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Tax Effort of West Bengal and Andhra  
Pradesh: A Comparative Study Based on  
Consumption Expenditure

Jayanta Kr. Dwibedi

Sugata Marjit

&

Koushik Kr. Hati

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**Tax Effort of West Bengal and Andhra Pradesh: A Comparative Study  
Based on Consumption Expenditure**

**Jayanta Kumar Dwivedi**

*Brahmananda Keshab Chandra College, Kolkata*

**Sugata Marjit<sup>1</sup>**

*Centre for Studies in Social Sciences, Calcutta*

**Koushik Kumar Hati**

*Centre for Studies in Social Sciences, Calcutta*

**Abstract**

*West Bengal is at present in a dire state of fiscal and financial stringency. In this paper we have tried to find out the root causes of such a problem by looking at the revenue generating capacity and comparing its performance with Andhra Pradesh which is said to be of similar 'size' in terms of the volume of economic activity. Our new approach carefully decomposes the aggregate consumption data of each state from National Sample Survey and measures tax collection for different commodity groups. We have also estimated tax realization of West Bengal, taking tax effort of Andhra Pradesh as a benchmark. Based on our counterfactual exercise on different components of the state's own tax revenue we find that some part of West Bengal's poor tax realization can be explained in terms of its consumption data. Per capita consumption of some commodities in West Bengal, which are very important from the point of view of tax collection, is unusually lower than the corresponding figures in Andhra Pradesh. We propose that the discrepancy might be related to larger informal sector and thereby under reporting of actual consumption or in genuine consumption behavior reflecting a different intra as well as inter-temporal preference structure. This opens up new avenues for further research.*

**Key Words:** State finance, Tax Effort, Counterfactual, Consumption pattern, Informalization

**JEL Classification:** H10, H11, H21, H26

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<sup>1</sup> Corresponding Author, Centre for Studies in Social Sciences, Calcutta, R-1, Baishnabghata Patuli Township, Kolkata – 700 094. Email: marjit@gmail.com. This is related to a broader study conducted for the 14<sup>th</sup> Finance Commission, Govt. of India. Partial research support has been provided by CTRPFP at CSSSC. The usual disclaimer applies.

## **1. Introduction**

West Bengal is at present in a dire state of fiscal and financial stringency manifested in high revenue and fiscal deficit and a huge debt burden. A number of factors are said to be responsible for the present state of state finance and the debt problem. One of such important factors is the effort to generate own tax revenue to finance the state's own expenses. Own tax revenue acts as the prime source of revenue for any government. Despite having a sizable volume of GSDP, West Bengal has performed badly in collecting own tax revenue. This paper makes an attempt to find the causes behind such poor revenue collection. However, evaluation of state finance has to be done in terms of a benchmark or a valid reference point. A natural choice seems to be to use the national average as benchmark. But averaging across states with fairly large variations in economic and social attributes cannot do justice to the performance of a state. Therefore, along with the national average, as a comparable national yard stick, we take Andhra Pradesh as the reference point because of its proximity to West Bengal in terms of its size of the economy (GSDP), per capita income and population.

The main contribution of this paper is to explore the extent of tax collection from different groups of consumables as categorized in the NSS consumer expenditure survey. Comparable components of consumption are studied along with the applicable tax rates for both the states. This exercise is quite novel in the sense that it helps the policy makers to identify the micro sources of the problem. The work is based on a data set ranging from 2002-03 to 2011-2012. In some cases we have extended our study upto 2012-13 wherever data is available. Though we should keep in mind that the inherited fiscal burden is not likely to be streamlined anytime soon, a careful scrutiny of the fiscal scenario over the last decade or so will provide some clue to possible remedial policies.

The paper is structured as follows. The next section describes the profile of the two states in terms of volume of economic activity and demographic pattern. The third section compares the tax efforts of the two states and tries to find out the root causes of such dismal tax effort for West Bengal. The fourth section Concludes.

## **2. State Profile – Andhra Pradesh & West Bengal**

To start with, we compare some basic socio, demographic and economic differences across the two states under discussion. West Bengal (WB) and Andhra Pradesh (AP) are said to be of similar “size” in terms of population and volume of economic activities. In spite of that Andhra Pradesh tends to perform much better than West Bengal in any of the areas of fiscal

management. It is well known that Revenue Deficit of the state of West Bengal is the highest among the five highly-indebted states of today's India and consequently the state has become the top most indebted state among all general category states of the country. Our benchmark state of this discussion, namely Andhra Pradesh, on the other hand, has shown significant improvement in her state finance by reducing her revenue deficit to zero and running in surplus since 2006-07. If we go on finding the root causes of this increasing deficit for West Bengal, it can be seen that on the one side the actual tax collection is far below the potential tax collection, causing shortfall of revenue earning, and on the other side inefficiency in spending money causing rise in expenditure. In 2011-12, West Bengal managed to collect only 4.6 per cent of her GSDP as Own Tax Revenue, whereas Andhra Pradesh has collected 8 per cent of the same in the same financial year. Table-1 provides a snapshot of some demographic and economic indicators for the two states under discussion.

Table –1  
**At a Glance: Andhra Pradesh and West Bengal (2011-12)**

| Indicators                       | Andhra Pradesh  | West Bengal     |
|----------------------------------|-----------------|-----------------|
| Population (in 2011)             | 84665533        | 91347736        |
| GSDP (2004-05 Prices)            | 4050.46 Billion | 3291.37 Billion |
| Growth Rate of GSDP              | 7.82            | 6.26            |
| Per Capita GSDP (2004-05 Prices) | 47840           | 36031           |
| Revenue Deficit                  | Nil             | 145.7 Billion   |
| Debt Burden                      | 1395.1 Billion  | 2077.02 Billion |
| Annual Interest Payment          | 114.12 Billion  | 160.97 Billion  |

*Source:* Ministry of Statistics and Programme Implementation, GoI and State Finance: A Study of Budgets, Reserve Bank of India.

The table basically corroborates the fact that Andhra Pradesh can indeed be considered as a benchmark state to evaluate West Bengal's situation in the right perspective.

### **3. Revenue Effort**

We now focus on the central objective of the study and try to examine the revenue generating capacity of the state by estimating and analysing various fiscal parameters that are considered to be the indicators of the tax effort of a state.

#### **3.1 Revenue Receipt**

To start with, we look at various sources of revenue of the two states for the entire study period (Table-2). It is clear that West Bengal's dependence on Central Transfers has increased significantly during the last decade. The share of state's own revenue (tax *plus* non tax) in total revenue receipts declined sharply from 56.4 per cent to 44.7 per cent for WB whereas in case of AP there has been a sizable increase from 64.8 per cent to 69.5 per cent.

Increased dependence on central transfers are primarily on account of the state's inability to collect own tax revenue as well as its inability or reluctance to levy appropriate user charges to collect non tax revenue.

