IMPACT OF VALUE ADDED TAX (VAT) ON STATE REVENUE IN INDIA

Dr. Ritu Sharma*

ABSTRACT

The term indirect tax has more than one meaning. In the colloquial sense; an indirect tax (such as Sales Tax, Value Added Tax, Goods and Service Tax) is collected by intermediary from the person who bears the ultimate economic burden of tax. VAT is a kind of tax levied on sale of goods and services when these commodities are ultimately sold to the consumer. In this paper I analysed the VAT its feature, meaning, its negative aspects, its positive aspects, reaction among the business community, impact of VAT in Indian economy, find out opportunities under vat and examine the procedural aspects, its impact of consumers etc. and reach to the conclusion that in the purview of liberalization & globalisation there is no alternative of VAT. By this new system of indirect taxation- the Consumer, the Trader and also the Government will be benefited by different ways instead of existing system of taxation i.e. Sales Taxation. VAT ensures transparency; reduce cascading effect of existing indirect taxation and also tax evasion.

KEYWORDS*: Indirect Tax, Sales Tax, Economic Burden of Tax, VAT, Goods and Service Tax.*

_____

Introduction

The most controversial issue in India at this moment is the Value Added Tax (VAT). Value added tax, a new system of indirect taxation, has been imposed in India from 1st April, 2005. Though it is new and first time in India, it has already been adapted in the first world countries for a long time. Though VAT rate is specified in each country (where it has been imposed) of the world, some of the common items are on the reduced rate Viz., food, pharmaceuticals, newspapers, electricity, diamonds, gold and silver etc. in most of the countries of the world. The standard rate of VAT in Argentina is 17 per cent. Newspapers and magazines are exempted from VAT to retail business in this country and also a reduced rate of VAT (10.5 per cent) is applicable in respect of goods Viz., gold, silver, some computer equipments and photographic and medical equipments. In China the specified rate of VAT is 17 per cent. There is a reduced rate of VAT, 6 per cent on microchips and diamond related transactions are totally exempted from VAT. In India two basic rates of VAT, 4 per cent and 12.5% per cent, have been imposed. 1 per cent VAT rate is applicable to gold and silver ornaments only.

Present Study

The present study attempt it's examine the difference between sales tax and value added tax. The present study VAT of some selected States in India is check the Impact of Value Added Tax. Also examine whether VAT better explain Sales Tax that indirect Tax system.

Object of Study

- To study the impact of VAT on state revenue.
- To study the important of VAT in India Economy.
- To examine the procedural aspect and difficulties in implementation of VAT.
- To find the out opportunities under VAT.

---

* Assistant Professor, S.S.G. Pareek P.G. Girls College, Jaipur, Rajasthan, India.

Research Methodology

Research Methodology is well planned programmed of process which is a base of all the research work. Research work based on research methodology. It includes objectives of study, scope of study, source of data, collection tools and techniques. In present study based on select states of India. This study based on primary as well as secondary data. The primary data have been collected by visiting sales tax department through fulfilling the questionnaire. While the secondary data have been collected through published information as well as website and sales tax department. The period taken for the study is 1995-96 to 2005-06 is pre VAT period and 2006-07 to 2016-17 is post VAT period.

Statistical Tools

To analysis is data techniques of statistics have been used and its test the hypothesis t-test, and chi-square test is applied.

Hypothesis

There are two types of hypothesis, null hypothesis(H_0) and alternative hypothesis (H_1) .When the null hypothesis is not proved automatically alternative hypothesis is accepted. In the present study I will assume the following hypothesis:

H_0 : There is no significant change in the state revenue due to implementation of VAT in place of Sales Tax.

H_1 : The state revenue have significantly increase after the implementation of VAT.

