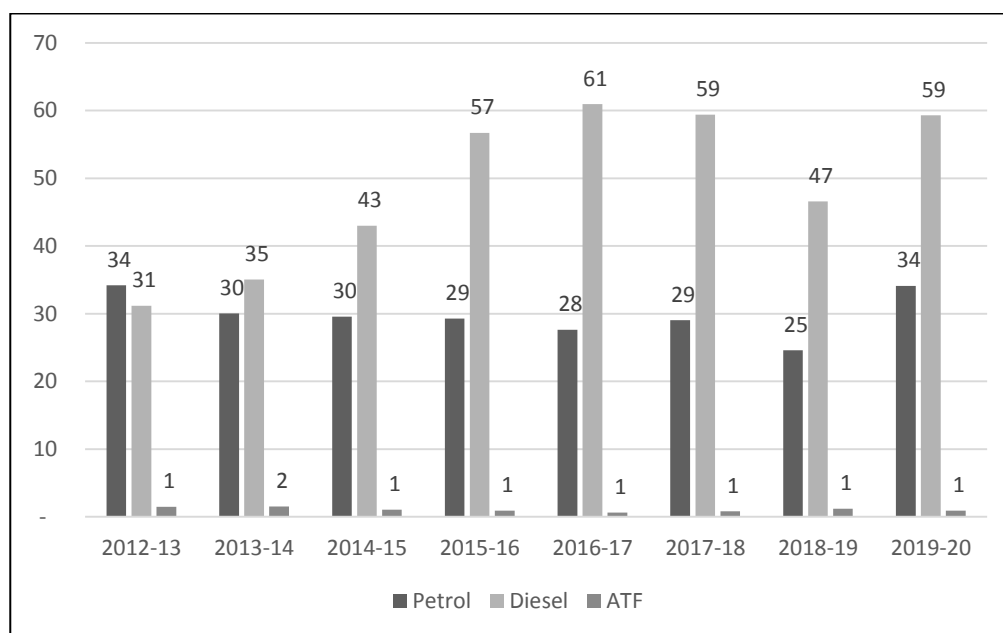
The study uses two different methods for computation of projected revenue (under existing and proposed GST tax structure) for major petroleum products for central government for the period 01.04.2020 to 31.03.2022 and state governments (Delhi and West Bengal) for the period 01.04.2020 to 31.03.2024.

### **3.1 Methodology used for Central government**

For union government major portion of petroleum revenue comes from central excise of MS/petrol and HSD<sup>5</sup>. Among all petroleum products, excise duty collection

from petrol and diesel accounts nearly 85%-90% (Figure 4). Hence, we have considered revenue from central excise on MS/Petrol and HSD only for our study.

**Figure 4: Share (in %) of Major Petroleum Products in Central Excise Duty Collection**



Source: Various publications of PPAC, MoPNG, 2012-2020

First, we collected time series data of revenue for these two products for the period 2012-13 to 2019-20. Mann-Kendall Trend Test/two-tailed test applied on the data to check whether there is any trend in the series. Based on the result of test, we forecast revenue from central excise under present taxation system for the given products for the period 2020-21 to 2023-24.

Second, we calculated present rate of tax (central excise plus state VAT) on retail sale price as on 01.04.2021. Now, to levy the same tax rate under GST (i.e., to make revenue neutral rate), tax rate and amount of CGST, SGST and GST compensation cess have been calculated as on 01.04.2021. CGST shall be the only source of revenue for central government under GST regime.

Third, based on the actual production of MS & HSDO for the year 2020-21, estimated demand of MS & HSDO for the year 2021-22 and applying the same amount of CGST as calculated in second step, we compute the estimated revenue from CGST

(i.e., revenue that may have been earned if GST is implemented on Petrol/MS and HSDO.

Last, we compare the revenues computed in step one (i.e., under present taxation system) and step three (i.e., if GST would have implemented) to find excess/shortfall in revenue, if GST is implemented.

### **3.2 Methodology used for State governments**

For the purpose of our study, we have taken the state of Delhi and West Bengal only for easy availability of data<sup>6</sup>. Another reason for considering these two states is consistency in sales tax/VAT rate. We found no deviation of tax rates of selected products for the state of West Bengal. For the state of Delhi also, the rate of deviation is negligible. These are shown in Appendix Tables A and B. Data in respect of price build-up of different petroleum products in Delhi and Kolkata has been considered as representative of price and taxes for the respective state. Three<sup>7</sup> petroleum products, MS/Petrol, HSDO and ATF, has been considered for the purpose of our study as most of the petroleum revenue (in the form of VAT/sales tax) comes from these products to any state government(s). To achieve the objective of the study the following steps has been followed.

