Predicting Compensation under GST and its Impact on Revenue Growth Post Compensation Period: A Study for the State of West Bengal

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ABSTRACT

Goods and Service Tax Compensation Cess (GSTCC) has been introduced to compensate states for any loss of revenue subsumed under GST considering 14% growth per year. This compensation shall last for 5 years i.e. up to 30.06.2022. GSTCC is levied on some specified luxury items or demerit goods. As GST is destination-based consumption tax, it is expected to increase revenue for states having a large consumption base. West Bengal, being, one of the largest consumer state, is expected to receive large revenue under GST. However, the state's budget figure shows huge increase in compensation amount over the year. With the help of trend function and simple regression model, the expected revenue from GST has been computed up to 30th June, 2022 and then compared with the projected revenue subsumed. The study shows an increasing trend of compensation for the state which indicates revenue shock once the compensation period shall over. This study also considers the theoretical impact of ongoing economic slowdown for pandemic on GSTCC. The study concludes that in post compensation period the state shall have revenue shock which may be mitigated by widening tax base and increasing tax efficiency.

Keywords: *Goods and services tax compensation cess; GST compensation; West Bengal.*

1.0 Introduction

Goods and Service Tax (GST), a new paradigm shift in India's indirect taxation system, was introduced in India on 1st July, 2017. In view of the federal structure of the country, India has adapted a 'Dual GST Model' where both Centre and States can simultaneously levy taxes.

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Being a new taxation regime, many states were uncertain about the revenue under the new taxation regime. As major portion of states revenue comes from existing taxation which has subsumed in GST, it was obvious to worry about GST revenue and its growth. To bring confidence among states and protect states' revenue, Goods and Service Tax (Compensation to States) Cess Act, 2017 (hereinafter referred as GSTCC) was enacted. GSTCC enables Central Government (CG) to levy cess, over and above the GST, and to compensate those states whose projected state GST revenue shall not be achieved. It is decided that this compensation to States shall be for the next 5 years i.e. up to 30.06.2022 with an annual revenue growth of 14%. This cess is charged on the specified luxury items or demerit goods, like tobacco, pan masala, aerated waters, motor cars etc.

GST, being a destination-based consumption tax, aims to increase the revenue for not so rich states which have higher consumption[1]. The Centre has released so far Rs.2,96,466 crore (up to 31.03.2020)[2] to states as compensation for not achieving expected revenue which indicates a gap between expected revenue and actual revenue earned by states. This revenue gap has become a major concern among states because the compensation by Centre shall end on 30.06.2022[3]. Now a question arises that how this gap shall be financed post 30.06.2022?

West Bengal, a state having large consumer base and low industrial development in comparison to developed states is expected to receive compensation around 7% and 15% of state's own tax revenue and state GST revenue respectively for the year 2020-'21[4]. Given the declining economy, unexpected lockdown and increasing trend of pandemic, maintaining the rate of growth in revenue by state governments and GSTCC mobilization by Central Government shall be the real challenge in the days to come.

2.0 GST Compensation Cess and Its Financial Impact in Post Compensation Period in the State of West Bengal: A Literature Review

Researchers have found that commodity-service tax have negative effects on state economic growths (Neog, and Gaur, 2020). However, studies have also confirmed that tax revenue has significant impact on GDP of a country (Babatunde *et al.*, 2017).

GST can be a tool for improving government's finance and increase in efficiency (Sury, 2015). Research suggests that economy shall hit badly in case there is decrease in political will-power and synergy between Centre and States on GST matters (Mohanty & Chandran, 2017).

There shall be revenue shock to most of the states once GSTCC period shall over and to compensate this, states either need to augment revenue source or to cut down expenditure (Mukherjee, 2020). Researchers have found that relatively low-income states have tax capacity to sustain 14% growth rate in tax collection during the GST Compensation period whereas middle-income and high-income states don't have this capacity (Mukherjee, 2019). However, no literature is found on the projection and impact of GSTCC in respect to the state of West Bengal. Hence there is a study gap which needs to be fulfilled.