Taxonomy of VAT

Vat is a multipoint sales tax with set off for the tax paid on purchases. It is collected in installment at each transaction in the production distribution system. It does not have cascading effect due to the system of deduction or credit mechanism. It is a tax on consumption. The final and total burden of the tax on consumption. The final and total burden of the tax is fully and exclusively borne by the domestic consumer of goods and services. It being an exported. It is alternative mechanism of collection of tax. It is also equivalent to last point retail sales Tax. Value Added tax is, therefore a multi stage sales tax levied as a proportion of value added(i.e. sales minus purchases, which is equivalent to wages plus profits).To illustrate, let us assume dealer "A "to be raw material producer, "B" to be manufacturer, "C" to be wholesaler and "D" to be retailer. Dealer A, as show in Exhibit 1.1,sells his produce at Rs. 200 and pays tax at the rate of 10%.As dealer A is a producer of primary product, his inputs could be assumed to be zero..The sale price of Rs. 100 would be purchase price of dealer B, who is a manufacturer. This dealer would use wages, salaries, other manufacturing expenses and all this he would add interest and his own profit. Assume that after adding all these cost, his sale price is Rs.400.On this sale price the gross tax (at the rate of 10%) would be Rs. 40. As dealer A has already paid tax on Rs 200, dealer B would get credit for this tax. Therefore, his net VAT liability would be Rs 40 minus Rs 20. That is, dealer B would pay to the Government Rs. 20only.Similarly, the sales price of Rs 600 by a dealer C would have net VAT liability of Rs. 20 (Rs. 60–Rs. 40).

Calculation of VAT

VAT Computation Value Added Taxation works under chain system and creates incentives for each participant from production to sale and clearly identifies his role, because he is only taxable for paying on VAT on addition in value generation. It is a multipoint tax system with input tax credit available for tax paid on corresponding purchases. Full tax is charged at each transaction, but tax is paid to Government after 60 considering input tax credit. Thus indirectly tax is charged on value addition only. Therefore, it is called Value Added Tax or VAT. Since VAT is a very versatile tax, it offers several methods to calculate the quantum of tax payable. The commonly used methods of calculation are addition, subtraction and tax credit. (a) Addition Method In 'addition method', all factor payments including profits are aggregated to arrive at the total value addition. This type of computation is used mainly with income VAT. Addition method cannot easily accommodate exemptions of intermediate firms. It is also difficult to exempt exports and do correct valuation of imported goods. Another drawback is that it does not facilitate matching of invoices for detecting tax evasion. (b) Subtraction Method. (c) Tax credit or Invoice Method VAT operating countries mostly employ the tax credit or invoice method for computing the actual tax payable. It is widely used in conjunction with comprehensive VAT. In this method, deduction of taxes paid on inputs is 61 allowed from the taxes payable on sales on the basis of the aggregates of the taxes indicated on all invoices. The invoices received for the purchase of inputs and sale of value added commodities give correct indication of the actual tax liability. It eliminates the distortion caused by a differential rate structure.

Status of VAT Compensation

"The Central Government had announced compensation package under which the States are compensated for any revenue loss on account of VAT introduction at the rate of 100% of revenue loss during 2005-06, 75% during 2006-07 and 50% during 2007-08.Central Government has received claims totaling Rs.13167.30 crores during 2005-06,2006-07 and 2007-08 (January 31,2008). After VAT implementation the revenue of the states are increased. Here after covering the VAT related information, I have study the effects of VAT on few states. To know the effects of VAT I have take four states of India-Rajasthan Madhya Pradesh, Maharashtra and Orissa. After the implementation of VAT these states he increase or decrease, impact of VAT on state revenue in India I have analyzed following States:

- **Rajasthan Vat**

VAT in Rajasthan is levied as per the sections of the Rajasthan Value Added Tax Act, 2003. VAT is levied on the type of goods and in some cases the quantity of goods.

Rajasthan VAT Rates: Rajasthan VAT rates are levied on goods imported or manufactured in the state. Rates range from 0.25% to 65%, though most of the products are charged VAT between 0.25% and 15%, with higher VAT rates applicable on products such as cigarettes, pan masala etc.

VAT in Rajasthan is Charged to a Dealer:

- Who imports goods
- Who manufactures goods with annual turnover not less than Rs.2 lakhs
- Whose annual turnover is more than Rs.10 lakhs

There are 6 Schedules of the Rajasthan Value Added Tax Act, 2003 that deal with VAT rates (applicable from 1st April 2006, as of December 2015).