First, we forecast the revenue for the period 2020-21 to 2023-24 under existing taxation system based on the available time series data for both the states (i.e., forecasted revenue under existing taxation system).

Second, total tax (under present system) as percent on selling price as on 01.04.2020 are computed for each of the products mentioned above. To levy the same tax rate under GST (to make revenue neutral rate), tax rate and amount of CGST, SGST and GST compensation cess have been calculated as on 01.04.2020. For state governments, SGST has been considered as the only revenue under GST regime<sup>8</sup>.

Third, based on the total consumption of these petroleum products for the last eight years (2012-13 to 2019-20), CAGR of consumption is computed for each of these products. By applying the same rate of CAGR, demand for these products computed up to 2023-24.

Fourth, using data of amount of SGST as computed in step two above and demand of petroleum products as computed in third step, total revenue that may be earned if these products are brought under GST has been calculated.

Last, we compare the revenue forecast in step one (i.e., under present tax structure) and revenue computed in step four (if GST is implemented) to find excess/shortfall in revenue.

### 3.3 Data used and their source(s)

The present study uses secondary data to achieve its objectives. The description of data along with their source are given in Table 2.

**Table 2: Data and their Sources**

S. No.	Description	Source
1	Revenue from central excise (MS/Petrol and HSDO) to central government	Indian Petroleum and Natural Gas Statistics, 2018-19 & 2019-20, Ministry of Petroleum & Natural Gas.
2	Actual production of MS & HSDO for the year 2020-21	PPAC's Snapshot of India's Oil & Gas Data, Abridged Ready Reckoner, March, 2021, p.18.
3	Estimated demand of MS & HSDO for the year 2021-22	PPAC, Demand under 13 <sup>th</sup> Plan
4	a) Revenue from Sales Tax/VAT to state government(s) b) Consumption of MS, HSDO & ATF from 2012-13 to 2019-20 for the state of Delhi & West Bengal	Indian Petroleum and Natural Gas Statistics, 2012-13 to 2019-20, Ministry of Petroleum & Natural Gas.

### 4.0 Revenue Neutral Tax Rate under GST Regime

As discussed earlier, major share of revenue from petroleum products comes from central excise on MS/petrol and HSDO for central government. Table 3 shows price build-up and present tax rate on petrol and diesel. To determine the tax rate, total cost is equal to price charged to dealers(s) plus dealer's commission. Total tax on cost is 146.35% for petrol and 117.28% on diesel.

Now to earn the same rate of tax on cost under GST, we need to fix-up the GST rate for petrol and diesel. We know that GST law has broadly given four tax slabs and highest of which is 28%. In other words, on a single transaction 14% tax on cost shall come to the kitty of each central and state government. As the present tax rate on petrol and diesel (on cost) is higher than 28%, we assume the highest tax rate (i.e., 28%) for each of the product. We also assume the remaining tax may be charged as GST compensation cess for each of the product. Following the assumptions, the component and amount of tax to be charged has been shown in Table 4. Thus, it can be said that on every litre sale of petrol and diesel central government can earn Rs.5.15 and Rs.5.21 respectively as CGST. Similarly, SGST component shall be the revenue of state



governments. The remaining component of tax i.e., GST compensation cess, shall be collected by the central government and distributed to the state according to the law of GST compensation cess. However, it may be kept in mind that GST compensation cess can only be collected up to 30.06.2022<sup>9</sup>.