Table 2  
Sources of Revenue over the Years (in per cent)

| Year      | West Bengal              |                           | Andhra Pradesh           |                           |
|-----------|--------------------------|---------------------------|--------------------------|---------------------------|
|           | Share of Own Tax Revenue | Share of Central Transfer | Share of Own Tax Revenue | Share of Central Transfer |
| 2003-2004 | 56.4                     | 43.6                      | 64.8                     | 35.2                      |
| 2004-2005 | 56.6                     | 43.4                      | 69.6                     | 30.4                      |
| 2005-2006 | 48.1                     | 51.9                      | 68.6                     | 31.4                      |
| 2006-2007 | 50.1                     | 49.9                      | 68.7                     | 31.3                      |
| 2007-2008 | 48.4                     | 51.6                      | 66.2                     | 33.8                      |
| 2008-2009 | 52.5                     | 47.5                      | 68.5                     | 31.5                      |
| 2009-2010 | 52.4                     | 47.6                      | 66.5                     | 33.5                      |
| 2010-2011 | 49.7                     | 50.3                      | 69.0                     | 31.0                      |
| 2011-2012 | 44.7                     | 55.3                      | 69.5                     | 30.5                      |

Source: Calculation based on RBI data

When we compare the state's performance with respect to the size of the economy (GSDP in this case) we can find how the state performed badly in generating own tax as well as non-tax revenue. Table - 3 presents different revenue components as percentage of GSDP for West Bengal and Andhra Pradesh for our study period. Revenue receipt as a percentage of gross state domestic product increased marginally in West Bengal but remained significantly lower than that of Andhra Pradesh.

Table - 3  
Components of Revenue Receipt as percentage of GSDP

| YEAR          | West Bengal |          |           |                       | Andhra Pradesh |          |           |                       |
|---------------|-------------|----------|-----------|-----------------------|----------------|----------|-----------|-----------------------|
|               | RR/GSDP     | OTR/GSDP | ONTR/GSDP | Central Transfer/GSDP | RR/GSDP        | OTR/GSDP | ONTR/GSDP | Central Transfer/GSDP |
| 2002-2003     | 8.7         | 4.2      | 0.4       | 4.1                   | 13.0           | 7.1      | 2.0       | 3.9                   |
| 2003-2004     | 8.8         | 4.7      | 0.3       | 3.8                   | 13.3           | 6.8      | 1.8       | 4.7                   |
| 2004-2005     | 9.5         | 4.8      | 0.6       | 4.1                   | 12.8           | 7.2      | 1.7       | 3.9                   |
| 2005-2006     | 10.3        | 4.5      | 0.4       | 5.4                   | 13.6           | 7.5      | 1.8       | 4.3                   |
| 2006-2007     | 9.9         | 4.5      | 0.5       | 4.9                   | 14.7           | 7.9      | 2.2       | 4.6                   |
| 2007-2008     | 10.1        | 4.4      | 0.5       | 5.2                   | 14.8           | 7.9      | 1.9       | 5.0                   |
| 2008-2009     | 10.8        | 4.2      | 1.5       | 5.1                   | 14.7           | 7.8      | 2.3       | 4.6                   |
| 2009-2010     | 9.3         | 4.2      | 0.6       | 4.4                   | 13.6           | 7.4      | 1.6       | 4.6                   |
| 2010-2011     | 10.3        | 4.6      | 0.5       | 5.2                   | 13.9           | 7.7      | 1.8       | 4.3                   |
| 2011-2012     | 10.9        | 4.6      | 0.2       | 6.0                   | 14.1           | 8.0      | 1.8       | 4.3                   |
| 2012-2013(RE) | 11.6        | 5.2      | 0.3       | 6.1                   | 14.5           | 8.3      | 1.7       | 4.5                   |

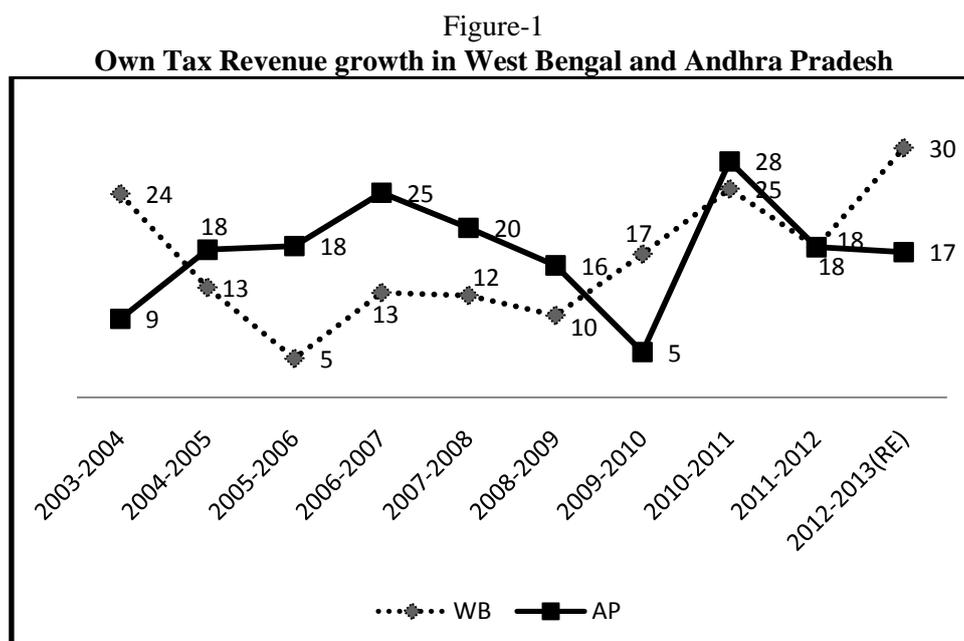
Source: Calculation based on RBI and CSO data

Note: RR- Revenue Receipt; OTR-Own Tax Revenue; ONTR - Own Non-Tax Revenue

As can be seen from the above table, own tax revenue (OTR) as well as own non-tax revenue (ONTR) as a percentage of GSDP in WB has been very low compared to Andhra Pradesh. For most of the years from 2002-03 to 2012-13, the OTR-GSDP ratio for West Bengal remained below 5 per cent and ONTR-GSDP ratio remained below 0.5 per cent. Only in 2012-13, the OTR-GSDP ratio for West Bengal has crossed the 5 per cent mark owing to an impressive performance of own tax revenue growth of nearly 31 per cent in 2012-13. Andhra Pradesh, on the other hand, registered a significantly higher OTR-GSDP as well as ONTR-GSDP ratio for the entire period. Furthermore, Andhra Pradesh experienced a sizeable increase in its OTR-GSDP ratio from 7.1 per cent in 2002-03 to 8.3 per cent in 2012-13. If we compare own revenue collection (OTR *plus* ONTR) as a percentage of GSDP, it is very surprising to note that AP's own revenue as a percentage of GSDP is nearly double to that of WB.