Rajasthan VAT Registration: The registration process can be completed online through a few simple steps online. You may also approach the tax offices for the same.

Table 1

Year	Sales Tax Collection	Indices Base on 1995-96	Year	Sales Tax Collection	Indices Base 0n 2006-07
1995-96	1399.66	100.00	2006-07	6720.71	100.00
1996-97	1598.85	114.41	20007-08	7750.73	115.32
1997-98	1826.19	130.75	20008-09	8904.50	132.49
1998-99	2058.76	147.40	2009-10	10163.53	151.22
1999-00	2424.52	173.59	2010-11	12629.59	187.92
2000-01	2821.21	201.99	2011-12	15766.43	234.61
2001-02	3069.03	219.74	2012-13	18574.65	276.37
2002-03	3437.89	246.15	2013-14	21215.51	315.67
2003-04	3985.43	285.35	2014-15	24169.91	359.63
2004-05	4797.53	343.50	2015-16	26344.77	391.99
2005-06	5593.64	400.50	2016-17	28548.79	424.78

Table 2

X_1	$d_1(X_1-\overline{X}_1)$	d_1^2	X_2	$d_2(X_2-\overline{X}_2)$	d_2^2
100	-114.85	13192.82	100	-144.5	20891.81
114.47-*+	-100.39	10076.81	115.32	-129.22	16697.81
130.75	-84.86	7073.8	132.49	-112.05	12555.2
147.4	-67.46	4550.05	151.22	-93.32	8708.62
173.59	-41.27	1702.87	187.92	-56.62	3205.82
201.99	-12.87	165.46	234.61	-9.93	98.6
219.74	4.88	23.82	276.37	31.83	1013.15
246.15	31.29	979.12	315.67	71.13	5054.48
285.35	70.49	4969.45	359.63	115.09	13245.71
343.5	128.64	16548.3	391.99	147.45	21741.5
400.5	185.64	34462.65	424.78	180.24	32486.46
2363.48		**93745.16**	**2690**		**135704.2**

$$t = \frac{\overline{X}1 - \overline{X}2}{s\sqrt{\dfrac{1}{n_1} + \dfrac{1}{n_2}}} \qquad \text{or} \qquad t = \frac{\overline{X}_1 - \overline{X}_2}{S}\sqrt{\frac{n_1 n_2}{n_1 + n_2}}$$

$$S = \frac{\Sigma\left(X_T - \overline{X}_1\right)^2 + \Sigma\left(X_2 - \overline{X}_2\right)^2}{(n_1 - 1)(n_2 - 1)} \qquad \text{Or} \quad S = \frac{\Sigma d_1 + \Sigma d_2}{n_1 + n_2 - 2}$$

$$\overline{X}_1 = \frac{\Sigma X_1}{n_1} = \frac{2363.48}{11} = 214.862$$

$$\overline{X}_2 = \frac{\Sigma X_2}{n_2} = \frac{2690}{11} = 244.545$$

d.f. = $n_1 + n_2 - 2$ = 11 + 11 − 2 = 20

$$S = \sqrt{\frac{93745.16 + 135704.16}{11 + 11 - 2}} = \sqrt{\frac{229449.33}{20}}$$

$$S = \sqrt{11472.467}$$

$$S = 107.109$$

$$t = \frac{\overline{X}_1 - \overline{X}_2}{S}\sqrt{\frac{n_1 n_2}{n_1 + n_2}}$$

$$\frac{214.862 - 244.545}{107.109} \quad \text{x} \quad \sqrt{\frac{11 \text{ x } 11}{11 + 11}}$$

$$\frac{29.683}{107.109} \text{ x } 2.34$$

$$0.277 \text{ x } 2.34 = 0.648$$

- **Maharashtra VAT and Commercial Tax**

The Maharashtra Value Added Tax act was introduced in 2002 and took effect in 2005. Earlier, sales tax was collected under the provisions of the Bombay Sales Act of 1959. The department of sales tax in the government of Maharashtra overseas the collection and management of sales tax. The official website of this department allows dealers to register and pay their taxes online, file returns, refund applications and also lodge their grievances. The State of Maharashtra has a few acts whose provisions are taken into account while collecting these taxes. Such acts include the sales act of 1956 and tax on luxuries act of 1987 among others.