**Table 3: Rate of Central Excise Duty on Petroleum Products as % of Cost and Retail Sales Price**

S. No.	Particulars	Price as on 01.04.2021 <sup>10</sup>	
		Petrol	Diesel
		INR/Litre	INR/Litre
1	Price charged to dealers (excluding excise duty and VAT)	33.07	34.71
2	Add: Excise Duty	32.90	31.80
3	Add: Dealers' commission (Average)	3.69	2.51
4	Add: VAT (including VAT on dealers' commission)	20.90	11.85
5	Retail Selling Price/Litre [1+2+3+4]	90.56	80.87
6	Excise Duty as % of Cost [2 /1+3]	89.50%	85.44%
7	Excise Duty as % of RSP [2/5]	36.33%	39.32%
8	Total Tax as % of Cost [(2+4)/(1+3)/]	<b>146.35%</b>	<b>117.28%</b>

*Source: Data compiled from PPAC's Snapshot of India's Oil and Gas Data, March, 2021*

**Table 4: Propose Rate of GST and Tax Amount of different Petroleum Products to Earn Same Amount of Tax**

S. No.	Particulars	Petrol			Diesel		
		CGST	SGST	Cess	CGST	SGST	Cess
1	Tax Rate	14.00%	14.00%	118.35%	14.00%	14.00%	89.28%
2	Tax Amount (INR)	5.15	5.15	43.50	5.21	5.21	33.23

*Source: Authors' own computation*

In case of state government(s), revenue, in the form of sales tax/VAT, from three petroleum products (Petrol, HDSO and ATF) constitutes the major share. The present price build-up and tax components for the state of Delhi and West Bengal of each of these products are shown in Table 5. We noted that retail selling price of all the products are lower in the state of Delhi in comparison to West Bengal. Total tax (as percent of cost) is higher in Delhi for petrol and diesel as compared to West Bengal.

**Table 5: Statement Showing Price Build-up of Different Petroleum Products on 01.04.2020**

S. No.	Particulars	Delhi			West Bengal		
		Petrol	ATF	Diesel	Petrol	ATF	Diesel
		INR/Litre	INR/KL	INR/Litre	INR/Litre	INR/KL	INR/Litre
1	Price charged to dealers (excluding excise duty and VAT)	28.28	25578.47	31.78	31.95	27,999.35	34.46
2	Add: Central Excise Duty	22.98	2813.63	18.83	22.98	3,242.73	18.83
3	Add: Dealers' commission (Average)	3.54	-	2.49	3.57	-	2.50
4	Add: VAT (including VAT on dealers' commission)	14.79	7098.02	9.19	14.80	9,660.52	9.83
5	Retail Selling Price [1+2+3+4]	69.59	35490.12	62.29	73.30	40,902.60	65.62
6	Total Tax (2+4)	37.77	9911.65	28.02	37.78	12,903.25	28.66
7	Tax as % of total Cost [6/ (1+3)]	<b>118.70%</b>	<b>38.75%</b>	<b>81.76%</b>	<b>106%</b>	<b>46%</b>	<b>78%</b>
8	Tax as % of Retail Selling Price [5/ (2+4)]	54.28%	27.93%	44.98%	52%	32%	44%

Source: Data compiled from Indian Petroleum and Natural Gas Statistics, 2019-20

To earn the same rate of tax (on cost) we have assumed 28% tax slab<sup>11</sup> on each of the products and balance tax shall be collected as GST compensation cess. The computed rate and amount of tax has been shown in Table 6 and Table 7 for the state of Delhi and West Bengal respectively.

**Table 6: Proposed Rate of GST and Tax Amount of Different Petroleum Products in Delhi on 01.04.2020**

Particulars	Petrol/Litre			ATF/KL			Diesel/Litre		
	CGST	SGST	Cess	CGST	SGST	Cess	CGST	SGST	Cess
Tax Rate	14.00%	14.00%	90.70%	14.00%	14.00%	10.75%	14.00%	14.00%	53.76%
Tax Amount (INR)	4.45	4.45	28.86	3580.99	3580.99	2749.68	4.80	4.80	18.42

Source: Authors' own computation

**Table 7: Proposed Rate of GST and Tax Amount of Different Petroleum Products in West Bengal on 01.04.2020**

Particulars	Petrol/Litre			ATF/KL			Diesel/Litre		
	CGST	SGST	Cess	CGST	SGST	Cess	CGST	SGST	Cess
Tax Rate	14.00%	14.00%	78.36%	14.00%	14.00%	18.08%	14.00%	14.00%	49.54%
Tax Amount (INR)	4.97	4.97	27.83	3919.91	3919.91	5063.43	5.17	5.17	18.31

Source: Authors' own computation

## 5.0 Revenue Forecast under Present Taxation System and under GST regime

### 5.1 For Central Government

To check whether there is any trend in past revenue collection from central excise on petrol and diesel, we have applied Mann-Kendall Trend Test. The test hypothesis and result are shown in Table 8.

