ISSN (online): 2320-9836
ISSN (Print): 2320-9828

Belated VAT gains in Indian states: Right time to Switchover to Goods and Services Tax

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Abstract

Background/Objectives:
1. To study the impact of State VATs in Indian States. In the past, many attempts have been made. In all the studies, Sales Tax revenues collected from states have been used to assess the impact and found that impact is almost zero. In reality, the State Sales-tax revenues consist of revenues from VAT commodities, non VAT commodities, Surcharges, Turnover taxes and Central Sales Tax. Hence, an attempt is made in this paper to study the impact of State VATs after isolating revenues due to VAT commodities from the sales-tax revenues of the states after deducting the revenues from non VAT commodities for the period from 1995-96 to 2014-15 for 22 major states of India as many of these States have been collecting substantial and huge revenues from Non-VAT commodities.
2. Also, it is proposed to estimate the expected revenues and the Revenue Neutral Rate (RNR) under Goods and Services Tax (GST).

Statistical Analysis: Basic statistical tools Viz. Annual Average Growth Rate (AAGR), Buoyancy Co-efficient and Co-efficient of Variation (C.V.) have been calculated for both the pre and post VAT periods separately for 22 major states of India.

Findings: The performance of VAT in most of the States is highly impressive and during the last five years from 2011-12 to 2014-15, these States have posted an excellent growth of 21%. This successful gain in performance of State VATs may be taken as a green signal for the transition to the Introduction of Goods and Services Tax (GST) and an attempt is made in this paper to estimate the expected revenues and the Revenue Neutral Rate (RNR) under GST. A RNR of 8% is found to be sufficient for revenue generation for States.

***Key Words*:** Value Added Tax**,** Annual Average Growth Rate (**AAGR**), Buoyancy Co-efficient and Co-efficient of Variation (**C.V**.), Goods and Services Tax (**GST**), Revenue Neutral Rate (**RNR**)

1. Introduction to tax reforms

Fiscal reforms in India have been carried out from time to time and these reform measures were initially aimed at mobilization of resources to meet the exigencies of plan targets. Later, the focus was on the rationalization, simplification and harmonization of taxes and tariff structures. The Indirect Taxation Enquiry Committee[1] (1978) has laid the basic foundation for the introduction of Value Added Tax at the manufacturing level (MODVAT later CENVAT) in India to mitigate primarily the influence of cascading input taxes by permitting credits for the taxes paid on inputs and harmonization of innumerable tax rates to a reasonable number. Further, the Tax Reforms Committee,[2](TRC) 1991, headed by the country's senior fiscal expert, Prof. Raja Chelliah, did the most pioneering study for restructuring and rationalization of taxation system in India. The TRC brought forward three reports: a) An interim report in December 1991 b) Final Report Part I in August 1992 and c) Final Report Part II in January 1993 and these reports formed the basis for the Union government to carry out its reform agenda on simplification, rationalization and harmonisation.

India's domestic trade reforms have been initiated following a study done by the National Institute of Public Finance and Policy[3] (NIPFP) in 1994 to examine the various designs for a coordinated consumption tax system in

ISSN (online): 2320-9836
ISSN (Print): 2320-9828

India. The report titled "Reform of Domestic Trade Taxes in India" recommended a dual VAT: a central VAT to be levied by the Central Government by converting the Union Excise Duty into CENVAT at the manufacturing level and a state VAT to be adopted by the state Governments by replacing the existing sales tax into a full-fledged VAT at the wholesale and the subsequent retail level to maintain a balance between sub-national fiscal autonomy and the ability of the Centre to undertake any desired interstate redistribution.