Maharashtra VAT Rates: Based on the type of goods being sold, they can be classified into 5 categories with each category attracting a certain VAT rate. Goods belonging to schedule A such as manual agricultural equipment and fire and electricity and other basic necessities such as salt are VAT exempt. Jewellery, both original and imitation, precious stones and precious metals fall in schedule B and attract a VAT of 1%, goods in Schedule C attract a VAT of anywhere between 2% to 5% and these goods include automated machinery used in agriculture, paper, drugs etc.

Maharashtra VAT Registration: The registration for VAT/TIN falls under the provisions of the Maharashtra Value Added Tax Act of 2002. This act governs all aspects of VAT including filing of returns. Dealers in the state with a sales value exceeding Rs. 5 lakh per month are mandatorily required to register themselves for VAT while any dealer who imports any commodity will have to register themselves mandatorily if their sales value exceeds Rs. 1 lakh per month. Dealers wishing to conduct business in

Maharashtra can also voluntarily register themselves and upon receiving application will be allotted a TIN or tax identification number. This TIN will serve as the Vat registration as well as the CST registration.

Table 3

Year	Sales Tax Collection	Indices Base on 1995-96	Year	Sales Tax Collection	Indices Base on 1995-96
1995-96	7221.74	100.00	2006-07	27594.41	100.00
1996-97	7816.64	108.24	20007-08	31214.05	113.12
1997-98	8465.2	117.22	20008-09	34389.68	124.63
1998-99	8961.95	124.10	2009-10	37106.54	134.47
1999-00	11787.78	163.23	2010-11	47542.98	172.29
2000-01	13674.16	189.35	2011-12	56591.21	205.08
2001-02	13692.7	189.60	2012-13	65083.25	235.86
2002-03	15045.22	208.33	2013-14	69777.23	252.87
2003-04	16909.1	234.14	2014-15	75783.06	274.63
2004-05	20494.91	283.79	2015-16	79124.29	286.74
2005-06	22464.47	311.07	2016-17	90525.19	328.06
		2029.07			2227.74

Table -4

X_1	$d_1(X_1-\bar{X}_1)$	d_1^2	X_2	$d_2(X_2-\bar{X}_2)$	d_2^2
100.00	-84.46	7133.49	100.00	-102.52	10510.35
108.24	-76.22	5809.85	113.12	-89.40	7992.84
117.22	-67.24	4521.45	124.63	-77.89	6067.55
124.10	-60.36	3643.71	134.47	-68.05	4630.64
163.23	-21.23	450.87	172.29	-30.23	913.73
189.35	4.89	23.88	205.08	2.56	6.56
189.60	5.14	26.46	235.86	33.34	1111.33
208.33	23.87	569.89	252.87	50.35	2534.85
234.14	49.68	2468.26	274.63	72.11	5200.13
283.79	99.33	9867.37	286.74	84.22	7093.06
311.07	126.61	16029.40	328.06	125.54	15759.35
2029.07		**50544.64**	**2227.74**		**61820.39**

$$t = \frac{\bar{X}_1 - \bar{X}_2}{s\sqrt{\frac{1}{n_1} + \frac{1}{n_2}}} \qquad \text{or } t = \frac{\bar{X}_1 - \bar{X}_2}{S}\sqrt{\frac{n_1 n_2}{n_1 + n_2}}$$

$$S = \frac{\sum (X_T - \bar{X}_1)^2 + \sum (X_2 - \bar{X}_2)^2}{(n_1 - 1)(n_2 - 1)} \qquad \text{Or} \qquad S = \frac{\sum d_1 + \sum d_2}{n_1 + n_2 - 2}$$

