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Research Papers

VAT & ITS IMPACT ON PROFITABILITY OF MANUFACTURING INDUSTRIES IN MAHARASHTRA

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ABSTRACT

Maharashtra is one of the 21 states which have introduced the Value Added Tax (VAT) system of taxation from 1st April 2005. With introduction of VAT, we have moved to a globally recognized sales taxation system that has been adopted by more than 150 countries. The design of Maharashtra state VAT is guided by the best international practices with regard to legal frame work as well as operating producers. VAT is collected at each stage in the chain when value is added to goods.

It applies to all businesses, including importers, exporters, manufacturers, retailers, work contractors. At this moment VAT is the key source of government's revenue in more than 150 countries. Nearly seventy percent of the world is now under the VAT. The past experience in Maharashtra & elsewhere have shown that half backed reforms in the name of VAT has done more harm than good in evolving a tax system required competitive environment. Maharashtra is the third largest state which is contributing 12 percent revenue through VAT to the exchequer in India in 2009-10. It is important to assess the changing scenario of taxation from sales tax to VAT and VAT to GST. This paper examines the trends and growth of VAT and its impact on profitability of manufacturing industries in Maharashtra.

II.RESEARCH METHODOLOGY & DATA BASE OF THE STUDY:

There are large number of manufacturing industries in India in general and Maharashtra in particular. This study is based on both primary and secondary data, which have been collected from 100 industries and these industries are grouped into five categories. They are, Infrastructure Industries (10), Capital Goods Industries (18), Pharmaceutical Industries (25), Consumer Goods Industries (24), and Other Industries (23). The detailed discussion was also held with tax consultants, financial officers of various companies. The primary data was obtained through the following methods such as personal interviews, telephonic interviews, questionnaires, etc. The secondary data was collected from publication of Reserve Bank of India, Ministry of Finance (Economic Survey) Government of India and Government of Maharashtra, database of CMIE etc.

Present study focuses on the following statistical tools to measure the profitability of organization. Co-efficient of Variation, Compound Growth Rate Analysis, Regression Analysis etc.

Co-efficient of Variation:

$$CV = \frac{\sigma}{\overline{X}} \times 100$$

Where, CV = Co-efficient of Variation

σ = Standard Deviation

$\overline{X}$ = Arithmetic Mean

COMPOUND GROWTH RATE ANALYSIS:

In the present study, compound growth rate were estimated with the help of following exponential model.

$Y = a\,bt\,e$

Where, Y = Dependent variable for which growth data is estimated.

a = Intercept.

b = Regression coefficient.

t = Time variable.

e = Error term.

The logarithmic form of the above equation estimated the compound growth rate

$\log Y = \log a + t \log b$

The compound growth rate (g) was estimated by using

$g = [\text{Anti log of log (b)} - 1]\ 100$

III.RESULT AND DISCUSSION
A.HISTORY OF TAXES IN MAHARASHTRA:

