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RBI, RBI

2006

The Journal of Income and Wealth, Volume 28, No.1, January-June 2006

Analytics and Implications of Services Sector Growth in Indian Economy

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JEL classification: E23; E24; O14; E31.
Keywords: Services; Industry; Tax; Employment; Inflation.

Abstract

Given the magnitude of services growth and its inter-linkages with other sectors of the economy, it is important to understand the impact of services sector on other macro-economic variables. The present paper attempts to identify some of the critical issues in India's services-led growth and tests certain hypotheses that are currently in debate. These relate to: (a) whether the robust growth of the services sector has added a dimension of stability to India's GDP growth; (b) whether there has been a growing complementarity between services and industrial sectors of the economy; (c) whether like other commodity-producing sectors, the services sector also experienced 'jobless' growth; (d) whether the imposition of services tax has boosted the Indian Government's efforts at mobilising more resources; and (e) whether high growth of services sector in India had an inflationary impact on the economy. Our analysis found the first four hypotheses to hold true. In respect of the last hypothesis, in contrast to the expectations that high services sector growth has an inflationary impact on the economy, we found that the rising share of services sector in GDP has not contributed to inflation in the Indian economy.

I. INTRODUCTION

As is well known, globally due to growing tertiarisation of several economies, services sector has emerged as the largest and fastest-growing sector in the global economy in the last two decades or so. Starting from the pioneering work of Clark (1940), Kuznets (1957), and Chenrey (1960), evolution of sectoral shares in output, consumption and employment as economies grow have been studied for a long period. These studies attribute economic development as a three-stage process, wherein primary, secondary and services sector dominate the economic activity in that sequence. Analysis in terms of such stages of development, however, has been challenged in the recent literature, with the benefit of a richer a data than was available to Kuznets and Chenrey. For instance, Kongsamut, Rebelo and Xie (2001) have analysed a sample of 123 countries for 1970-89 and found that rising per capita GDP in these economies is

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associated with an increase in services and as the economy matures, the sectoral share given up by the agricultural sector shifts more to the services sector and less to industry.

In line with the above dominant trend of services-led growth, services sector in India has also grown rapidly in the last one and a half decades. Its growth has, in fact, been higher than the growth in other commodity-producing sectors such as agriculture and manufacturing sectors. As per the latest data, in the year 2005-06, it contributed 60.9[1] percent of India's GDP. Given the magnitude of services growth and its inter-linkages with other sectors of the economy, it is important to understand the impact of services sector on other macro-economic variables. Towards this objective, the present paper attempts to make an assessment of performance of services at the aggregated as well as the disaggregated level in terms of their shares in GDP, employment, expenditure, tax, *etc*. Given that the literature in the field of services sector analysis is sprawling, but still at a stage where some of the debates are still unsettled, the present paper attempts to identify some of the critical issues in India's services-led growth. The following hypotheses have been tested in the paper:

(i) Whether the robust growth of the services sector has added a dimension of stability to India's GDP growth;
(ii) Whether there has been a growing complementarity between services and industrial sectors of the economy;
(iii) Whether the services sector also experienced 'jobless' growth like other commodity-producing sectors;
(iv) Whether the imposition of services tax has boosted the Government's effort at mobilising more resources;
(v) Whether high growth of services sector had any inflationary impact on the economy.

Accordingly, the rest of the paper is organised as follows: Section II examines the issue of the rapid growth in services sector and its role in adding a dimension of stability to India's GDP growth. Section III discusses the issue of growing complementarity between services and industrial sectors of the economy. The issue as to whether the services sector also experienced 'jobless' growth like other commodity-producing sectors is examined in Section IV. Section V evaluates whether the imposition of services tax has boosted the Government's effort at mobilising more resources. The inflationary impact of the services sector in Indian economy has been discussed in Section VI. Section VII sums up the discussion.

II. INDIA'S GROWTH STORY AND THE ROLE OF SERVICES SECTOR IN FOSTERING STABILITY TO GDP GROWTH

The emergence of services as the most dynamic sector in the Indian economy has in many ways been a 'revolution' (Gordon and Gupta, 2003). Growth of services picked

[1] Services sector in the present analysis includes 'construction' besides other sectors such as 'trade, hotel, transport and communication', 'financing, insurance, real estate and business services', and 'community, social and personal services'.

up in the eighties, and accelerated in the nineties, when it averaged 7.5 percent per annum (Table 1). It has been the major growth driver of the economy since the nineties. Growth of real GDP in excess of 8 per cent has been achieved in only five years of the recorded history in India and two of these are in the last three years, thanks to the strong performance of the services sector.

Table 1: Sectoral Growth Performance of the Indian Economy

(Per cent)

	Agriculture	**Industry**	**Services**	**GDP**
1980-81 to 1989-90	4.4	7.4	6.4	5.8
1990-91 to 1995-96	2.8	6.7	6.6	5.4
1996-97-2000-01	2.7	5.0	8.0	5.9
2001-02 to 2005-06	2.5	6.2	8.6	6.7
2003-04 to 2005-06	4.3	7.3	9.6	8.0

Source: Central Statistical Organisation.

In the recent years, there has been a phenomenal growth in respect of distributive, communication and financial services (Table 2). Communication sector has been one of the fastest growing sectors abetted by liberalisation, which has increased the competition and brought down the prices remarkably, thereby making it affordable to common mass. Financial services have consistently recorded double-digit growth in the last four years benefiting from substantial expansion in economic activity. Transportation sector also witnessed substantial expansion and benefited from the burgeoning activity in the commodity-producing sectors as well as the growing external orientation of the Indian economy.