d.f. = $n_1 + n_2 - 2$ = 11 + 11 − 2 = 20

S= $\sqrt{5618.265}$

S=74.95

t= 0.880x2.34=2.059

- **Madhya Pradesh VAT**

   Madhya Pradesh VAT Rates: The goods that can have VAT levied against them are broadly classified into 4 categories with Schedule I being manually operated agricultural equipment and other vital commodities such as food used for animal husbandry be it poultry or fisheries, fresh fruits and vegetables and coarse grains barring wheat and rice. These commodities do not attract any VAT. Schedule II goods are precious metals and stones such as gold silver and diamonds along with edible oils and different types of flour that attracts a VAT of 1%. Schedule III consists of goods that are used as structures for example bridges and other items such as utensils. It also encompasses the automatic and non-manually operated agricultural equipment. These goods attract a VAT of 5%.

VAT Registration of Dealers: Dealers based on the kind of goods sold will have to register for VAT as per the rules of the Madhya Pradesh VAT act of 2002. There have been several amendments to this act and now the VAT act of Madhya Pradesh has come to encompass a large section of dealers. Any dealer having a business in the state regardless of whether they reside in the state are required to register themselves for VAT when they are either in the industries segment or if the sale value of goods exceeds Rs. 1 Lakh per annum. Dealers can even voluntarily register for this act if they do not fall under these criteria. Registration for VAT once applied for will be reviewed by the commissioner of commercial taxes and if the details provided are found satisfactory the commissioner will approve the application.

Table 5

Year	Sales Tax Collection	Indices Base on 1995-96	Year	Sales Tax Collection	Indices Base on 1995-96
1995-96	1786.85	100.00	2006-07	6238.03	100.00
1996-97	2158.59	120.80	2007-08	7261.15	116.40
1997-98	2472.74	138.39	2008-09	8462.70	135.66
1998-99	2818.11	157.71	2009-10	9404.26	150.76
1999-00	3191.41	178.61	2010-11	12326.36	197.60
2000-01	2659.50	148.84	2011-12	14933.64	239.40
2001-02	2825.16	158.11	2012-13	17596.37	282.08
2002-03	3458.82	193.57	2013-14	19624.24	314.59
2003-04	3948.04	220.95	2014-15	21429.75	343.53
2004-05	4594.55	257.13	2015-16	23772.46	381.09
2005-06	5297.56	296.47	2016-17	27217.23	436.31
		1970.58			**2697.43**

Table 6

X_1	$d_1(X_1 - \overline{X}_1)$	d_1^2	X_2	$d_2(X_2 - \overline{X}_2)$	d_2^2
100.00	-79.14	6263.14	100.00	-145.21	21085.94
120.80	-58.34	3403.06	54.55	-128.81	16591.67
138.39	-40.75	1660.94	26.63	-109.55	12000.54
157.71	-21.43	459.08	7.36	-94.45	8921.39
178.61	-0.53	0.29	0.00	-47.61	2266.69
148.84	-30.30	918.25	14.72	-5.81	33.79
158.11	-21.03	442.33	7.09	36.87	1359.56
193.57	14.43	208.25	3.34	69.38	4813.63
220.95	41.81	1748.05	28.02	98.32	9667.60
257.13	77.99	6082.64	97.51	135.88	18463.16
296.47	117.33	13767.46	220.70	191.10	36519.71
1970.58		**34953.48**	559.93		**131723.69**

$$t = \frac{\overline{X}_1 - \overline{X}_2}{s\sqrt{\frac{1}{n_1} + \frac{1}{n_2}}} \qquad \text{or } t =$$

$$S = \frac{\sum\left(X_T - \overline{X}_1\right)^2 + \sum\left(X_2 - \overline{X}_2\right)^2}{\left(n_1 - 1\right)\left(n_2 - 1\right)} \qquad \text{Or} \qquad S = \frac{\sum d_1 + \sum d_2}{n_1 + n_2 - 2}$$

d.f. = $n_1 + n_2 - 2$ = 11 + 11 − 2 = 20

S= $\sqrt{8333.63}$

S=91.288

t= 0.723x2.34=1.691

- **Odisha VAT**

Value Added Tax or VAT is a tax levied on the sale and purchase of commodities in a state. In Odisha, the VAT Act was implemented in 2004.