### 3.1.1 Own Tax Revenue

Own tax revenue (OTR) is undoubtedly the most important source of revenue for any state government. The fiscal performance of a state is best judged by its performance in generating own tax revenue. This is the source which gives a state maximum flexibility in generating revenue and allocating expenditure. West Bengal's own tax revenue grew at a CAGR of 16.5 per cent as compared to 17.4 per cent in Andhra Pradesh during the referred period. Figure 1 presents the relative performance of the two states in terms of own tax revenue growth.



Source: Calculation based on RBI and CSO data

Note: WB- West Bengal, AP – Andhra Pradesh

Revenue generating performance of a state can be judged by comparing its tax effort with the tax effort of similar level of governments. We define tax effort as the ratio of actual tax revenue of a government to its taxable capacity. Taxable capacity of a country is generally measured in terms of GDP with an implicit assumption that GDP is the closest possible proxy for the tax base of an economy. In case of states within a country, GSDP is taken as the proxy for the base and therefore the tax effort of a state is generally measured in terms of own tax to GSDP ratio<sup>2</sup>.

As mentioned earlier, for West Bengal the OTR-GSDP ratio has been very low compared to similar states as well as the national average. For the period 2002-03 to 2012-13 the OTR-GSDP ratio for West Bengal remained below 5 per cent (except 2012-13) compared to nearly 7 per cent for an average general category state. Furthermore the OTR-GSDP ratios for the state show a declining trend with only sign of slight improvement from 2010-11 onwards. For other similar states, however, this has increased significantly. For example, Andhra Pradesh experienced an increase in its OTR-GSDP ratio from 7.1 per cent in 2002-03 to 8.3 per cent in 2012-13. For an average GCS also this ratio has increased from 6.6 per cent to 7.3 per cent during the same period. Our estimates of OTR-GSDP for all the general category states show that the state of West Bengal scores the lowest on OTR-GSDP ratio and this is true for all the years except 2002-03, 2004-05 and 2012-13 where it was marginally higher than Bihar.

Very poor revenue generating performance of the state is surprising because in terms of per capita income West Bengal is ranked somewhere in the middle (ranked 10<sup>th</sup>) if all general category states are ranked according to per capita income but it ranked last if the states are ranked in terms of their revenue generating capacity. Andhra Pradesh, on the other hand, ranked 9<sup>th</sup> among the general category states in terms of per capita income but registered a very high OTR-GSDP ratio (ranked 4<sup>th</sup> for most of the period). Despite having a mid-level per capita income and a satisfactory growth of income, it is puzzling to see such poor tax collection in West Bengal. This prompts us to go deep into the problem and analyse why the OTR-GSDP ratio is so low in West Bengal.

### **3.1.2 Own Tax Revenue and its Components**

Own Tax Revenue of a state mainly comprises taxes on professions & trades, taxes on property and capital, taxes on commodities and services (including Value Added Tax (VAT), state excise, motor vehicles and passenger tax) and clearly most of them are not directly

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<sup>2</sup> Tax-GDP is the most commonly used measure of tax effort for cross country tax comparison. For more on this issue one can go through Pessino and Fenochietto (2010), Lotz. et. al (1967), Le et. al. (2012). For a sub-national level analysis one can see Sen (1997).

related to gross income of a state. We now look at the different components within Own Tax Revenue of West Bengal and compare those with that of Andhra Pradesh to see which are the most poorly performing items within the tax avenues. We consider the contribution of different components for the year 2011-12 to find the laggards (Table-4). In terms of contribution, state sales tax (now VAT) contributed maximum (58.3 per cent) to the total tax collection of WB and taxes on property and capital transaction is the second most important contributor (18.5 per cent). State excise also contributed a sizable 8.5 per cent to the state's own tax revenue in 2011-12 for WB. This is however much lower than that of Andhra Pradesh (18 per cent). Taxes on vehicles contributed 4 per cent to the total own tax revenue as compared to 5.6 per cent in Andhra Pradesh. Thus, taxes on commodities and services and taxes on property and capital transaction can explain nearly 99 per cent of the total tax collection for both the states as there is very little scope for the states to collect tax under the head 'taxes on income'.

Table-4  
**Tax components within OTR and their relative performance (in per cent)**

|   | Share in OTR<br>(WB)<br>(2011-12) | Share in OTR<br>(AP)<br>(2011-12) | Tax to GSDP<br>(WB)<br>(2011-12) | Tax to GSDP<br>(AP)<br>(2011-12) |
|---|-----------------------------------|-----------------------------------|----------------------------------|----------------------------------|
| <u>State's Own Tax Revenue (1-3)</u>          | 100.00                            | 100.00                            | 4.60                             | 8.00                             |
| 1. Taxes on Income                            | 1.70                              | 1.00                              | 0.08                             | 0.08                             |
| 2. Taxes on Property and Capital Transactions | 18.50                             | 8.80                              | 0.90                             | 0.70                             |
| 3. Taxes on Commodities and Services          | 79.80                             | 90.20                             | 3.70                             | 7.30                             |
| <i>Of Which</i>                               |                                   |                                   |                                  |                                  |
| • State Sales TAX/VAT                         | 58.30                             | 62.20                             | 2.70                             | 5.01                             |
| • State Excise                                | 8.50                              | 18.00                             | 0.40                             | 1.50                             |
| • Vehicles Tax                                | 4.00                              | 5.60                              | 0.20                             | 0.50                             |

*Source:* Authors' Calculation based on RBI and CSO data

*Note:* WB- West Bengal, AP – Andhra Pradesh

When we compare the performance of different tax components with respect to the taxable capacity (i.e. GSDP), it is evident that West Bengal performed dismally in collecting tax under all heads except taxes on property and capital transaction (Table-5).

Table - 5  
**Major Tax Components as a percentage of GSDP**

| Type of Taxes                             | West<br>Bengal | Andhra<br>Pradesh |
|---|----------------|-------------------|
| Own Tax Revenue                           | 4.6            | 8.0               |
| Taxes on Income                           | 0.1            | 0.1               |
| Taxes on Property and Capital Transaction | 0.9            | 0.7               |
| Taxes on Commodities and Services         | 3.7            | 7.3               |

|                   |     |     |
|-------------------|-----|-----|
| Value Added Tax   | 2.7 | 5.0 |
| State Excise      | 0.4 | 1.5 |
| Taxes on Vehicles | 0.2 | 0.5 |

*Source:* Calculation based on RBI and CSO data

In case of VAT, which is the biggest contributor to state's own tax revenue, West Bengal's tax effort (measured in terms of VAT-GSDP ratio) is nearly half of that of Andhra Pradesh. WB's excise revenue, at 0.4 per cent of GSDP, was substantially lower than that of Andhra Pradesh at 1.5 per cent. In case of collection under tax on vehicles, West Bengal performed miserably with collection of only 0.2 per cent of GSDP as against 0.5 per cent in case of Andhra Pradesh. Even though these two states are similar in terms of tax potential/capacity, in terms of actual tax collection West Bengal failed miserably.