Dr.Raja J Chelliah, et all, in their Primer of VAT[4] (2003) have discussed thoroughly the major deficiencies of state sales taxes as cascading type which leads to escalation of costs, distortion in resource allocation and also as creator of barriers to free trade within the Indian Union. The authors have also opined that the sales tax system that operated is neither in the interest of individual states nor in the national economy as a whole. Apart from explaining the meaning and characteristics of VAT, the study has also argued for a case as why VAT is to be preferred to the state sales tax system. The Central Sales Tax[5] (CST) levied on interstate trade is the most contributing factor to tax cascading as the tax is collected by the exporting state for which no ITC is permitted. Robin Burgess, Stephen Hower and Nicholas Stern[6](2004) proposed State level VAT considering the fragile nature of the Centre-State financial relations in the Indian Federal structure focused on the problems that would arise under either a states' or a dual VAT with regard to taxing interstate trade. In 2001, Richard. Bird and Gendron-Pierre-Pascal[7] discussed the major problems and the feasibility of implementing sub-national VATs. In 2001, Charles E. McLure, Jr. [8]discussed an inspired and well-designed scheme for implementing a destination-based value added tax (VAT) on cross-border trade within a nation or group of nations. In 2000, Keen and Smith[9] proposed alternate proposal called VIVAT (Viable Integrating VAT) for inter-state trade between countries of European Union. Joshua Aizeman & Yothin Jinjark[10] (2005) evaluated the political and structural factors on VAT collection efficiency and found that the political factors such as great polarization and political instability reduce tax collection efficiency whereas structural factors such as urbanization, share of agriculture and trade openness improve tax collection efficiency.

Being a federal country, India has the advantage of a huge common market. Economies to scale and cost efficient production of goods and services can be achieved in such large common markets if there are no barriers to trade and free flow of factors of production within the federation. Since, prices of goods and services are uniform across the states under the common market, the demand for goods is the aggregate demand of all state economies and the production becomes integrated, which in turn triggers the level of goods to be produced. Consumers will benefit from the increased competition from sellers and from realisation of economies to scale through the concentration of productive activities.

1.1 Reforming of State Sales Tax and Implementation of VAT

In order to reform the state sales tax structure, the Union Finance Ministry set up an Empowered Committee of ten State Finance Ministers headed by the West Bengal Finance Minister Mr. Asim Das Gupta to find the ways and means to achieve a coordinated Sales Tax structure in India. The Finance Ministers' Committee[11] submitted its report in 1995 listing out sequence of steps to convert the present State Sales Tax system into a consumption type destination VAT. On 17th January 2005, a white paper[12] released by the Empowered Committee outlined the basic structure of State VATs.

After Herculean efforts over a decade and postponements, all the states in India have switched over to a system of Value Added Tax replacing their existing sales taxes is given in table No.1. **At the state level, replacing the sales tax systems with Vat is regarded as the boldest tax reform undertaken in independent India**. The half a century old sales taxes levied by the states was so complex and the VAT has mitigated these complex structure in taxation. The first point sales taxation with its multiple forms such as surcharges, turnover tax and additional sales tax, etc. has distorted the indirect taxation in India and the multiplicity of tax rates often lead to confusion in drawing distinctions among goods that were often flawed and led to endless disputes.

ISSN (online): 2320-9836
ISSN (Print): 2320-9828

Table 1. Implementation of VAT by Indian States

Name of the States	Date of Implementation
Haryana	01-04-2003
Arunachal Pradesh, Assam , Himachal Pradesh, Mizoram, Nagaland ,New Delhi, Sikkim, Tripura Goa, Jammu and Kashmir, Manipur Andhra Pradesh, Bihar,Haryana, Karnataka, Kerala, Maharashtra, Orissa, Punjab, West Bengal, Meghalaya	01-04-2005
Uttarkhand	01-10- 2005
Rajasthan, Jharkhand Chhatisgarh, Madhya Pradesh, Gujarat,	01-04- 2006
Tamil Nadu	01-01- 2007
Uttar Pradesh	01-01- 2008