Odisha VAT Rates: The VAT charged on goods in Odisha differs according to the product. The rates are divided into categories based on the four schedules of the Odisha VAT Act 2004. The provisions are categorized under Schedule A, Schedule B, Schedule C, and Schedule D.

- **Schedule A:** Under this schedule more than 47 goods and products are exempted from VAT that is they attract 0% VAT rate. These products include agricultural implements, electrical energy, coarse grains, books, textile fabric, petrol, sugar etc
- **Schedule B:** Under this schedule a VAT rate of 1% applies to gold and silver, bullion, precious stones and platinum, among many others.
- **Schedule C:** Under this schedule a VAT rate of 20% applies foreign and country liquor, light diesel oil, motor spirit including petrol and high speed diesel, and narcotics.
- **Schedule D:** The following goods fall under this schedule a VAT rate. The rate may vary according to the commodity:
  - Capital goods purchased or paid prior to 01.04.2005
  - Capital expenditure incurred prior to the date of registration under VAT.
  - Capital goods not connected with the business of the dealer.
  - Capital goods used in energy/power including captive power.
  - Capital or other expenditure on land, civil structure or construction.
  - Second hand purchase or subsequent purchases of capital goods.
  - Vehicles for conveyance and transportation.

Odisha VAT Registration: In Odisha, VAT Registration is mandatory for dealers who have an annual turnover above Rs.5 lakhs during the current year or during the preceding twelve months. Dealers who are involved in the sale and purchase of goods from other states should also register for VAT. Additionally, VAT registration is also mandatory for those involved in manufacturing of goods with a turnover of Rs.1 lakh or more per year.In case a dealer doesn't qualify under for mandatory Odisha VAT Registration he may still obtain Odisha VAT Registration voluntarily under Section 26 of the Odisha VAT Act 2004. Dealers who wish to establish a business in the state can also obtain VAT registration voluntarily under Section 26.

Table 7

Year	Sales Tax Collection	Indices Base on 1995-96	Year	Sales Tax Collection	Indices Base on 1995-96
1995-96	546.51	100.00	2006-07	3042.34	100.00
1996-97	708.07	129.56	20007-08	3567.16	117.25
1997-98	744.21	136.17	20008-09	4268.73	140.31
1998-99	845.42	154.69	2009-10	4915.00	161.55
1999-00	929.90	170.15	2010-11	6221.28	204.49
2000-01	1129.23	206.62	2011-12	7463.38	245.32
2001-02	1218.66	222.99	2012-13	8929.61	293.51
2002-03	1398.66	255.92	2013-14	9882.03	324.82
2003-04	1577.26	288.60	2014-15	10892.11	358.02
2004-05	2080.73	380.73	2015-16	12211.26	401.38
2005-06	2524.18	461.87	2016-17	12428.84	408.53

Table 8

X_1	$d_1(X_1-\bar{X}_1)$	d_1^2	X_2	$d_2(X_2-\bar{X}_2)$	d_2^2
100.00	-127.93	16366.08	100.00	-150.46	22638.21
129.56	-98.37	9676.47	117.25	-133.21	17744.76
136.17	-91.76	8419.21	140.31	-110.15	12132.86
154.69	-73.24	5363.67	161.55	-88.91	7904.41
170.15	-57.78	3338.43	204.49	-45.97	2113.24
206.62	-21.31	453.95	245.32	-5.14	26.45
222.99	-4.94	24.43	293.51	43.05	1853.41
255.92	27.99	783.63	324.82	74.36	5528.93
288.60	60.67	3681.24	358.02	107.56	11568.62
380.73	152.80	23346.91	401.38	150.92	22776.01
461.87	233.94	54727.17	408.53	158.07	24985.80
2507.31		**126181.20**	**2755.17**		**129272.69**

$$t = \frac{\bar{X}1 - \bar{X}2}{s\sqrt{\frac{1}{n_1} + \frac{1}{n_2}}} \qquad \text{or } t = \frac{\bar{X}_1 - \bar{X}_2}{S}\sqrt{\frac{n_1 n_2}{n_1 + n_2}}$$

$$S = \frac{\sum(X_T - \bar{X}_1)^2 + \sum(X_2 - \bar{X}_2)^2}{(n_1 - 1)(n_2 - 1)} \qquad \text{or} \qquad S = \frac{\sum d_1 + \sum d_2}{n_1 + n_2 - 2}$$