The objective of the study is to predict the compensation under GST in coming days and its impact on the revenue growth post compensation period.

3.0 Methodology and Data

3.1 Method of study

In order to achieve the objective of the study following steps have been performed sequentially:

1) 'State's own tax revenue' (SOTR) for the year 2021-'22 and 2022-'23 have been predicted with the help of TREND function in Excel.

2) As 'taxes on sale, trade etc.' (TOST) is a part of SOTR, Pearson's correlation coefficient is computed to know the degree of association between these two variables with available data for the period 2010-11 to 2020 – 21. Then linear regression equation computed, the model of which is as follows:

$$\text{TOST} = \alpha + \beta_1 \text{SOTR}$$

where TOST is 'taxes on sale, trade etc.' which is dependent variable; α is the intercept; β_1 is the parameter (intercept) to be estimated (slope of the line) and SOTR is 'state's own tax revenue' which is independent variable.

Now with the outcome of linear regression equation, we predict the variable 'TOST' for the year 2021-22 and 2022-23.

3) Next, we have once again used Linear Regression Analysis between the variable 'Revenue from GST (Inclusive of IGST)' and TOST with the available data (FY 2017-18 to FY 2020-21 as GST has been implemented only from 01.07.2017). The model for regression equation is given as follow:

$$\text{RGST} = \alpha + \beta_1 \text{TOST}$$

where RGST is 'Revenue from GST (inclusive of IGST).' which is dependent variable; α is the intercept; β_1 is the parameter (intercept) to be estimated (slope of the line) and TOST is 'taxes on sale, trade etc.' which is independent variable.

With the outcome of linear regression equation, we predict the variable 'RGST'for the year 2021-22 and 2022-23. (*Note: To predict RGST, we have not used multiple regression model as SOTR and TOST are not two independent variables; rather TOST is dependent on SOTR.*)

4) Next, comparison has been made between the value of 'Revenue from GST' and 'Projected Tax Subsumed under GST'. If the resultant value is positive, it means the state has achieved the expected growth in GST revenue and there shall be no compensation for loss of revenue. On the other hand, if the value is negative, it implies that GSTCC is receivable for not achieving expected growth to the extent of negative value.

Projected Tax Subsumed under GST has been computed year-wise after giving effect of 14% growth starting with Base Year 2015-'16[5].

3.2 Sources of data

The sources of data of different variables with their notations and source is enumerated in the following table (Table 1).

Table 1: Descriptions of Variables and Source

| S. No.	Variables	Description	Source
1	TOST	Taxes on sale, trade etc.	Data for the period 2010-'11 to 2020-'21 has been taken from Budget publication No. 4 (for various years), Receipts under Consolidated Fund and Explanatory Memorandum thereon under Revenue Account, Government of West Bengal. *The figures of the year 2019-'20 and 2020-'21 is revised estimate and budget estimate respectively.*
2	SOTR	State's own tax revenue (including revenue from SGST and IGST)	
3	RGST	Revenue from West Bengal GST (inclusive of IGST)	Data for the period 2017-'18 (from 01.07.2017) to 2020-'21 has been taken from Budget publication No. 4 (for various years), Receipts under Consolidated Fund and Explanatory Memorandum thereon under Revenue Account, Government of West Bengal. *The figures of the year 2019-'20 and 2020-'21 is revised estimate and budget estimate respectively.*

4.0 Analysis and Interpretation

We shall analyze the result in the same sequence as mentioned in study methodology in section 3.1.

1) State's own tax revenue (SOTR) has grown with an increasing trend in the last decade (Figure 1). Major sources of SOTR include State GST, Sales Tax/VAT, State Excise, Stamp Duty & Registration Fees and Land Revenue. The SOTR grew at an average rate of 14% p.a. in the period 2010-'11 to 2019-'20. However, we noted a very high rate of deviation from mean (S.D. 9%) which implies an inconsistency in growth.