The feature of Vat uniformity agreed by the states is a major step in the direction of reforming state taxes and is considered as a major step towards harmonisation of State Sales Tax system. Komal[13] (2013) focused on the impact of VAT on Business Enterprises, Wholesalers, Retailers, Chartered Accountants, Tax officials and Consumers in Delhi and to come up with practical and viable suggestions for better implementation of VAT. In 2013, Mohd. Azam KHAN and Nagma SHADAB [14]studied the impact of VAT and found that the average CAGR(Compounded Average Growth rate) of Post VAT period of six majors States of India is greater than Pre-VAT period. An earlier study done by Arindam Das-Gupta[15] (2011) on the impact of State level VAT in India has indicated that except for Haryana and Orissa and six other special category states, the gains from the State VATs in terms of revenue and efficiency gains was at best zero for the country as a whole. All the above studies suffer on two counts. Firstly, these studies considered the Sales-tax revenues collected from State Governments for estimating the buoyancy and revenue to GSDP ratio for the pre and post VAT periods. In reality, the State Sales-tax revenues consist of revenues from VAT commodities, non VAT commodities, Surcharges, Turnover taxes and Central Sales Tax. The major non VAT commodities are Petroleum and its products and sales-tax on Indian Made Foreign Liquor (IMFL). Some of the states viz. Maharashtra, Gujarat, Haryana, Tamil Nadu, West Bengal, Kerala, Andhra Pradesh, etc. have been collecting huge and substantial revenues from non VAT commodities. Hence, to study the impact of state VATs on the finances of the state Governments, the revenues due to the VAT commodities alone to be analysed as the revenues from Petroleum products and IMFL are not under the purview of the State VATs. Secondly, the period of study was too short (post VAT period 2005-06 to 2008-09) a period to obtain robust estimates. *Hence, it is proposed to study the impact of State VATs after isolating revenues due to VAT commodities from the sales-tax revenues of the states after deducting the revenues from non VAT commodities for the period from 1995-96 to 2014-15 for 22 major states of India.*

The Successful Implementation of Value Added Tax (VAT) in 2005 by the States is hailed as the boldest innovative tax reform undertaken in the independent India. The design of VAT implemented was based on a study "Reform of Domestic Trade Taxes in India: Issues and options" done by Late Dr. Amaresh Bagchi. Considering the fragile nature of the Centre-State financial relations, the study recommended a dual VAT: a Central VAT replacing the existing Central excise duty and a State Vat replacing the existing Sales Tax system in the States. The report also clearly spelt out that Dual Vat recommendation is only a short-term and feasible solution to the complex taxation system in India and the immediate implementation may pave the way for a more progressive, rational, destination based consumption type taxation system covering both goods and services in future.

ISSN (online): 2320-9836
ISSN (Print): 2320-9828

1.2. Deficiencies of the dual VAT system in India

Exclusion of Services: A study done by the National Institute of Public Finance and Policy in 1994 pointed out that services are often become an integral part of manufacturing and trade and the line between goods and services is getting increasingly blurred such as development of software, desktop publishing, printing of photographs, etc. involves a variety of services such as the training, installation and maintenance. By taking advantage of these definitional ambiguities, the manufacturers in collusion with the traders underestimate the value of manufactured goods by claiming discounts for post-manufacturing services such as transportation, installation and maintenance. In case of sales taxes too, the first point taxation on goods where the base is free of services and trade margins tends to distort consumers and producers as items which carry higher trade margins are more favored than the essential goods and the producers add more number of services to underestimate the value of their products.

Tax cascading: The coverage of commodities under CENVAT is not comprehensive as certain sectors such as oil and gas production, agriculture, wholesale and retail trade, real estate and construction remain outside the scope of CENVAT and service taxes. These sectors cannot claim any Input Tax Credit (ITC) under CENVAT and service tax. Central Sales Tax on Inter-state trade is the most contributing factor to tax cascading as the tax is collected by the exporting state for which no ITC is permitted. At the outset, the extent of tax cascading is so huge under the CENVAT, service tax and the state VAT on account of the innumerable exemptions and restricted ITC claims.

1.3. Goods and services tax

To overcome the above mentioned deficiencies in the CENVAT and State VAT dispensations, the Union Finance Minister while presenting the Union Budget for 2006-2007, announced that Goods and Service Tax (GST) would be implemented from April 11, 2010. The Empowered Committee of State Finance Ministers has been holding deliberations to prepare a roadmap for the implementation the GST. Kavita Rao[16] (2008) describes the contours of a feasible designs, issues and options and estimation of RNR and anticipated revenues of GST in India. In 2009, Ehtisham Ahmad and Satya Poddar[17], discussed the major issues in implementing Goods and Services in India such as constitutional division of taxation powers between the Centre and the States, harmonisation of taxes imposed by the Centre and the States, treatment of food, housing, and inter-state services such as transportation and telecommunication, subsuming of existing Centre and State taxes and the administrative infrastructure for the collection and enforcement of the tax. Kavita Rao and Pinaki Chakraborty[18](2013) provided conservative estimates on the Revenue Neutral rate (RNR) and expected revenues for States in case GST is implemented in India. The Constitution Amendment Bill 2014 (122nd Amendment) introduced by the Finance Minister on December, 19, 2014 envisages the following:

Towards achieving a common market in India by removing barriers in the form of cascading effects of taxation, the Central Government introduced the 122nd Constitution Amendment Bill, 2014 on the introduction of Goods and Services Tax ('GST').

The Bill proposes to replace the existing multi-tiered Indian taxation system. Currently, the Centre imposes excise duty on manufacture of goods, and service tax on select services apart from customs duty on imports. The States levy Value Added Tax (VAT) on the supply of goods and a plethora of taxes such as entertainment tax, excise duties on alcohol and medicinal and toilet preparations (MTP), entry tax and octroi. For mixed supply of services and goods, some activities such as construction, restaurants, etc., both service tax and VAT apply on the respective components. This results in a multiplicity of taxes with limited cross credits, conceptual difficulties, differential tax regimes between States and undue litigation. The Bill proposes that both the Centre and States would have concurrent powers to levy GST on the supply of goods and services within a State. In reality, every supply of goods and services would attract a Central GST (CGST) and State GST (SGST) on a common base. For interstate trade, a levy called Integrated Goods and Services Tax (IGST) would be levied by the Centre. IGST Revenues would be shared between the Centre and States as per the recommendations of the GST Council. Imports to be treated on par with inter-state transactions and therefore should attract IGST. In this regard, *it is proposed to estimate Revenue Neutral Rate (RNR) and estimated revenues for major 22 states under the GST.*

2. Material and methods

In this paper, an attempt is made to isolate the revenue due to VAT commodities alone from the Total Sales Tax revenue and estimated the basic *tool*s such as Annual Average Growth Rate (AAGR), Buoyancy Co-efficient and Co-efficient of Variation (C.V.) for 22 major states and presented in Tables 2, 3 and 6.

ISSN (online): 2320-9836
ISSN (Print): 2320-9828

2.1. Data analysis and estimation

In this study revenues due to VAT commodities have been isolated from the sales-tax revenues of the states after deducting the revenues from non VAT commodities from the data available in the Ministry of Petroleum and Natural Gas on sales-tax payments to state Governments, Data on CST from Reserve Bank of India database and the 13th Finance Commission Reports. The study period is from 1995-96 to 2014-15.

To assess the impact of state VATs, the basic statistical tools Viz. Annual Average Growth Rate (AAGR), Buoyancy Co-efficient and Co-efficient of Variation (C.V.) have been calculated for both the pre and post VAT periods separately for 22 major states of India.

Annual average growth rate (AAGR): Average Year to Year Growth Rate over a period of time and calculated as the geometric mean of the ratios of revenue growth for a specific period.

AAGR = ((Geometric mean (Growth Ratios) -1) x 100.

Buoyancy Co-efficient:

The responsiveness of tax revenues to discretionary changes in the tax rate and in the tax base in relation to the GDP is termed the **buoyancy** of the tax system and is expressed as

$$B= (\Delta T/\Delta Y) \times (Y/T))*100$$

B = Buoyancy of tax revenue to GDP

T = Total tax revenue

Y= GDP

ΔT = Change in tax revenue Y

ΔY = Change in GDP

Revenue stability:

A simple measure of the stability of tax revenue is the coefficient of variation (CV), which is defined as the percentage standard deviation of tax revenue (as a fraction of GDP usually) over its mean. Coefficient of Variation= (Standard Deviation/Mean) x 100.