S= $\sqrt{12772.73}$

S=113.01

t= 0.0199x2.34=0.465

Decision:

$H_0 = X_1 - \bar{X}_2 = 0$, $H_1 = X_1 - \bar{X}_2$ 0, d.f $n_1 + n_2 - 2$

Table 9

Name of States	D.F	Tabulated Value	Calculated Value
Rajasthan	20	2.09	0.648
Madhya Pradesh	20	2.09	1.691
Maharashtra	20	2.09	2.059
Orissa	20	2.09	0.472

Above table show calculated value of t-test. The tabulated value at degree of freedom is 5% on its complentory stage and valued at 2.09. The calculated value of t-test is less than tabulated valued. Therefore, the difference is meaningless. The hypothecated of zero is true. There comes no difference between sales tax revenue and value added tax revenue. Our null hypotheses and it has been proved. That is means no significant change in state revenue due to implementation of Vat in place of Sales Tax.

F-Test   **Table 10**

State	Rajasthan		Maharashtra		Madhya Pradesh		Orissa	
Year	Sales tax collection	Indices based on 2006	Sales tax collection	Indices based on 2006	Sales tax collection	Indices based on 2006	Sales tax collection	Indices based on 2006
2006-07	6720.7	100	27594	100	6238	100	3042.3	100
2007-08	7750.7	115.32	31214	113.12	7261.2	116.4	3567.2	117.25
2008-09	8904.5	132.49	34390	124.63	8462.7	135.66	4268.7	140.31
2009-10	10164	151.22	37107	134.47	9404.3	150.76	4915	161.55
2010-11	12630	187.92	47543	172.29	12326	197.6	6221.3	204.49
2011-12	15766	234.61	56591	205.08	14934	239.4	7463.4	245.32
2012-13	18575	276.37	65083	235.86	17596	282.08	8929.6	293.51
2013-14	21216	315.67	69777	252.87	19624	314.59	9882	324.82
2014-15	24170	359.63	75783	274.63	21430	343.53	10892	358.02
2015-16	26345	391.99	79124	286.74	23772	381.09	12211	401.38
2016-17	28549	424.78	90525	328.06	27217	436.31	12429	408.53

Origin Point x=250

F-test   **Table 11**

Year	Rajasthan	Maharashtra	Madhya Pradesh	Orissa
2006-07	100	100	100	100
2007-08	115.32	113.12	116.4	117.25
2008-09	132.49	124.63	135.66	140.31
2009-10	151.22	134.47	150.76	161.55
2010-11	187.92	172.29	197.6	204.49
2011-12	234.61	205.08	239.4	245.32
2012-13	276.37	235.86	282.08	293.51
2013-14	315.67	252.87	314.59	324.82
2014-15	359.63	274.63	343.53	358.02
2015-16	391.99	286.74	381.09	401.38
2016-17	424.78	328.06	436.31	408.53

Coded Data   **Table 12**

Year	Rajasthan	Maharashtra	Madhya Pradesh	Orissa
2006-07	-150	-150	-150	-150
2007-08	-134.68	-136.88	-133.6	-132.75
2008-09	-117.51	-125.37	-114.34	-109.69
2009-10	-98.78	-115.53	-99.24	-88.45
2010-11	-62.08	-77.71	-52.4	-45.51
2011-12	-15.39	-44.92	-10.6	-4.68
2012-13	26.37	-14.14	32.08	43.51
2013-14	65.67	2.87	64.59	74.82
2014-15	109.63	24.63	93.53	108.02
2015-16	141.99	36.74	131.09	151.38
2016-17	174.78	78.06	186.31	158.53
Total	**-60**	**-522.25**	**-52.58**	**5.18**