Maharashtra state is one of the leading states in India. Mumbai the capital city of state is internationally recognized as financial capital of India. Sales tax was first introduced in India in the province of Bombay, where a tax was imposed on sales of tobacco within certain very limited urban and suburban areas by the Bombay Tobacco (Amendment) Act, 1938. In the province of Bombay, Government took powers by the Bombay Sales Tax Act, 1939 to levy sales tax on motor spirit and manufactured cloth, at rates not exceeding six and a quarter per cent. Eventually, however, only motor spirit was notified for taxation under that Act.The Bombay Sales Tax Act of 1946 , provided for the levy of a tax at the last stage of sale of any goods. The rate of tax under the Bombay Sales Tax Act, 1946 was six paisa per rupee of the sale price. A radical change in sales tax was effected on 1st November, 1952 by the sales introduction of a system of multi-point taxation, that is to say, a uniform levy at each stage of the sale of any goods, supplemented by a special tax at one anna in the rupee on selected goods, in addition to the general levy. The BST Act, 1959 was a schedule oriented Act in as much as the tax liability of a sale or purchase of a commodity will depend on the schedule in which the goods fall. Maharashtra, from 1 July, 1981, adopted single point first stage sales taxation system. It broadly means manufacturers/ importers in Maharashtra will be liable to pay taxes on their first sale in the state, while resellers are normally exempted from paying taxes. Sales Tax in Maharashtra was introduced way back in 1946. Bombay Sales Tax Act, 1959 which is, present enactment, came into existence w.e.f. 1-1-1960 as a first stage single point levy. This Act has undergone major changes in 1981 and 1995. Maharashtra introduced a subtraction type VAT in 1995. Due to design deficiencies, it reverted to a single point sales tax in 1999, though partial setting off of input costs from sales revenue combined till 2005. In the sales tax structure, there was the problem of double taxation of commodities and multiplicity of taxes, resulting in a cascading tax burden. For instance, in the existing structure, before a commodity is produced, inputs are first taxed, and then after the commodity is produced with input tax load, output is taxed again. This causes an unfair double taxation with cascading effects. In the VAT, a set-off is given for input tax as well

as tax paid on previous purchases.

VAT in Maharashtra is levied under a legislation known as the Maharashtra Value Added Tax Rules (MVAT Rules). VAT is levied on sale of goods including intangible goods. The following are Acts, which are repealed by MVAT ACT 2002. The Bombay Sales of Motor Spirit Taxation Act, 1958 · The Bombay Sales Tax Act,1959 ·The Maharashtra Sales Tax Act,1979·The Maharashtra Sales Tax on the transfer of the Right to use any goods for any Purpose Act,1985·The Maharashtra Sales Tax on the Transfer of property in Goods involved in the execution of Works Contract (Re-enacted) Act, 1989.

B.PATTERN AND GROWTH OF VALUE ADDED TAX ON MANUFACTURING INDUSTRIES IN MAHARASHTRA:

This section undertakes the impacts of VAT on the profitability of manufacturing units in Maharashtra, based on the primary and secondary information that has been collected from various companies in the state of Maharashtra. This analysis provides an integrated view of the industrial sector in Maharashtra. The primary data was obtained from the sample respondents who are associated with manufacturing activity. Field survey covered the hundred industries, which are grouped into five major categories that is shown in Table:1

TABLE:1 TURNOVER WISE CLASSIFICATION OF INDUSTRIES IN MAHARASHTRA:

Turnover (Rs.Cr)	Capital Goods Industries	Consumer Goods Industries	Infrastructure Industries	Pharmaceutical Industries	Other Industries	All Industries
100 & less	6	6	2	7	8	29
101-200	4	2	2	4	6	18
201-300	1	1	-	1	-	4
301-400	4	-	-	1	1	6
400 &above	3	14	6	12	8	43
Total	18	24	10	25	23	100

Source: Field Survey.

1. CAPITAL GOODS INDUSTRIES AND CONSUMER GOODS INDUSTRIES:

Table:2 reveals that compound growth rate of capital goods industries since 2001-02 to 2008-09 regarding total sales is 15.7 percent and sales tax/ VAT is 8.65 percent, where as coefficient of variation about total sales is 31.82 percent and sales tax/ VAT is 19.7 percent during same period. But compound growth rate of capital goods industries only for sales tax was 16.75 percent and coefficient of variation was 17.2 percent during 2001-02 to 2004-05. Moreover compound growth rate of capital goods industries only for VAT was 0.26 percent and coefficient of variation was 5.76 percent during 2005-06 to 2008-09. Therefore it states that capital goods industries are more beneficial under VAT system as CGR of VAT is 0.26 percent whereas CGR for sales tax is 16.75 percent. So we can say that the profit of capital goods industries is increased under VAT system than sales tax, regarding capital goods industry regression analysis shows that there is positive relationship between sales and sales tax as well as sales and VAT of an organization during 2001-02 to 2004-05 and 2004-05 to 2008-09 respectively. Moreover the co-relation between sales and sales tax is closely related with 1 (0.99) whereas co-relation between sales and VAT is far below 1 (0.009) during the same period.