### **3.2 What is Behind West Bengal's Dismal Tax Effort?**

Under the existing federal fiscal structure, the States' rights to collect taxes are largely confined to indirect taxes, predominantly commodity taxes like Sales Tax/VAT and other indirect levies like state excise and motor vehicle tax. Being indirect in nature they are expected to be more closely related to consumption than income. In the following sections, the study attempts to estimate potential tax revenue from each of the important taxes using appropriate tax bases (instead of GSDP) for the corresponding taxes. We then compare this with actual collection to estimate the tax effort under more appropriate tax bases.

#### **3.2.1 Consumption and Tax Collection**

We now turn our attention to explore the possible relationship between tax collections by the states and their consumption behaviour. As mentioned earlier major components of OTR are indirect in nature and are directly related to consumption rather than income. So, we analyse the consumption data of West Bengal and Andhra Pradesh to see whether they can throw some light on resolving the tax puzzle. We have obtained the monthly per capita consumption expenditure (MPCE) for the states from the report of NSS 68<sup>th</sup> Round Survey on Consumption Expenditure. It is to be noted that the said report provides MPCE separately for rural and urban area. We have calculated the combined MPCE for the states using rural and urban populations as weights. Table-6 portrays estimated per capita consumption and per capita own tax collection by West Bengal and Andhra Pradesh to see whether consumption can be viewed as a better tax base for a state.

Table 6  
**Consumption and tax collection**

| States         | Per capita OTR<br>(yearly)<br>(2011-12) | Per capita<br>consumption<br>(yearly)<br>(2011-12) | OTR as<br>percentage of<br>Consumption<br>(2011-12) |
|----------------|---|--|---|
| Andhra Pradesh | 6293                                    | 24790  | 25.4  |
| West Bengal    | 2730                                    | 20460  | 13.3  |

*Source:* Authors' calculation based on RBI data and NSSO (68<sup>th</sup> round) data

As table-6 suggests, an assessment of tax effort of the state based on a different tax base approach gives no better result for the state. Considering per capita consumption as a proxy for taxable capacity of a state, West Bengal's tax effort comes at 13.3 per cent of consumption which is much lower than the tax effort of Andhra Pradesh at 25.4 per cent.

We must mention here that it is not just average consumption that affects taxable capacity of a state. Consumption pattern and the tax structure together play a crucial role in determining tax collection. For example, difference in per capita consumption of electricity is important from the view point of tax collection as consumption of electrical appliances, electronic items and electrical goods directly increase the taxable capacity of a state as these goods are usually taxed at higher rates (13.5 per cent /14.5 per cent). Per capita electricity consumption in West Bengal, at 442.5 Kwh in 2008-09, was significantly lower than AP's per capita consumption at 928.2 Kwh. Total amount of electricity sold to ultimate consumers in AP, at 54241.1 Gwh in 2008-09, was substantially higher than WB's figure at 27779.3 Gwh. Similarly, our estimates from the NSS 68<sup>th</sup> round consumption data show that monthly per capita consumption of pulses in West Bengal is around Rs. 29 whereas the corresponding value for Andhra Pradesh in Rs.54. While, pulses are taxed @ 5 per cent in Andhra Pradesh, same are exempted from tax in West Bengal. With population of more than 9 crores one can easily estimate the extent of loss in tax revenue in West Bengal due to a different tax structure. When we reconcile item wise consumption figures along with the VAT schedules of the states we find that nearly 55 percent of monthly per capita consumption expenditure of Andhra Pradesh is taxable as against only 44 percent in case of West Bengal (Table-7).

Table 7  
**Taxable consumption in AP and WB**

| State          | MPCE    | Taxable MPCE   |
|----------------|---------|----------------|
| West Bengal    | Rs.1705 | Rs.748 (43.9)  |
| Andhra Pradesh | Rs.2066 | Rs.1135 (54.9) |

*Source:* Authors' calculation based on RBI data and NSSO (68<sup>th</sup> round) data  
*Note:* Figures in the parentheses are the percentages of total MPCE

### 3.3 A Counterfactual Exercise

If we make a counterfactual exercise and estimate West Bengal's potential tax collection (taking AP's Tax to GSDP as the potential/benchmark tax effort) we can see that Bengal's potential tax collection for the year 2011-12 stands at Rs. 43057 crore against actual own tax collection of Rs. 24938 crore giving a tax realisation of 58 per cent. If we do the same exercise for West Bengal's VAT collection we get a VAT realisation figure at 53.9 per cent. If we now consider taxable consumption as the appropriate tax base and estimate West Bengal's potential VAT collection (taking AP's VAT to taxable consumption ratio as the potential tax effort) we find a VAT realisation at 61.5 per cent (Table-8). Clearly, some part of West Bengal's poor VAT collection can be explained in terms of its consumption behaviour.

Table 8  
**Potential and actual VAT collection: West Bengal (2011-12)**

|   | <b>With GSDP as<br/>tax base</b> | <b>With Taxable<br/>Consumption<br/>as the tax base</b> |
|---|----------------------------------|---|
| Potential Revenue (with AP's tax effort) (in Rs. Crore) | 26964.3                          | 23614.2   |
| Actual collection (in Rs. Crore)                        | 14526.7                          | 14526.7   |
| Realization ( in per cent)                              | 53.9                             | 61.5  |

Source: Authors' calculation based on RBI data and NSSO (68<sup>th</sup> round) data

If we compare the distribution of population in different MPCE classes for both the states it reveals some interesting information. Table-9 suggests that concentration of population in the low MPCE classes is substantially higher in WB than AP, particularly in rural areas. This suggests that though the average consumptions are similar in AP and WB (slightly higher in AP), in case of WB the distribution is more concentrated in the bottom classes. From this we can argue that this type of consumption distribution hampers ability to tax (as low consumption essentially means consumption of commodities like food items which are hard to tax).