Table 2. Annual Average Growth Rate (%)

States	PREVAT (1)	POSTVAT (2)	VAT Gains (1)-(2)	LAST 5 YRS.(2010-11 to 2014-15)
1.Andhra Pradesh	18.54	20.40	1.86	26.13
2.Bihar	7.35	25.16	17.82	32.82
3.Chhattisgarh	10.34	20.44	10.10	22.87
4.Goa	6.96	21.48	14.52	22.73
5.Gujarat	9.50	25.08	15.57	22.24
6.Haryana	13.39	22.69	9.30	27.24
7.Jharkhand	9.27	22.60	13.33	15.22
8.Karnataka	11.05	17.38	6.33	19.70
9.Kerala	11.04	20.20	9.16	22.74
10.Madhya Pradesh	7.38	19.68	12.30	22.13
11.Maharashtra	10.69	16.57	5.88	16.58
12.Orissa	11.03	20.81	9.78	20.74
13.Punjab	4.92	20.43	15.51	21.09
14.Rajasthan	14.90	21.02	6.12	20.80
15.Tamil Nadu	10.14	22.24	12.10	21.84
16.Uttar Pradesh	9.26	18.66	9.40	15.95
17.West Bengal	7.87	19.60	11.73	23.56
18.Assam	11.34	15.20	3.85	21.32
19.Himachal	21.21	27.16	5.95	25.32
20.Jammu and	22.04	22.60	0.56	20.34
21.Uttarakhand	19.65	20.82	1.17	17.42
22.NCT Delhi	14.65	16.61	1.96	15.91
National Average	11.93	20.76	8.83	20.56

Note: AAGR is calculated for Pre and Post VAT periods according to the period of implementation as given in Table-1.

ISSN (online): 2320-9836
ISSN (Print): 2320-9828

Table 3. BUOYANCY COEFFICIENT (%)

States	**PREVAT (1)**	**POSTVAT (2)**	**VAT Gains (1)-(2)**	**LAST 5 YRS. (2010-11 to 2014-15)**
1.Andhra Pradesh	5.09	7.69	2.60	10.41
2.Bihar	0.22	2.55	2.33	2.73
3.Chhattisgarh	2.89	3.43	0.54	4.20
4.Goa	1.81	3.51	1.70	4.20
5.Gujarat	0.01	5.44	5.42	7.31
6.Haryana	0.03	5.35	5.32	6.99
7.Jharkhand	-0.01	3.82	3.83	4.07
8.Karnataka	2.56	4.90	2.33	5.38
9.Kerala	2.37	6.76	4.39	7.04
10.Madhya Pradesh	0.01	7.26	7.24	9.05
11.Maharashtra	2.13	3.21	1.08	3.20
12.Orissa	1.96	3.80	1.84	5.30
13.Punjab	3.95	5.62	1.68	6.46
14.Rajasthan	0.03	3.01	2.98	3.82
15.Tamil Nadu	0.02	4.64	4.62	5.35
16.Uttar Pradesh	0.04	3.62	3.58	4.28
17.West Bengal	1.02	2.76	1.74	3.02
18.Assam	3.84	3.07	-0.76	4.38
19.Himachal	1.81	5.63	3.82	5.94
20.Jammu & Kashmir	2.92	5.93	3.02	6.53
21.Uttarakhand	0.05	3.18	3.13	3.47
22.NCT Delhi	3.36	3.28	-0.07	2.65

Note: Buoyancy is calculated for Pre and Post VAT periods according to the period of Implementation

Table 4. Classification of States based on AAGR (%)

AAGR Range	VAT Gains (%)	Last 5 years (2010-11 to 2014-15)		
		10-20%	20-30%	>30%
<1%	Assam, Jammu & Kashmir, Goa (3)		Assam, Jammu & Kashmir (2)	
1-5%	New Delhi (1)	Uttarakhand, Delhi, Maharashtra (3)	Andhra Pradesh (1)	
5-10%	Haryana, Karnataka, Maharashtra, Orissa, Rajasthan, Uttar Pradesh, Himachal Pradesh (7)	Uttar Pradesh (1)	Haryana, Karnataka, Orissa, Rajasthan, Himachal Pradesh (5)	
10-15%	Chhattisgarh, Goa, Kerala, Tamil Nadu & West Bengal (5)		Chhattisgarh, Goa, Kerala, Tamil Nadu & West Bengal (5)	
15-20%	Gujarat, Punjab , Andhra Pradesh, (3)		Gujarat, Punjab (2)	
>20%	Bihar, Jharkhand, Madhya Pradesh (3)	Jharkhand (1)		Bihar, M.P (2)
	Total States (22)	(5)	(15)	(2)

Note: Figures within parentheses indicate the no. of states.