To achieve the objective of study, we have computed the predicted value of SOTR for the period 2021-'22 and 2022-'23 by applying the methodology as mentioned in earlier section. A linear forecast trend-line is also shown in Figure 1.

Figure 1: State's Own Tax Revenue (SOTR)
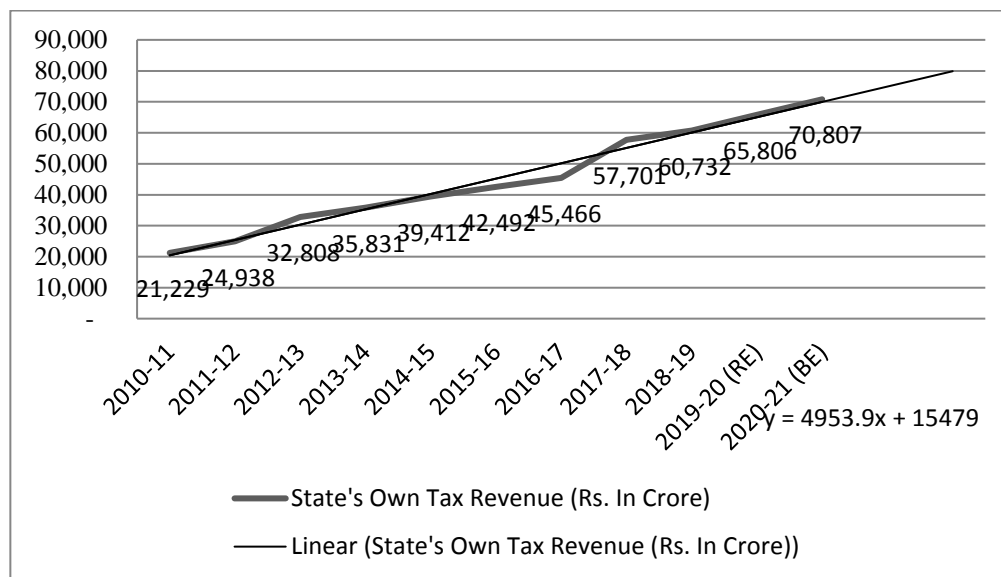
Source: Budget Publication No.4, Govt. of West Bengal

2) The Taxes on sales, trade etc. (TOST) is a part of SOTR. TOST includes mainly state GST including IGST, Sales Tax and Value Added Tax. The year-on-year growth of TOST is depicted in Figure 2. The correlation between TOST and SOTR shows near about perfect positive (r = 0.997). As TOST forms almost 60% of SOTR,

and there is linearity between the variables, we applied simple linear regression to predict the TOST (dependent variable) value for the next 2 years i.e. 2021-'22 and 2022-'23. The regression result is given in Table 2 and Table 3.

Figure 2: Y-o-Y Growth of Taxes on Sale, Trade etc.
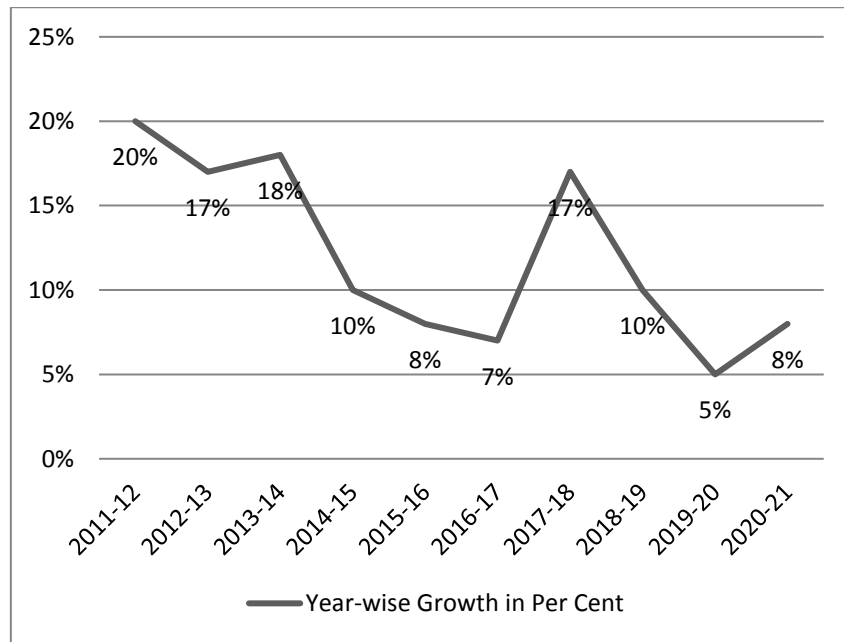
Source: Author's own computation from the available data of Budget Publication No.4, Govt. of West Bengal