Table 9  
**Percentage of population in different MPCE Class – Rural and Urban**

| MPCE Class (in Rs.) | Rural |      | MPCE Class (in Rs.) | Urban |      |
|---------------------|-------|------|---------------------|-------|------|
|                     | AP    | WB   |                     | WB    | AP   |
| ≤ 525               | 0.6   | 3.4  | ≤ 725               | 5.2   | 1.4  |
| 525-600             | 1.9   | 4.4  | 725-860             | 6.2   | 2.6  |
| 600-720             | 4.3   | 12.0 | 860-1090            | 11.0  | 6.3  |
| 720-825             | 5.3   | 12.8 | 1090-1295           | 11.1  | 10.0 |
| 825-925             | 8.4   | 11.1 | 1295-1510           | 9.3   | 10.6 |
| 925-1035            | 9.0   | 11.4 | 1510-1760           | 8.1   | 11.3 |

|           |      |      |           |      |      |
|-----------|------|------|-----------|------|------|
| 1035-1165 | 12.1 | 10.3 | 1760-2070 | 8.6  | 10.5 |
| 1165-1335 | 12.4 | 10.3 | 2070-2460 | 8.8  | 13.7 |
| 1335-1585 | 15.7 | 9.3  | 2460-3070 | 12.7 | 11.2 |
| 1585-2055 | 13.9 | 9.2  | 3070-4280 | 8.9  | 13.2 |
| 2055-1625 | 8.1  | 3.2  | 4280-6015 | 4.9  | 5.1  |
| > 2625    | 8.3  | 2.6  | > 6015    | 5.2  | 4.1  |

*Source:* Authors' calculation based on NSSO (68<sup>th</sup> round) data.

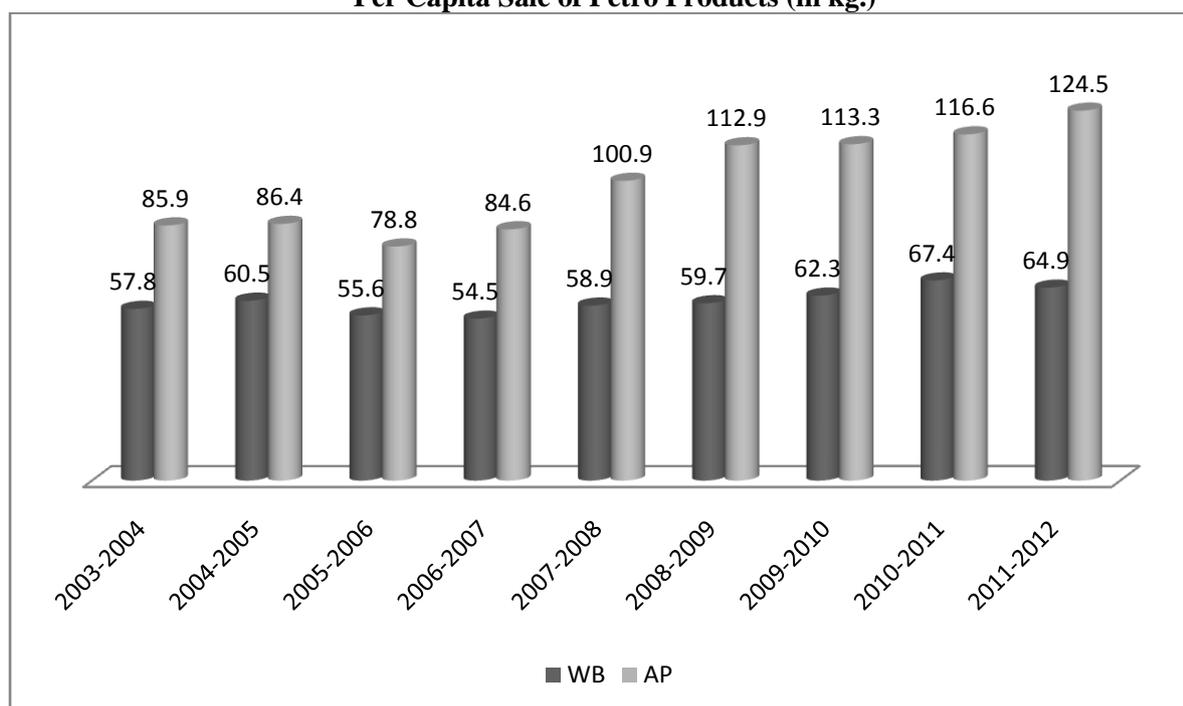
*Note:* AP – Andhra Pradesh, WB – West Bengal, MPCE – Monthly Per Capita Consumption Expenditure.

One can look at this from a different angle as well. A very high concentration of population around the bottom MPCE classes indicates that the poor may be consuming products obtained from the informal sector where bills are hardly procured. This type of informal activities leads to widespread tax evasion and therefore low tax effort.

### **3.3.1 VAT on Petro Products**

VAT collection from petroleum products account for around 30 percent of the total VAT collection in both the states (Table-10). VAT on petro products contributed Rs. 4227.3 crore to West Bengal's total revenue as compared to Rs. 9551.6 crore in Andhra Pradesh in 2011-12. When we compare them in absolute terms or in terms of its contribution as a percentage of GSDP, it is evident that West Bengal performed badly in generating sufficient revenue through this channel as well. Revenue from VAT on petro products in West Bengal accounts for 0.8 per cent of GSDP in 2011-12, whereas for Andhra Pradesh the figure is 1.4 per cent. But when we compare this in terms of a more appropriate tax base, which is total petro sales in the state, the difference is not that significant. One can easily argue that low collection of VAT on petro products in West Bengal is due to low per capita sales of petro products in the state, which is only 64.9 kg per capita against 124.5 kg per capita in Andhra Pradesh. However it not clear why there is such a big difference in per capita sales between these two states.

Figure2  
Per Capita Sale of Petro Products (in kg.)



Source: Ministry of Petroleum and Natural Gas, Government of India

Table 10  
Contribution of VAT on Petroleum Products in total revenue from VAT and sales of Petro Products (2011-12)

| State | Contribution of Petro Products in Total VAT (%) | VAT collection on Petro Products (Rs. Cr.) | VAT collection on Petro Products/ GSDP (%) | Per capita petro sales (kg.) | Total petro Sales (Cr. Kg) | VAT/Petro sales (Rs./kg) |
|-------|---|--|--|------------------------------|----------------------------|--------------------------|
| WB    | 29.1  | 4227.3                                     | .8%  | 64.9                         | 592.8                      | 7.1                      |
| AP    | 28.8  | 9551.6                                     | 1.4%                                       | 124.5                        | 1054.1                     | 9.1                      |

Source: Authors' calculation based on RBI data and data from Ministry of Petroleum and Natural Gas

Again, if we estimate West Bengal's potential tax collection from sale of petro products (taking AP's petro tax to GSDP as the potential effort) for the year 2011-12 and compare it against actual own tax collection we get a tax realisation figure at 54.5 per cent (Table-11). If we now consider total petro sales as the tax base and do the same exercise we find tax realisation at 78.7 per cent. Clearly a substantial portion of West Bengal's underperformance in collecting tax on petro products can be explained in terms of its reported consumption behaviour.