ISSN (online): 2320-9836
ISSN (Print): 2320-9828

Table 5. Classification of States based on Buoyancy

Buoyancy Range(%)	Vat Gains (%)	During Last 5 years (2010-11 to 2014-15)		
		<5%	5-10%	>10%
<1%	Assam, Delhi (2)	Assam Delhi (2)		
1-2%	Chattisgarh, Goa, Maharashtra, Orissa, Punjab, West Bengal (6)		Maharashtra, Rajastan, Uttarkhand, Uttar Pradesh, West Bengal (5)	
2-4%	Andhra Pradesh, Bihar, Jharkhand, Karnataka, Rajastan, Tamil Nadu, Uttarkhand, Uttar Pradesh, Himachal Pradesh (10)	Bihar, Jharkhand (2)	Chattisgarh, Goa, Orissa, Tamil Nadu, Himachal Pradesh, Jammu & Kashmir, Karnataka, M.P., Punjab, Gujarat Haryana, Kerala (12)	Andhra Pradesh (1)
4-6%	Gujarat, Haryana, Kerala (3)			
>6%	Madhya Pradesh (1)			
	Total States (22)	(4) (4)	(17)	(1) (1)

Note: Figures within parentheses indicate the no. of states.

Table 6. Stability of VAT Revenues

States	COEFFICIENT OF VARIATION (%)		
	Prevat (1)	**Post Vat (2)**	**Last 5 yrs. (2010-11 to 2014-15) (3)**
1.Andhra Pradesh	48.28	83.49	62.13
2.Bihar	HV	160.35	100.04
3.Chhattisgarh	79.34	58.91	36.79
4.Goa	244.11	67.94	80.96
5.Gujarat	354.89	92.90	138.36
6.Haryana	207.80	86.31	87.08
7.Jharkhand	HV	121.83	98.07
8.Karnataka	137.67	48.63	42.71
9.Kerala	154.65	127.11	101.69
10.Madhya Pradesh	317.08	167.64	156.68
11.Maharashtra	279.67	97.37	99.83
12.Orissa	189.34	46.05	55.56
13.Punjab	169.52	75.29	81.49
14.Rajasthan	23.40	48.45	67.36
15.Tamil Nadu	188.47	108.73	120.64
16.Uttar Pradesh	156.59	33.66	30.88
17.West Bengal	82.98	60.07	42.09
18.Assam	127.90	188.98	75.73
19.Himachal Pradesh	110.51	53.10	66.35
20.Jammu and	72.25	60.90	72.30
21.Uttarakhand	25.17	40.25	50.52
22.NCT Delhi	144.19	72.43	45.14

Note: HV- Highly Volatile

 ISSN (online): 2320-9836
ISSN (Print): 2320-9828

3. Computation of revenue neutral rate (RNR) and Estimated revenues for major states

To compute the RNR for the States, revenue due to VAT commodities, CST revenue, Surcharges, Turn over taxes, Entertainment taxes, Luxury taxes, Entry taxes for the last five years (2010-11 to 2014-15) is collected as these taxes are likely to be subsumed under SGST and projected for the years 2015-16 to 2019-20. Similarly, Net State Domestic Product (NSDP) at factor cost at current prices is collected for the 22 states and the share of Agriculture & Allied sector and unregistered manufacturing is subtracted as more than 95% of these sectors remain unorganized. Further, a reduction of 15% is made for major manufacturing states as 77% GSDP of the trade and Hotels and restaurants remains in informal sector in these states and the resultant NSDP is projected for the years 2016-17 to 2019-20. The RNR and estimated revenues are presented in Table-7 and Table-8 for the 22 states mentioned above.