**Table 8: Mann-Kendall Trend Test/two-tailed test**

<b>H<sub>0</sub>: There is no trend in the realisation from central excise.</b>	
<b>H<sub>a</sub>: There is a trend in the realisation from central excise.</b>	
Kendall's tau	0.643
S	18.000
Var(S)	65.333
p-value (Two-tailed)	<b>0.035</b>
Alpha	0.050
An approximation has been used to compute the p-value.	

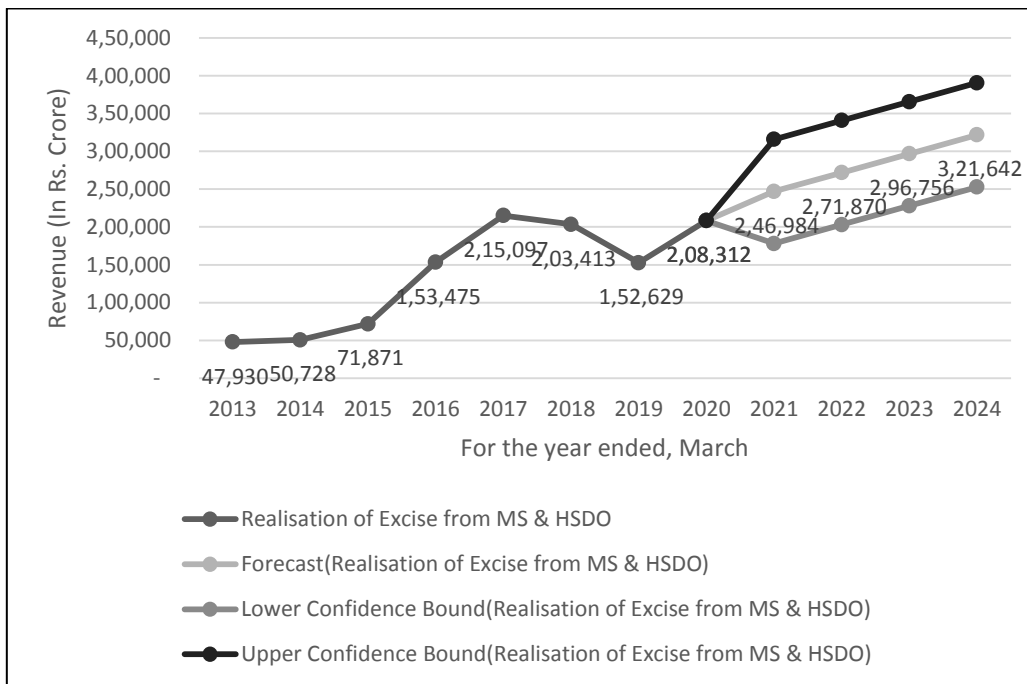
Source: Own computation

As the computed p-value is lower than the significance level  $\alpha=0.05$ , we reject the null hypothesis ( $H_0$ ) and accept the alternative hypothesis ( $H_a$ ). Based on the past revenue collection (central excise) trend from petrol and diesel, we have predicted revenue for the period 2020-21 to 2023-24 with 95% confidence interval. Figure 5 shows the year wise forecasted revenue.

Now, we compute revenue (to the central government) that had been earned in 2020-21 or may be earned in 2021-22, if these two petroleum products (petrol and diesel) are brought in GST regime. To compute the estimated revenue, only CGST as computed in Table 4 has been considered. The estimated revenue for the respective year

is shown in Table 9. The result shows that if petrol and diesel are brought in under GST, the central government shall loose huge revenue.

**Figure 5: Actual and Forecast Revenue from Motor Spirit and Diesel for Union/Central Government**



Source: Actual Figure – Indian Petroleum & Natural Gas Statistics, 2012-13 to 2019-20 MoP&NG. Forecast Figure – Authors’ own computation

**Table 9: Statement Showing Projected Revenue from Motor Spirit and HSDO Under Existing Tax Structure and Proposed GST Regime for the Union/Central Government**