Table 11

**Potential and actual tax collection on petro products: West Bengal (2011-12)**

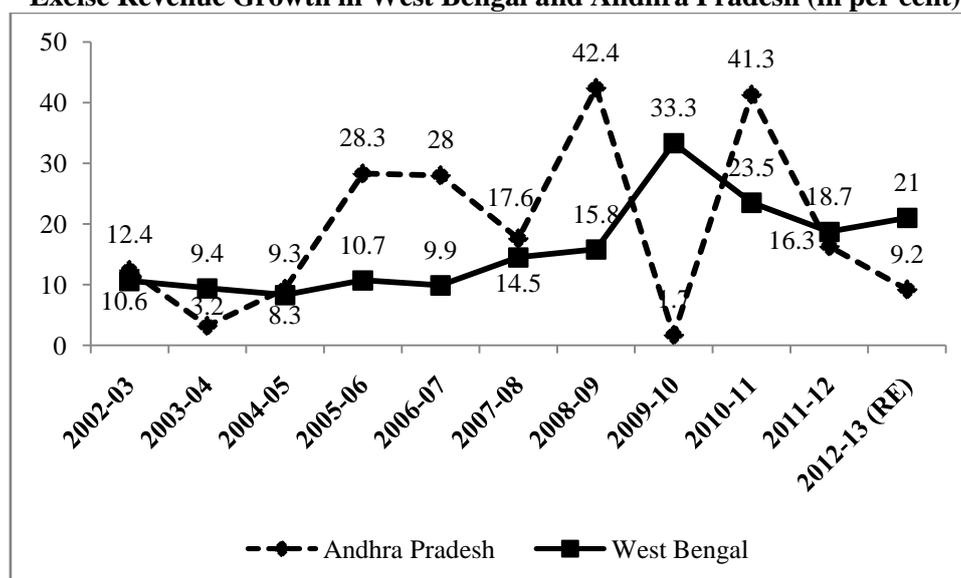
|  | With GSDP as tax base | With sale of petro products as the tax base |
|--|-----------------------|---|
| Potential Revenue (with AP's tax effort) (Rs. Crore) | 7758.5                | 5372.1                                      |
| Actual collection (Rs. Crore)                        | 4227.3                | 4227.3                                      |
| <b>Realisation ( in per cent)</b>                    | <b>54.5</b>           | <b>78.7</b>                                 |

Source: Authors' calculation based on RBI data and data from Ministry of Petroleum and Natural Gas

**3.3.2 State Excise**

State excise is one of the most important sources of revenue for a state. Excise revenue for a state mainly comes from duty on different types of liquors and from license fee and fines. Figure-3 presents performance of excise revenue collection of West Bengal and Andhra Pradesh in terms of annual growth rates.

Figure 3  
Excise Revenue Growth in West Bengal and Andhra Pradesh (in per cent)



Source: Authors' Calculation based on RBI data

Though West Bengal registered a healthy annual average growth rate of nearly 16 per cent for the last decade, it remained below AP's average annual growth rate of around 19.1 per cent. It is surprising to note that there are huge fluctuations in the excise revenue growth rates in both the states. When we compare contribution of state excise in total tax collection and collection of excise revenue with respect to the size of the economy we find that West Bengal's performance was way below that of AP's (Table-12).

Table 12  
Excise Revenue as percentage of OTR and GSDP

|              | Excise Revenue as percentage of OTR |             | Excise Revenue as percentage of GSDP |             |
|--------------|-------------------------------------|-------------|--------------------------------------|-------------|
|              | Andhra Pradesh                      | West Bengal | Andhra Pradesh                       | West Bengal |
| 2002-03      | 14.7                                | 8           | 1.05                                 | 0.34        |
| 2003-04      | 13.9                                | 7.1         | 0.95                                 | 0.33        |
| 2004-05      | 12.9                                | 6.8         | 0.93                                 | 0.32        |
| 2005-06      | 14                                  | 7.2         | 1.05                                 | 0.32        |
| 2006-07      | 14.4                                | 7           | 1.14                                 | 0.31        |
| 2007-08      | 14                                  | 7.1         | 1.11                                 | 0.31        |
| 2008-09      | 17.2                                | 7.5         | 1.35                                 | 0.32        |
| 2009-10      | 16.6                                | 8.5         | 1.23                                 | 0.36        |
| 2010-11      | 18.3                                | 8.4         | 1.42                                 | 0.39        |
| 2011-12      | 18                                  | 8.5         | 1.45                                 | 0.39        |
| 2012-13 (RE) | 16.8                                | 7.9         | 1.39                                 | 0.41        |

Source: Authors' Calculation based on RBI data

Excise collection as a percentage of own tax revenue in West Bengal remained around 8 percent for the entire period which is much lower than the corresponding figures for Andhra Pradesh. West Bengal's excise revenue remained stuck between 0.3 per cent to 0.4 per cent of GSDP as against 1 to 1.5 per cent in Andhra Pradesh. Clearly in terms of excise revenue collection West Bengal failed terribly.

How much of this underperformance can be explained in terms of consumption behaviour? Our estimation from NSS 68<sup>th</sup> round data (2011-12) shows, in Andhra Pradesh an individual from rural area spends 5.07 per cent (Rs.89 in absolute term) of his total consumption expenditure on alcohol and intoxicants and the corresponding figure for the urban area was 2.29 per cent (Rs. 62 in absolute term). For West Bengal the corresponding figures are much lower at 2.54 per cent (Rs.33) and 1.64 per cent (Rs.42) for rural and urban areas respectively. Assuming a similar kind of recorded alcohol consumption in both the states, one can easily argue that the difference in consumption pattern must have significantly affected excise revenue collection.

Table 13  
Excise revenue and alcohol consumption 2011-12

|   | WB    | AP     |
|---|-------|--------|
| Yearly Per capita alcohol consumption (Rs.) | 430.8 | 957.8  |
| Per capita excise collection (Rs.)          | 231.8 | 1135.3 |
| Excise collection /alcohol consumption      | 53.8% | 118.5% |