TABLE:2 STATISTICAL ANALYSES OF CAPITAL AND CONSUMER GOODS INDUSTRIES IN MAHARASHTRA:

	Capital Goods Industries				Consumer Goods Industries			
	Sales	ST/ VAT	ST	VAT	Sales	ST/ VAT	ST	VAT
CGR	15.67	8.65	16.75	0.26	13.34	23.30	10.84	24.40
CV	31.82	19.70	17.12	5.76	31.08	49.51	11.59	23.44
Co-efficient		0.008	0.015	0.00		0.03	0.03	0.02
Std. Error		0.002	0.001	0.004		0.002	0.007	0.006
T-Test		4.61	10.89	0.012		15.86	4.76	4.7
R		0.88	0.99	0.009		0.98	0.95	0.95
R^2		0.78	0.98	0.00		0.97	0.919	0.917

Source: Field Survey (2010-11), CGR: Compound Growth rate, CV: Co-efficient Variation, R: Regression. **Note:** 1) Sales tax (BST) is applicable from 2001-02 to 2004-05. 2) Value Added Tax (VAT) is applicable from 2005-06 to 2008-09.

The compound growth rate of consumer goods industries since 2001-02 to 2008-09 regarding total sales is 13.34 percent and sales tax/ VAT is 23.30 percent, where as coefficient of variation about total sales is 31.08 percent and sales tax/ VAT is 49.51 percent during same period. But compound growth rate of consumer goods industries only for sales tax was 10.84 percent and coefficient of variation was 11.59 percent during 2001-02 to 2004-05. Moreover compound growth rate of consumer goods industries only for VAT was 24.40 percent and coefficient of variation was 23.44 percent during 2005-06 to 2008-09. Therefore it states that consumer goods industries are more beneficial under sales tax system as CGR of sales tax is 10.84 percent whereas CGR for VAT is 24.40 percent. So we can say that the profit of consumer goods industries is reduced under VAT system than sales tax, regarding consumer goods industry regression analysis shows that there is positive relationship between sales and sales tax, sales and VAT of an organization during 2001-02 to 2004-05 and 2004-05 to 2008-09 respectively. Moreover the co-relation between sales and sales tax is closely related with 1 (0.95) and co-relation between sales and VAT is also close to 1 (0.95) during the same period.

2. INFRASTRUCTURE INDUSTRIES AND PHARMACEUTICAL INDUSTRIES:

Table:3 reveals that compound growth rate of infrastructure industries since 2001-02 to 2008-09 regarding total sales is 20.72 percent and sales tax/ VAT is 7.24 percent, where as coefficient of variation about total sales is 42.19 percent and sales tax/ VAT is 81.71 percent during same period. But compound growth rate of infrastructure industries only for sales tax was 34.51 percent and coefficient of variation was 37.56 percent during 2001-02 to 2004-05. Moreover compound growth rate of infrastructure industries only for VAT was (48.45) percent and coefficient of variation was 72.90 percent during 2005-06 to 2008-09. Therefore it states that infrastructure industries are more beneficial under VAT system as CGR of sales tax is 34.51 percent whereas CGR for VAT is (- 48.45) percent. So we can say that the profit of infrastructure industries has increased under VAT system than sales tax, regarding infrastructure industry regression analysis shows that there is less positive relationship between sales and sales tax then Sales and VAT of an Organization during 2001-02 to 2004-05 and 2004-05 to 2008-09 respectively. Moreover the co-relation between sales and VAT is closely related with 1 (0.98) and co-relation between sales and sales tax is far below 1 (0.46) during the same period.