Table 2: Regression Statistics

Multiple R	0.997
R Square	0.994
Adjusted R Square	*0.993*
Standard Error	766.272
Observations	11

Source: Author's own computation

The value of adjusted R Square in Table 2 (Regression Statistics) is 0.993 which means independent variables are able to explain the variations in dependent variable to

the extent of 99.3%, at $p < 0.05$ (refer Table 3) which is significant. With intercept and regression coefficient, the regression equation is as follows:

$$TOST = 1916.783 + 0.551*SOTR$$

With the above equation we predicted the value of TOST for the year 2021-'22 and 2022-'23.

Table 3: ANOVA Table

	df	F	Significance F (p value)
Regression	1	1419.436	*0.000*
Residual	9		
Total	10		

Source: Author's own computation

3) The result of bivariate regression model is depicted in Table 4 and Table 5.
   As the regression result shows significant predictability (Adj. R Square = 0.963) of RGST at P<0.05, we accept the following regression equation and calculated RGST for the year 2021-'22 and 2022-'23.

$$RGST = -2406.147 + 0.867 * TOST$$

Table 4: Regression Statistics

Multiple R	0.987
R Square	0.975
Adjusted R Square	*0.963*
Standard Error	557.649
Observations	4

Source: Author's own computation

Table 5: ANOVA Table

	df	F	Significance F (p value)
Regression	1	78.423	*0.013*
Residual	2		
Total	3		

Source: Author's own computation

4) We compared the calculated values of RGST and Projected Tax Subsumed under GST and the result is shown in Table 6.

Table 6: GST Compensation Required for the State of West Bengal

Year	RGST	Projected Tax Subsumed under GST[6]	Result (Amount in Rs. Crore)
2017-'18 (Actual, except 1st Quarter)	-	-	(1,608.00)
2018-'19 (Actual)	-	-	(1,977.00)
2019-'20 (Advance Estimate)	-	-	(2,544.00)[7]
2020-'21 (Budget Estimate)	-	-	(4,928.00)
2021-'22 (Computed)	35,048.86	44,113.95	**(9,065.09)**
2022-23 (Only 1st Quarter, Computed Proportionally)	9,376.33	12,572.47	**(3,196.14)**

Source: For the year 2017-18 to 2020-21 Budget Publication No.4, Govt. of West Bengal;
Author's own computation for the remaining years

It is seen from Table 6 that projected tax subsumed under GST may not achieved by the State Government in the coming years. Hence there shall be revenue loss which may be compensated by GSTCC. It is also seen, that this revenue loss has an increasing trend in last 3 years and shall remain so in coming years. As the GSTCC shall remain effective only up to 30.06.2020, proportionate computation has been made for the year 2022-'23.