Table 7. Revenue Neutral Rates (%) for State Goods and Services Tax

	With CST				**Without CST**			
States	**2016-17**	**2017-18**	**2018-19**	**2019-20**	**2016-17**	**2017-18**	**2018-19**	**2019-20**
1.Andhra Pradesh	9.4	9.9	10.5	11.1	8.9	9.5	10.0	10.6
2.Bihar	4.6	5.6	6.8	8.3	4.5	5.5	6.7	8.2
3.Chhattisgarh	6.2	6.5	7.0	7.4	4.8	5.1	5.4	5.7
4.Goa	5.1	5.5	5.8	6.2	4.7	5.0	5.3	5.7
5.Gujarat	7.7	8.2	8.8	9.4	6.5	7.0	7.5	8.1
6.Haryana	8.5	9.4	10.4	11.5	7.7	8.5	9.4	10.4
7.Jharkhand	5.6	5.8	6.0	6.3	4.6	4.7	4.9	5.1
8.Karnataka	6.6	6.9	7.3	7.7	6.2	6.6	6.9	7.3
9.Kerala	7.0	7.6	8.2	8.9	6.9	7.4	8.0	8.7
10.Madhya Pradesh	5.4	5.9	6.4	6.9	5.0	5.4	5.9	6.4
11.Maharashtra	5.0	5.2	5.4	5.5	4.5	4.7	4.8	5.0
12.Orissa	5.9	6.3	6.7	7.2	5.3	5.7	6.1	6.5
13.Punjab	8.2	8.9	9.6	10.4	7.9	8.6	9.3	10.0
14.Rajasthan	5.8	6.1	6.5	6.8	5.3	5.6	5.9	6.3
15.Tamil Nadu	7.0	7.5	8.0	8.6	6.3	6.8	7.3	7.8
16.Uttar Pradesh	8.1	8.4	8.7	9.0	7.2	7.5	7.7	8.0
17.West Bengal	6.5	7.1	7.7	8.4	5.8	6.3	6.9	7.4
18.Assam	6.7	7.3	8.0	8.7	5.9	6.4	7.0	7.6
19.Himachal Pradesh	6.7	7.3	8.0	8.7	5.9	6.4	7.0	7.6
20.J and K	10.7	11.8	13.1	14.4	10.0	11.0	12.2	13.4
21.Uttarakhand	8.6	9.2	9.8	10.5	8.6	9.2	9.8	10.5
22.NCT Delhi	5.5	5.7	5.8	5.9	4.9	5.0	5.1	5.3
National Average	7.4	7.9	8.5	7.4	6.3	6.8	7.3	7.9

 ISSN (online): 2320-9836
ISSN (Print): 2320-9828

Table 8.Estimated Revenue for States Goods and Services Tax (in crore)

	With CST				Without CST			
States	2016-17	2017-18	2018-19	2019-20	2016-17	2017-18	2018-19	2019-20
1.Andhra Pradesh	57849	72965	92033	116083	53237	64427	77944	94313
2.Bihar	13023	17297	22974	30514	12891	17121	22740	30204
3.Chhattisgarh	10140	12125	14500	17340	7838	9373	11209	13404
4.Goa	2923	3587	4402	5403	2681	3290	4038	4955
5.Gujarat	56333	68859	84170	102885	48132	58834	71916	87907
6.Haryana	34426	43802	55732	70911	31247	39758	50586	64364
7.Jharkhand	8938	10298	11865	13671	7253	8357	9629	11094
8.Karnataka	40493	48471	58021	69454	38343	45898	54942	65767
9.Kerala	30191	37057	45485	55829	29500	36209	44443	54550
10.Madhya Pradesh	18564	22672	27690	33818	17072	20850	25465	31100
11.Maharashtra	64002	74614	86985	101408	57687	67251	78402	91401
12.Orissa	14547	17564	21206	25604	13206	15945	19252	23245
13.Punjab	20945	25362	30711	37188	20112	24354	29490	35710
14.Rajasthan	27043	32668	39461	47668	24716	29856	36065	43566
15.Tamil Nadu	55687	67851	82670	100727	50581	61629	75090	91491
16.Uttar Pradesh	43581	50533	58595	67942	38981	45199	52410	60770
17.West Bengal	30766	38016	46974	58044	27400	33857	41835	51693
18.Assam	8663	10510	12751	15470	7605	9227	11195	13582
19.Himachal Pradesh	6715	8415	10546	13216	6259	7843	9828	12317
20.Jammu and Kashmir	5767	6940	8352	10051	5767	6940	8352	10051
21.Uttarakhand	5744	6744	7919	9299	5123	6016	7064	8294
22.NCT Delhi	23226	26921	31204	36167	20336	23571	27321	31667