Squares

Year	Rajasthan	Maharashtra	Madhya Pradesh	Orissa
2006-07	22500.00	22500.00	22500.00	22500.00
2007-08	18138.70	18736.13	17848.96	17622.56
2008-09	13808.60	15717.64	13073.64	12031.90
2009-10	9757.49	13347.18	9848.58	7823.40
2010-11	3853.93	6038.84	2745.76	2071.16
2011-12	236.85	2017.81	112.36	21.90
2012-13	695.38	199.94	1029.13	1893.12
2013-14	4312.55	8.24	4171.87	5598.03
2014-15	12018.74	606.64	8747.86	11668.32
2015-16	20161.16	1349.83	17184.59	22915.90
2016-17	30548.05	6093.36	34711.42	25131.76
Total	**136031.44**	**86615.61**	**131974.15**	**129278.06**
	X^2_1	X^2_2	X^2_3	X^2_4

$t = X_1 + X_{2+} X_{3+} X_4$

$= -60 + (-522.25) + (-52.61) + 5.08$

$= -629.65$

$C.F = \dfrac{T^2}{N} = \dfrac{(-629.65)^2}{44}$

$SST = (X^2_1 + X^2_{2+} X^2_{3+} X^2_4) - \dfrac{T^2}{N}$

   483899.26-9010.43

   =474888.83

$SSB = \left(\dfrac{(\sum X1)^2}{n1} + \dfrac{(\sum X2)^2}{n2} + \dfrac{(\sum X3)^2}{n2} + \dfrac{(\sum X4)^2}{n4}\right) - \dfrac{T^2}{N}$

   =25376.05-9010.43

   =16365.62

SSW= SST-SSB

   474888.83-16365.62

   458523.21

Degree of Freedom

$V_1 = K-1 = 114-1 = 10$

$V_1 = N-K = 44-1 = 33$

$d.g = N-1 = 44-1 = 43$

ANOVA TABLE

Sources	Sum of Square	d.g	Variance	F
SSB	16365.62	10	1636.56	0.1177
SSW	458523.21	33	13894.64	
Total	459850.85	43		

Level of Significance5%

V_1 =10,V_2=33 and $F_{.05}$=2.16

Calculated Value -0.1177

Tabulated Value – 2.16

5% Significance table value is $F_{.05}$=2.16 of V_1 =10,V_2=33and degree of freedom43.The f-test calculated value is less than tabulated value. so the difference is not adequate. After the t-test and F-test I observed that the calculated value of t-test and f-test was less than table value. That means is no significant change in state revenue due to implementation of value Added Tax in place of Sales Tax.

References

❋ Deshmukh, M.S. (2012) "Economic Analysis of VAT & revenue growth in Maharashtra" International Interdisciplinary Research Journal, Vo-2 issue-3 PP-102-105.

❋ Impact of Vat in India.

❋ M.C. Purohit Value Added Tax, Gayatri Publication P.10.

❋ M.P. Shrivstav, Economics of Value Added Tax, Delhi APH Publication 2004 P(XIV.)

❋ N.P. Agarwal and Nani Bhatia "fundamental of Value Added Tax" the Chartered Accountant. The institute of chartered accountants of India, Oct. 2001, PP-425-429.

❋ P.T.Chaudhari,Tax Reforms in India, Shree Niwas Publication,Jaipur(India) 2003,pp 84-86.

❋ Purohit, M.C. 2001, Sales Tax and Value Added Tax in India, Gayatri Publication New Delhi PP-22

❋ Ratan Pande "Value Added Tax The New Tax System, Abhishek Publication Delhi 2005, PP-6-8

❋ Report of the indirect taxation enquiry committee P – 286.

❋ Value Added Taxation in India – A critical overview, 2006.

❋ www.rajtax.gov.in

❋ www.mahavat.com

❋ www.ori.nic.in

❋ www.mptax.com

❋ www.commercialtax.

❋ status ov VATin India/hml

❋ www.economywater.com

❋ www.st.vat.com

❋ www.vat.com

❍❍❍