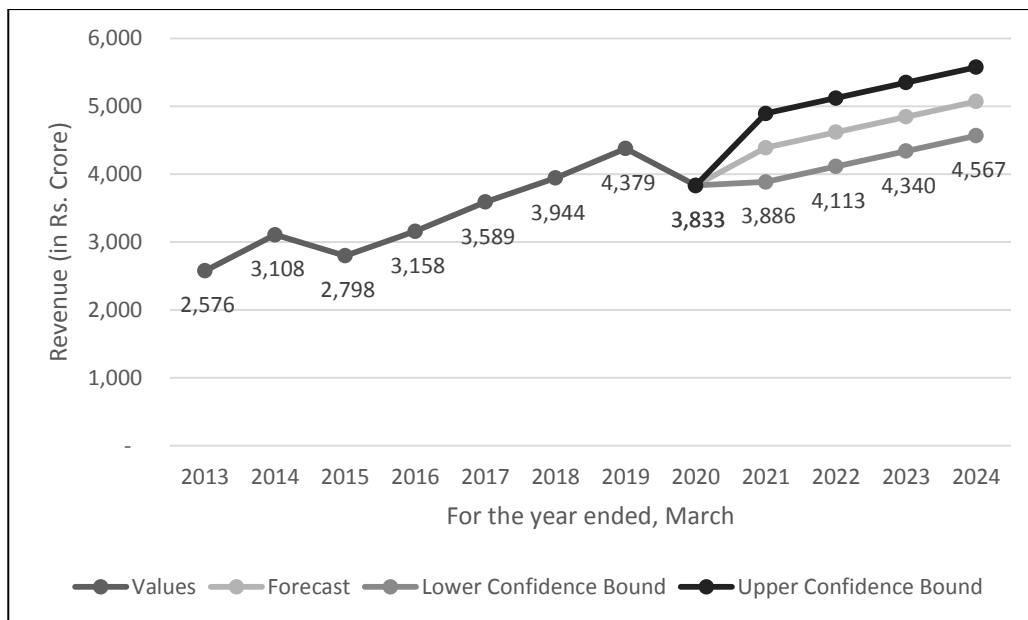
Sl. No.	Particulars	For the year ended [Amount in Rs. Crores]	
		31.03.2021	31.03.2022
1	Forecasted revenue under present tax system	2,46,984	2,71,870
2	Forecasted revenue if GST is implemented	89,308 <sup>12</sup>	94,293 <sup>13</sup>
3	Forecasted revenue shortfall	1,57,676	1,77,577

Source: Authors’ own computation

### 5.2 For State Government(s)

In case of government of Delhi and West Bengal, we also forecasted revenue (i.e., revenue from sales tax/VAT) from petroleum products for the period 2020-21 to 2023-24 with 95% confidence interval. This is depicted in Figure 6 and Figure 7 for the state of Delhi and West Bengal respectively.

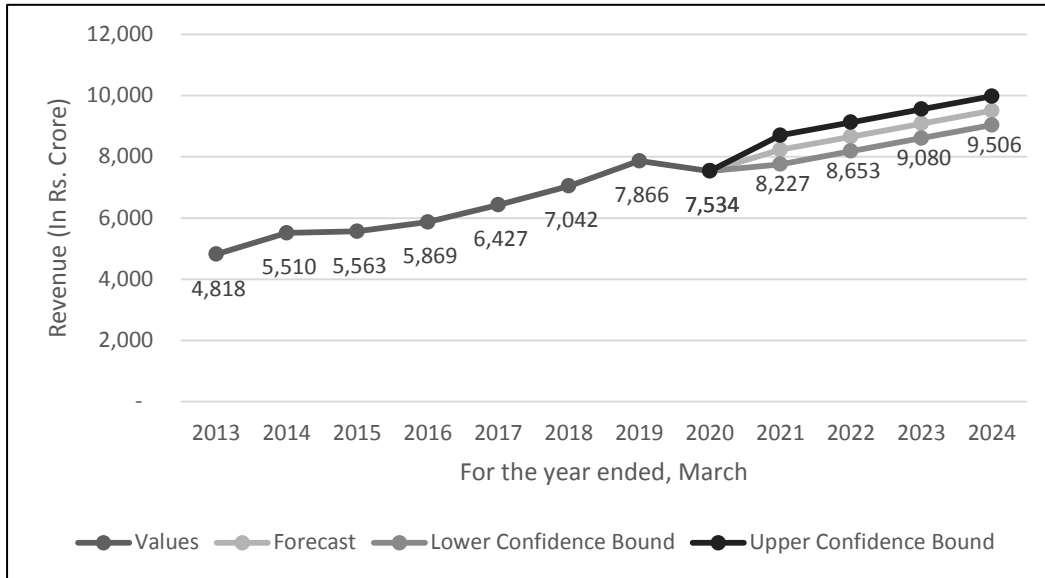
**Figure 6: Actual and Forecast Revenue from Petroleum Products for the State of Delhi**