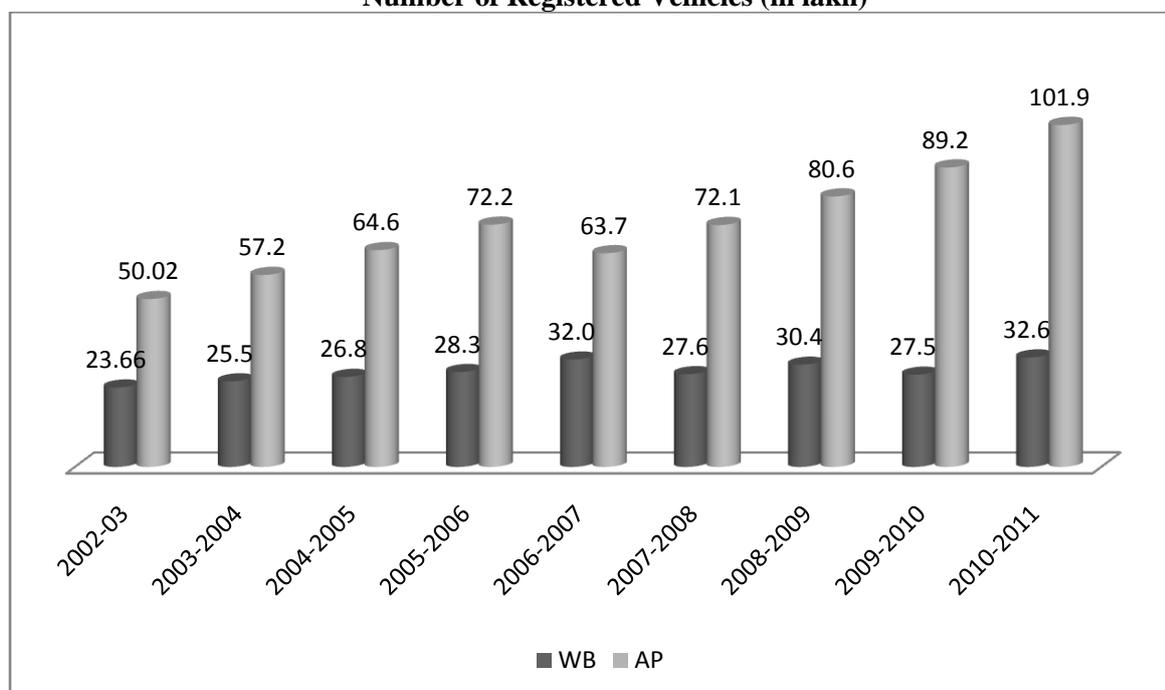
Source: Authors' calculation based on RBI data and NSSO (68<sup>th</sup> round) data

West Bengal's excise to GSDP at 0.39 per cent against 1.45 per cent of Andhra Pradesh for the year 2011-12 can be viewed as excise revenue realisation at 27.1 per cent of potential collection (assuming AP's tax effort as the potential tax effort for WB). If we analyse excise revenue against per capita alcohol consumption, we find West Bengal's tax realisation at 45.4 per cent. Clearly some portion of West Bengal's underperformance can be explained in terms of its consumption behaviour. But even after controlling for alcohol consumption, Bengal's excise effort is significantly lower than that of Andhra Pradesh.

### 3.3.3 Taxes on Vehicles

Taxes on vehicles contributed around 4 per cent to the total own tax revenue of the state and remained around 0.2 per cent of gross state domestic product for the last ten years. In case of Andhra Pradesh the contribution is between 5-7 per cent and the tax effort remained around 0.5 per cent of GSDP for the entire period. As motor vehicles taxes are collected on registration of vehicles, issuance of the driving licenses, issuance of certificates of fitness to transport vehicles and for transferring ownership of vehicles etc., collection under this head is expected to be closely related to the number of registered vehicles in a state. Figure-4 presents the number of registered vehicles in West Bengal and Andhra Pradesh for the last ten years.

Figure: 4  
Number of Registered Vehicles (in lakh)



Source: Transport Research Wing, Ministry of Surface Transport, Govt. of India

West Bengal's revenue from taxes on vehicles to GSDP at 0.2 per cent against 0.45 per cent of Andhra Pradesh for the year 2010-11 can be viewed as revenue realisation at 45.1 per cent of potential collection (assuming AP's tax effort as the potential tax effort for WB). We have tried to estimate West Bengal's potential tax revenue against the number of registered vehicles for the year 2010-11 taking AP's tax potential as benchmark. We find West Bengal's tax realisation at 111.3 per cent. This suggests that poor collection of taxes on vehicles in West Bengal is entirely due to very low number of registered vehicles in the state. This is however surprising because in spite of being nearly similar in size, the number of registered vehicles in West Bengal is less than one-third of that in Andhra Pradesh.

Table 14  
**Taxes on vehicles and number of registered vehicles 2010-11**

|  | <b>WB</b> | <b>AP</b> |
|--|-----------|-----------|
| Number of registered vehicles (in lakh)  | 32.61     | 101.89    |
| Revenue from taxes on vehicles (Rs.Lakh) | 93601     | 262675    |
| Tax /no. of vehicles                     | 2870.3    | 2578      |

*Source:* Authors' calculation based on RBI data and data from Transport Research Wing, Ministry of Surface Transport

Our analyses so far suggest that some part of West Bengal's poor tax collection can be explained in terms of its consumption data. But even this cannot explain the extent of underperformance of Bengal's tax collection. This raises question about the saving behaviour of the state as well. As state's taxes are consumption based, a disproportionately high savings will affect tax effort adversely. To see whether West Bengal's saving propensity is higher than that of Andhra Pradesh, we have used bank deposit data as the proxy. One should keep in mind that total savings consists of commercial bank deposits, Post Office deposits, deposits in other non-banking financial institutions as well as savings in informal institutions like Chit Funds etc. However as nearly 81 percent of total savings of India can be explained in terms of deposits in the commercial banking system<sup>3</sup>, one can use commercial banking data as a proxy to understand the savings behaviour without loss of generality. We have compared the deposit data of the two states to understand their savings behaviour and to see whether savings in West Bengal is indeed higher than Andhra Pradesh or not.

Table 15  
**Deposits over the years**

| <b>Year</b>      | <b>West Bengal</b>              |                         | <b>Andhra Pradesh</b>           |                         |
|------------------|---------------------------------|-------------------------|---------------------------------|-------------------------|
|                  | <b>Per Capita Deposit (Rs.)</b> | <b>Deposit/GSDP (%)</b> | <b>Per Capita Deposit (Rs.)</b> | <b>Deposit/GSDP (%)</b> |
| <b>2002-2003</b> | 10495                           | 51                      | 9465                            | 41                      |

<sup>3</sup> For details one can see MicroSave (2011).

|                  |       |    |       |    |
|------------------|-------|----|-------|----|
| <b>2003-2004</b> | 11584 | 51 | 10850 | 42 |
| <b>2004-2005</b> | 13339 | 54 | 12355 | 44 |
| <b>2005-2006</b> | 14855 | 55 | 14582 | 46 |
| <b>2006-2007</b> | 17610 | 58 | 17384 | 47 |
| <b>2007-2008</b> | 22021 | 64 | 21773 | 49 |
| <b>2008-2009</b> | 26111 | 67 | 26352 | 51 |
| <b>2009-2010</b> | 31261 | 69 | 29799 | 52 |
| <b>2010-2011</b> | 35243 | 68 | 34671 | 51 |
| <b>2011-2012</b> | 41555 | 71 | 40519 | 53 |

*Source:* Authors' Calculation based on RBI and CSO data

Table-15 clearly suggests that savings in West Bengal is significantly higher than that of Andhra Pradesh. Per capita deposit in WB remained higher than AP throughout the period in spite of the fact that WB's per capita income is lower than AP's. Deposit-GSDP is significantly higher in WB showing a disproportionately higher savings in the state relative to the size of its economy. Clearly a part of WB's underperformance in tax effort can be attributed to its savings behaviour as well.