4. Results and Discussion

Table 4 and Table 5 are derived from Tables 2 & 3 by classifying the states based on the gains in VAT (%) given in Columns 4 & 5 in Tables 2 & 3 according to the AAGR (%) and Buoyancy (%) in the last five years (2010-11 to 2014-15) respectively. Fifteen (15) states viz. Assam, Jammu & Kashmir , Andhra Pradesh, Haryana, Karnataka, Orissa, Rajasthan, Himachal Pradesh, Chhattisgarh, Goa, Kerala, Tamil Nadu & West Bengal, Gujarat, Punjab had VAT gains of less than 20% have posted more than 20% growth in the last five years. Bihar and Madhya Pradesh have posted the highest growths of 32.82% & 42.80% during last five years had a VAT gains of 25.4% and 23.16% respectively. Assam and Jammu & Kashmir also posted more than 10% growth during last five years had VAT losses. Echoing similar results, table 5 too shows that 11 states have posted a buoyancy gain of more than 5% during last five years compared to the less than 5% buoyancy gains during the post VAT period. Table 6 shows that the stability of the VAT revenues improves in most of the states except Andhra Pradesh during the post VAT period and the same has improved during the last five years also except in a few states viz. Goa, Gujarat, Tamil Nadu, Punjab and Jammu & Kashmir.

The success of VATs in Indian states is the cumulative effect of growing state economies, strict enforcement, improvements in the voluntary compliance and the inflation persisted during the period. Now the state sales tax collection authorities have familiarised with the tax concepts and the nuances of tax collection. Therefore, it is the right time to switchover to Goods and Service Tax (GST) which is overdue as the gains achieved in the implementation of state VATs may be exploited. In this regard, an attempt is made to estimate the Revenue Neutral Rates (%) and Estimated Revenue for States Goods and Services Tax for the period from 2016-17 to 2019-20. From Table 6, it is clear that the Revenue Neutral Rate (%) of 8% is sufficient for generation of sufficient revenues.

5. Conclusion

The successful implementation of Value Added Tax (VAT) in 2005 by the States is hailed as the boldest innovative tax reform undertaken in the independent India. In the recent past, a few studies have been conducted to assess the impact of VAT on the finances of the State Governments in India. These studies have used State Sales Tax revenue as the major variable of study and found that there was not much improvement in the finances of the State Governments after the implementation of VAT. In this paper, revenues due to the VAT commodities alone were isolated and studied. It is found that most of the States have gained substantially due to implementation of VAT and during the last five years from 2010-11 to 2014-15 the growth in revenue due to VAT commodities has been phenomenal. This successful gain in performance of State VATs may be taken as a green signal for the transition to the Introduction of Goods and Services Tax (GST). In this regard, an attempt is made in this paper to estimate the expected revenues and the Revenue Neutral Rate (RNR) under GST and a RNR rate is found to be 8%, which is sufficient for revenue generation of the States.

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Declaration Note: This study has been done by me and has not been published in any journal or newsletter. This compilation is based on the knowledge gained when I worked in the Department of Commercial Taxes, Government of Tamil Nadu, for more than five years and especially during the introduction of VAT in Tamil Nadu in January 2007. Moreover, I have done a thesis on the "The Harmonisation of Indirect Taxes with Special Reference to Union Excise Duties, Sales Tax/VAT and Service Tax" during my PhD study.
The views expressed in this paper are purely personal and on academic interest only and in no way connected to the organization which I belong to.

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The Publication fee is defrayed by Indian Society for Education and Environment (www.iseeadyar.org)

Cite this article as:

B.Viswanathan. Belated VAT gains in Indian States: Right time to Switchover to Goods and Services Tax. *Indian Journal of Economics and Development*. Vol 4 (2), February 2016.