(Source: Actual Figure – Indian Petroleum & Natural Gas Statistics, 2012-13 to 2019-20 MoP&NG. Forecast Figure – Authors’ own computation)

Now we compute revenue from major petroleum products (Petrol, Diesel and ATF) considering the CAGR growth rate in consumption of these products and SGST as computed in Table 6 and Table 7 for the respective states. It must be noted that in computing forecasted revenue for the period 2020-21 to 2023-24 the amount of SGST has been kept fixed. In other words, it has been assumed that only quantity will increase, but there will be no change in tax rate.

**Figure 7: Actual and Forecast Revenue from Petroleum Products for the State of West Bengal**



Source: Actual Figure – Indian Petroleum & Natural Gas Statistics, 2012-13 to 2019-20 MoP&NG. Forecast Figure – Authors’ own computation

The result shows with the implementation of GST on petroleum products, there shall be huge revenue loss to state governments. Revenue may fall by more than 60% in each year which is a huge financial loss for state governments. However, the present study doesn’t consider the impact of compensation cess<sup>14</sup>. The results are presented in Table 10 and Table 11 for the state of Delhi and West Bengal respectively.

**Table 10: Statement under Projected Revenue from Petroleum Products under Existing Tax Structure and Proposed GST Regime for the State of Delhi**

Sl. No.	Particulars	For the year ended [Amount in Rs. Crores]			
		31.03.2021	31.03.2022	31.03.2023	31.03.2024
1	Forecasted revenue under present tax system	4,390.00	4,617.00	4,844.00	5,071.00
2	Forecasted revenue if GST is implemented	2,035.25	2,092.72	2,152.74	2,215.42
3	Forecasted revenue shortfall	2,354.75	2,524.28	2,691.26	2,855.58

Source: Authors’ own computation

**Table 11: Statement under Projected Revenue from Petroleum Products under Existing Tax Structure and Proposed GST Regime for the State of West Bengal**

Sl. No.	Particulars	For the year ended [Amount in Rs. Crores]			
		31.03.2021	31.03.2022	31.03.2023	31.03.2024
1	Forecasted revenue under present tax system	8,227.00	8,653.00	9,080.00	9,506.00
2	Forecasted revenue if GST is implemented	3,253.59	3,453.27	3,670.69	3,907.81
3	Forecasted revenue shortfall	4,973.41	5,199.73	5,409.31	5,598.19

*Source: Authors' own computation*

## 6.0 Conclusion

The study finds both centre and state governments are heavily dependent on petroleum revenue. When international prices of crude oil gone down, the benefit of the same was not passed to the end consumer, rather central excise has had been hiked by the same to keep the end price unchanged. As compared to central government, states have much less space to increase the VAT because of much hyped political issue. With the introduction of GST, the freedom to levy and charge various taxation by the states have narrowed down and hence petroleum revenue has become very significant to both central as well as state governments. This study highlights that if the left-out petroleum products are brought in under GST umbrella, central government's revenue shall fall drastically. Same will be the case for any state governments. Central and state government(s) shall have to lower the dependency of revenue from petroleum products before bringing these products under GST umbrella.

In addition, if we consider the current global outbreak of COVID -19 pandemic and resultantly economic slowdown in India, both union and state governments have become more dependent on petroleum revenue. An increase of excise duty by Rs. 10/litre on Petrol and Diesel during May '20 (when the nation was going through lockdown) shows the dependency of petroleum revenues to the government(s). Hence, bringing left-out petroleum products under the ambit of GST seems to be impossible in the near future.