Another possible reason behind poor tax effort of West Bengal could be its economic structure itself. West Bengal economy is predominantly an informal economy with low and declining organised manufacturing sector. In the following section we look into the sectoral decomposition of West Bengal GSDP and we compare this with that of Andhra Pradesh.

### **3.4 Structure of the Economy and Tax Collection**

We compare the sectoral composition of GSDP of West Bengal with Andhra Pradesh by dividing different sectors into easy to tax sectors (like manufacturing, particularly organised manufacturing) and hard to tax sectors (like agriculture and services). Table-16 shows that in case of WB, manufacturing sector contributes only 9.7 per cent to GSDP (2011-12) compared to 10.8 per cent in Andhra Pradesh. Within the manufacturing sector share of organised/registered manufacturing is only 52 per cent in WB compared to 75 per cent in AP.

Table 16  
**Sector Composition of GSDP (in terms of percentage share) of  
West Bengal and Andhra Pradesh in 2011-12**

| <b>States</b>  | <b>Agriculture</b> | <b>Industry</b> | <b>Services</b> | <b>Agri+<br/>Services</b> | <b>Manufacturing</b> | <b>Registered<br/>Manufacturing</b> | <b>Trade<br/>and<br/>hotels</b> |
|----------------|--------------------|-----------------|-----------------|---------------------------|----------------------|-------------------------------------|---------------------------------|
| Andhra Pradesh | 22.4               | 26.6            | 51.0            | 73.4                      | 10.8                 | 8.1                                 | 12.7                            |
| West Bengal    | 22.0               | 18.0            | 60.0            | 82.0                      | 9.7                  | 5.1                                 | 17.2                            |

*Source:* Authors' Calculation based on CSO data

In terms of tax collection registered manufacturing is the easiest to tax and probably one can consider it as the most appropriate tax base. In case of WB the organised manufacturing

sector contributes only 5.1 per cent to GSDP compared to 8.1 per cent in case of AP. Share of industry in the GSDP is the lowest in West Bengal (18 per cent) among the comparable states indicating a poor industrial performance which might be responsible for poor tax collection. Assuming that agriculture and services are sectors which are hard to tax, we find contribution of hard to tax sectors in the GSDP in case of WB is as high as 82 per cent compared to 73.4 per cent in Andhra Pradesh. The share of this hard to tax sector in the West Bengal GSDP is in fact highest when compared with other similar states.

Table 17

**Size of the economy and consumption/use of some important commodities**

|  | <b>WB</b> | <b>AP</b> |
|--|-----------|-----------|
| GSDP current price (2011-12) (in Rs. Crore)          | 538209    | 662592    |
| Per capita income (current price) (2011-12)          | 55222     | 68970     |
| Per capita sale of petro products in kg. (2011-12)   | 64.9      | 124.5     |
| No. of registered vehicles (avg. in Lakh) (2010-11)  | 32.6      | 101.9     |
| Total electricity sold (Gwh) (2008-09)               | 27779     | 54241     |
| Per capita electricity consumption (Kwh) (2008-09)   | 442.5     | 928.2     |
| Per capita yearly alcohol consumption(Rs.) (2011-12) | 430.8     | 957.8     |

*Source:* CSO, Ministry of Petroleum and Natural Gas, Road Transport Year Books & Central Electricity Authority, Ministry of Power, GoI.

Over the years West Bengal economy has experienced rapid informalisation of its economic activities. Share of industry, particularly registered manufacturing, has shrunk drastically. Though significant structural changes have taken place for all the states and the national economy away from agriculture to services, most of the other states experienced a moderate rise in the share of industry. In case of West Bengal share of industry declined consistently over the years. Poor manufacturing performance along with decline in the share of agriculture compelled a vast educated unemployed labour force to set up small businesses depending on their own means. A huge number of the job seekers absorbed in the informal sector, mostly in retail trading and small transport business. As can be seen from Table-16, trade (mainly retail trade) and hotels accounted for 17.2 per cent of West Bengal GSDP which is the highest among the general category states.

Informal sector in a developing economy serves as a politically convenient strategic device to contain economic unrest. This was pointed out by Kolmar, Marjit and Mukherjee (2006). Sarkar (2006) argues that in West Bengal the informal sector was used by the government for political benefits undermining formal sector activities. Some researchers argue that political control over these informal businesses crippled the state tax administration, preventing it to generate tax revenue from these economic activities. As documented by Datta (2010), selling sand collected from riverbeds or stones from quarries are a big business but these businesses

have not generated sufficient revenue for the government. The system of governance in West Bengal, banking on informalisation, managing illegalities and merging the barrier between the state machinery and political management, has been taking its toll on government revenue. Increasing informalisation of the economy possibly resulted in underreporting of activities which are very important determinants of the taxable capacity of a state. As is evident from table-17, consumption of some important commodities in West Bengal is unusually lower than the corresponding figures in Andhra Pradesh most probably owing to informalisation and thereby under reporting. More vibrant informal sector with a significant gap in rate of return to investments relative to the formal sector may induce firms to litigate against the government and cause delay in tax payments with subsequent favor from a negotiating government. In a recent work Marjit, Mitra and Mehta (2015) argue that West Bengal possibly suffers from such a malady.

Another aspect one should look at is the general consumption pattern of the state and inter-temporal behavior. It is possible that West Bengal is generally conservative in terms of consumption behavior within and across time periods as consumption pattern need not be homogeneous. Also if one state prefers to save more than the other, generally the current consumption levels will be lower. But that will not explain permanent downsizing of tax collection.

#### **4. Conclusion**

Poor fiscal performance of West Bengal has been a cause of concern for many years now. Despite having a mid-level per capita income and a satisfactory growth of income, West Bengal performed miserably in terms of own tax effort and this has created all the problems related to government finance in the state. In this paper we made an attempt to understand the root causes behind West Bengal's poor own tax effort by comparing its revenue generating performance with that of Andhra Pradesh. We argue that any analysis of tax effort of sub national governments in India should be based on consumption and savings data as state taxes are mostly related to consumption rather than income. We have considered different important components of West Bengal's own tax revenue and compared them with that of Andhra Pradesh to understand the actual realization compared to its potential. Based on our counterfactual exercise we argue that a portion of West Bengal's underperformance in own tax revenue generation can be explained in terms of its consumption behaviour. Comparison of deposit data of the two states also suggests that a relatively high saving in West Bengal could be behind poor tax collection as well. Per capita consumption of some commodities, which are very important from the

point of view of tax collection, is strangely lower in West Bengal than the corresponding figures in Andhra Pradesh. Given this backdrop future work should study the relationship between informality and tax collection and general consumption propensities more closely.

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