TABLE:3 STATISTICAL ANALYSES OF INFRASTRUCTURE AND PHARMACEUTICAL INDUSTRIES IN MAHARASHTRA:

	Infrastructure Industries				Pharmaceutical Industries			
	Sales	ST/ VAT	ST	VAT	Sales	ST/ VAT	ST	VAT
CGR	20.72	7.24	34.51	-48.45	13.26	3.21	13.01	2.35
CV	42.19	81.71	37.56	72.90	28.50	10.74	14.52	3.42
Co-efficient		0.001	0.009	-0.038		0.006	0.03	0.006
Std. Error		0.008	0.012	0.004		0.003	0.01	0.001
T-Test		0.168	0.735	9.03		1.8	2.9	6.9
R		0.06	0.46	0.98		0.59	0.89	0.98
R^2		0.005	0.213	0.976		0.352	0.809	0.960

Source: Field Survey (2010-11), CGR: Compound Growth rate, CV: Co-efficient Variation, R: Regression. **Note:** 1) Sales tax (BST) is applicable from 2001-02 to 2004-05. 2) Value Added Tax (VAT) is applicable from 2005-06 to 2008-09.

The compound growth rate of pharmaceutical industries since 2001-02 to 2008-09 regarding total sales is 13.26 percent and sales tax/ VAT is 3.21 percent, where as coefficient of variation about total sales are 28.50 percent and sales tax/ VAT is 10.74 percent during same period. But compound growth rate of these industries only for sales tax was 13.01 percent and coefficient of variation was 14.52 percent during 2001-02 to 2004-05. Moreover compound growth rate of pharmaceutical industries only for VAT was 2.35 percent and coefficient of variation was 3.42 percent during 2005-06 to 2008-09. Therefore it states that pharmaceutical industries are more beneficial under VAT system as CGR of sales tax is 13.01 percent whereas CGR for VAT is 2.35 percent. So we can say that the profit of pharmaceutical industries

is increased under VAT system than sales tax. Regression analysis shows that there is positive relationship between sales and sales tax as well as sales and VAT of an organization during 2001-02 to 2004-05 and 2004-05 to 2008-09 respectively. Moreover the co-relation between sales and VAT is closely related with 1 (0.98) and co-relation between sales and sales tax also closely related to 1 (0.89) during the same period.

3. OTHER INDUSTRIES AND ALL COMBINED INDUSTRIES:

Table: 4 reveals that compound growth rate of other industries since 2001-02 to 2008-09 regarding total sales is 24.67 percent and sales tax/ VAT is 22.02 percent, where as coefficient of variation about total sales are 56.31 percent and sales tax/ VAT is 41.72 percent during same period.

TABLE: 4 STATISTICAL ANALYSES OF OTHER AND ALL COMBINED INDUSTRIES IN MAHARASHTRA:

	Other Industries				All Industries			
	Sales	ST/ VAT	ST	VAT	Sales	ST/ VAT	ST	VAT
CGR	24.67	22.02	32.75	14.59	19.65	11.10	23.23	-26.04
CV	56.31	41.72	33.99	16.07	40.58	47.50	24.53	36.96
Co-efficient		0.005	0.12	0.004		0.004	0.012	-0.24
Std. Error		0.001	0.001	0.002		0.006	0.010	0.003
T-Test		7.62	8.29	2.47		0.788	1.249	-7.229
R		0.95	0.29	0.86		0.306	0.662	0.981
R^2		0.906	0.972	0.753		0.094	0.438	0.963

Source: Field Survey (2010-11), CGR: Compound Growth rate, CV: Co-efficient Variation, R: Regression. **Note:** 1) Sales tax (BST) is applicable from 2001-02 to 2004-05. 2) Value Added Tax (VAT) is applicable from 2005-06 to20 08-09.