## Endnotes

1. Business Today, 6th May 2020 (Accessed at <https://www.businesstoday.in/current/economy-politics/69-india-now-has-highest-taxes-on-petrol-and-diesel-in-the-world/story/402995.html>)

2. Clause 12A of Article 366 of the Constitution of India defines 'Goods & Service Tax' (GST) as 'any tax on supply of goods or services or both except taxes on supply of alcoholic liquor for human consumption. Thus, petroleum products are constitutionally included under GST. However, Petroleum crude, diesel, petrol, ATF and natural gas are not presently leviable to GST. GST will be levied on these products from a date to be notified on the recommendations from the GST Council. Till such date, central excise duty shall be levied on manufacture/production of these products and CST/VAT shall continue on inter-state/intra-state sale. (Article 279A (5))
3. 'Left-out petroleum products' means those petroleum products which are still outside the umbrella of GST. These are Crude Oil, Petrol, Diesel, ATF and Natural Gas. However, GST is applicable on Naptha, Kerosene Oil, LPG, Fuel Oil, Sulphur, Bitumin, Light Diesel Oil, Lubes/Greases.
4. Lok Sabha Starred Question No. 265, answered on Monday, March 15<sup>th</sup>, 2021.
5. In the year 2019-20, 77% of tax/duties on crude oil and petroleum products came from central excise duty to union /central government. (Source: PPAC, Contribution of Petroleum Sector to Exchequer, Table Posted on 24.02.2021)
6. Price build-up data released in Petroleum Statistics covers only Metropolitan Cities (Delhi, Kolkata, Chennai & Mumbai).
7. Crude Oil and Natural Gas has not been taken into the study. The price of Natural Gas is government regulated and hence not included in study.
8. In the present study, we have assumed that any tax that needs to be charged over and above 28%, shall be collected by way of GST Compensation cess. It may be noted that GST Compensation cess is collected by central government and distributed among the states which falls short of pre-calculated revenue. While computing projected revenue from for states under GST regime, we have not considered revenue from GST compensation cess. As the GST compensation cess is only for transition period and not ever-lasting tax collection law, we have ignored any revenue that might be collected under this head for the purpose of our study.
9. GST Compensation cess is levied to compensate the state(s) for any shortfall of projected revenue for the first 5 years. However, 42<sup>nd</sup> GST Council meeting has decided to carry on compensation cess by another 2 years.
10. Computations are based on retail selling price in Delhi.
11. As the present rate of all the products are more than 28% in both the states.
12. Only CGST, assuming 28% tax rate (14% CGST + 14% SGST); MS and HSDO production for the year 2020-21 is 35.8 and 100.4 million metric tonnes respectively.
13. Computations based on forecasted demand under 13<sup>th</sup> Five Year Plan for the year 2021-22 and assuming same rate of excise duty as 2020-21.



14. If we assume that the entire compensation will be distributed to state government, then states may financially benefit. However, we must keep in mind that GST compensation cess can be charged for a certain period. Once that period gets over, states may have financial shock.

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**Appendix Table A: Statement Showing Average Rate of Sales Tax/VAT for the period 2012-12 to 2019-20 in the States of West Bengal and Delhi**

	MS/Petrol				ATF				HSD			
	Min	Max.	Avg.	S.D.	Min	Max.	Avg.	S.D.	Min	Max.	Avg.	S.D.
<b>West Bengal</b>	25.00 %	25.00 %	25.00 %	<b>0.00</b> <b>0</b>	25.00 %	25.00 %	25.00 %	<b>0.00</b> <b>0</b>	17.00 %	17.00 %	17.00 %	<b>0.00</b> <b>0</b>
<b>Delhi</b>	20.00 %	27.00 %	23.50 %	<b>0.03</b> <b>7</b>	20.00 %	25.00 %	22.50 %	<b>0.02</b> <b>7</b>	12.50 %	18.00 %	14.78 %	<b>0.02</b> <b>5</b>

Source: PPAC, 2012-2020

**Appendix Table B: Statement Showing Value of Upper and Lower Bound of Forecasted Petroleum Revenue**

Particulars	At 95% Confidence Interval	2020-21	2021-22	2022-23	2023-24
		(Figures in Rs. Crore)			
<b>Central Government</b>	Upper Bound	3,15,841	3,40,727	3,65,614	3,90,501
	Lower Bound	1,78,126	2,03,012	2,27,898	2,52,783
<b>Delhi</b>	Upper Bound	4,894	5,121	5,348	5,575
	Lower Bound	3,886	4,113	4,340	4,567
<b>West Bengal</b>	Upper Bound	8,700	9,126	9,552	9,978
	Lower Bound	7,555	8,181	8,607	9,033