5.0 Findings and Conclusion

The present study aimed at possible revenue shortfall in GST Compensation period gives the following findings:

a) There is an increasing trend in state's own tax revenue over the period. We found a near perfect positive correlation between state's own tax revenue and taxes on sale, trade etc. This implies a direct impact on exchequer's kitty with any future revenue earnings from GST.

b) Revenue from State GST (including IGST) is increasing with an average 8% per annum which is more or less the average revenue growth rate for the country. However, given the large consumer base in West Bengal, this growth may be increased with increase in tax efficiency.

c) There in year-on-year increase in compensation for not achieving the projected revenue under GST. As the compensation shall be limited for only 5 years, the State

government must think about increasing tax base to have minimum revenue shock post GST compensation period.

d) The study shows that estimated GST compensation grants for the year 2021-'22 shall be Rs.9065 crore which shall be an increase of 84% over the budget estimate of 2020-'21. In 2019-20, compensation grants are estimated to increase from Rs.2,000 crore at the budgeted stage to Rs 2,544 crore at the revised stage. The continuous increase of compensation requirement reflects poor ability of state to achieve the growth rate of 14% as projected.

If we take into account the ongoing global economic slow-down for pandemic, the situation further deteriorates for the states. As the collection from GSTCC is not adequate to compensate the states, the centre has used the earlier year's surplus fund to meet the obligation in the year 2019-'20. To add fuel in this concern, the Central Government very recently has indicated in the Parliamentary Panel that the collection under GSTCC is not sufficient to compensate in existing formula and has urged to decide the matter in GST Council. Now a question arises whether CG is liable for making the compensation? Very recently, the Attorney General has opined that CG has no obligation to compensate from its own fund and GST Council shall decide the possible measures[8].

Now broadly there are 3 options available to GST Council. First, increase the rate of compensation cess and bring more goods and services under its net. Second, market borrowing by the CG to pay compensation and extend the compensation period to repay the borrowings. Third, market borrowings by the respective states to compensate revenue loss for the time being and extend the compensation period to repay the borrowings to states by CG. In each of the alternatives there shall be some consequential impact. Like in first alternative, industry may hit badly for increase in cess and may bring further economic slowdown. Similarly, in second and third alternative, any borrowing shall be under the security of consolidated fund which shall increase higher government debt burden and also fiscal deficit.

As taxation revenue forms a major chunk of the overall state revenue, any uncertainties in this may have direct impact on state finances. Maintaining the steady growth in GST revenue demands a wider tax base and consistency which is the real challenge for the state of West Bengal in the days to come.

Endnotes

1. http://timesofindia.indiatimes.com/business/india-business/poorer-states-score-big-in-gst-mop-up/articleshow/70651418.cms (Accessed on 5th August, 2020)

2. https://www.bloombergquint.com/law-and-policy/cant-pay-states-gst-compensation-at-current-rate-government-tells-parliamentary-panel (Accessed on 7th August, 2020)
3. In 42nd GST Council Meeting held on 5th October, 2020; it has been decided that GST Compensation Cess shall stay beyond June, 2022 to help states (Jha. S. 2020). However, for non-availability of further details, this paper has not considered further extension of GSTCC beyond the initial decided period i.e. up-to 30.06.2022
4. Budget publication No. 4 (February, 2020), Receipts under Consolidated Fund for the year 2020-'21 and Explanatory Memorandum thereon under Revenue Account, Government of West Bengal
5. Sec. 4 of GST (Compensation to States) Cess Act, 2017
6. Source: Rajya Sabha Starred Question No. 164 answered on 03.12.2019; Computation: $(20,097.72*1.14)^t$ where t is time in years staring with Base Year 2015-'16
7. As per the Press Release by GoI, posted on 27th July, 2020, Compensation Cess released to the State of West Bengal for the year 2019-'20 amounts to Rs.6,200 Crore
8. https://economictimes.indiatimes.com/news/economy/policy/states-may-have-to-borrow-as-ag-says-centre-not-obligated-to-pay-for-gst-compensation-shortfall/articleshow/77264592.cms (Accessed on 7th August, 2020)

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