But compound growth rate of these industries only for sales tax was 32.75 percent and coefficient of variation was 33.99 percent during 2001-02 to 2004-05. Moreover compound growth rate of these industries only for VAT was 14.59 percent and coefficient of variation was 16.07 percent during 2005-06 to 2008-09. Therefore it states that other industries are more beneficial under VAT system as CGR of sales tax is 32.75 percent whereas CGR for VAT is 14.59 percent. So we can say that the profit of other industries is increased under VAT system than sales tax. Regression analysis shows that there is less positive relationship between sales and sales tax then sales and VAT of an Organization during 2001-02 to 2004-05 and 2004-05 to 2008-09 respectively. Moreover the co-relation between sales and VAT is closely related with 1 (0.86) and co-relation between sales and sales tax is far below 1 (0.29) during the same period.

That the compound growth rate of all industries since 2001-02 to 2008-09 regarding total sales is 19.65 percent and sales tax/ VAT is 11.10 percent, where as coefficient of variation about total sales is 40.58 percent and sales tax/ VAT is 47.50 percent during same period. But compound growth rate of these industries only for sales tax was 23.23 percent and coefficient of variation was 24.53 percent during 2001-02 to 2004-05. Moreover compound growth rate of all these industries only for VAT was (-26.04) percent and coefficient of variation was 36.96 percent during 2005-06 to 2008-09. Therefore it states that all industries taken together are More beneficial under VAT system as CGR of sales tax is 23.23 percent whereas CGR for VAT is (-26.04) percent. So we can say that the profit of all industries is increased under VAT system than sales tax. Regression analysis shows that there less is positive relationship between sales and sales tax then sales and VAT of an organization during 2001-02 to 2004-05 and 2004-05 to 2008-09 respectively. Moreover the co-relation between sales and VAT is closely related with 1 (0.98) and co-relation between sales and sales tax far away from 1 (0.66) during the same period.

IV.POLICY RECOMMENDATION AND CONCLUSION:

Maharashtra has introduced a subtraction type VAT in 1995. Due to design deficiencies, it reverted to a single point sales tax in 1999, though partial setting off of input costs from sales revenue

combined till 2005. VAT in Maharashtra is levied under a legislation known as the Maharashtra Value Added Tax Rules (MVAT). The study reveals and suggests the following findigs:

1.Consumer goods industries as compared to capital goods industries are more beneficial under VAT system as CGR of VAT is 0.26 percent whereas CGR for sales tax is 16.75 percent. So we can say that the profitability of capital goods industries has increased under VAT system than sales tax, regarding capital goods industry regression analysis shows that there is positive relationship between sales and sales tax as well as sales and VAT of an organization during 2001-02 to 2004-05 and 2004-05 to 2008-09 respectively.

2.Infrastructure industries are more beneficial under VAT system as CGR of sales tax is 34.51 percent whereas CGR for VAT is (- 48.45) percent. therefore it is understood that the profitability of infrastructure industries has increased under VAT system than sales tax.

3.The profit of pharmaceutical industries is also increased under VAT system than sales tax. Therefore it is clear that all industries taken together have benefited more under VAT system as CGR of sales tax is 23.23 percent whereas CGR for VAT is (-26.04) percent.

4.Profitability of all the industries has increased under VAT system than sales tax. Regression analysis shows that there is positive relationship between sales and sales tax then sales and VAT of an organization during 2001-02 to 2004-05 and 2004-05 to 2008-09 respectively.

5.It is suggested and emphasized that VAT reduces the cascading effect and improves neutrality. Therefore, rather than prescribing different rates for different goods, a uniform VAT will improve economic efficiency.

6.It would be in the interest of both state governments and taxpayers to have uniform laws and procedures for tax administration. In the medium term, a consensus Tax Administration Act will greatly reduce the cost & it will lead to increase the profitability of an organization.

Finally the analysis reveals that profitability of manufacturing industries in Maharashtra has increased under VAT as compared to sales tax. However the propotion of the tax contribution and profitability varies with variation in industries or group of industries.

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