Table 2: Key Indicators of Performance of Distributive, Communication and Financial Services (Base 1999-2000=100)

(Per cent)

	2000-01	**2001-02**	**2002-03**	**2003-04**	**2004-05**
1. Gross trading income	3.9	4.2	4.3	9.0	8.6
2. Railways					
2.1 Passenger net Kms.	6.1	7.4	4.9	4.0	6.1
2.2 Freight tonne Kms.	3.4	5.6	5.9	6.9	7.8
3. Communication - Telephone Connections	20.5	23.7	21.7	40.4	28.7
4. Cargo handled at major ports	3.3	2.4	9.0	9.9	11.3
5.Aggregate deposits and credits at the end of year in real terms	9.9	10.5	14.2	10.0	12.3

Source: National Accounts Statistics, 2006

It has been argued that the growth process in India is not only characterised by more stability at a higher level of growth, but also it is more structural than cyclical, and that the current growth momentum reflecting, *inter alia*, the buoyancy unleashed by structural changes in the economy, pursuance of economic reforms and credible policy (RBI, 2003; Rath and Mandal, 2004). Against this setting, we now discuss the first hypothesis as to how growth in the services sector has added a dimension of stability to India's growth process. We have found three supporting facts that highlight the role of the services in fostering stability to India's growth process. These relate to: a decline in volatility of output, muted cyclicity in GDP, and consumption leading the growth process from the demand side, which are discussed in detail in the following paragraphs.

Fact 1: Decline in Volatility of Output

So far as the fluctuation in GDP growth is concerned, there has been a gradual reduction in volatility in recent years. In particular, if we look at the last three years' growth rates, the reduction in volatility has been significant. The volatility, which was 5.8 during 1980-81 to 1989-90, was reduced to 2.2 during 1990-91 to 1995-96 and further down to 1.4 during 1996-97 to 2000-01 (Table 3). The volatility of the growth rate has further reduced to 0.5 during 2003-04 to 2005-06. The reduction in volatility of GDP growth rate has been contributed significantly by the services sector as it recorded the least volatile growth as compared to other commodity-producing sectors *viz.* agriculture and industrial sectors.

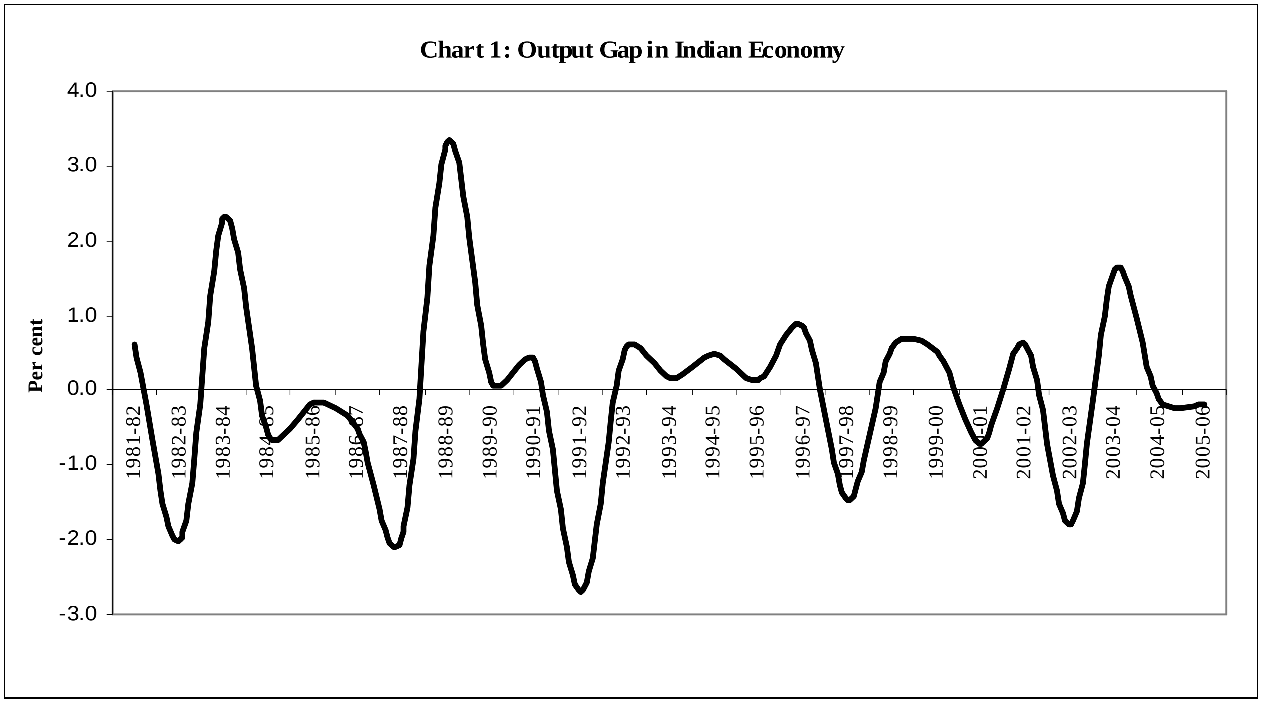
Table 3: Volatility (Standard Deviation) of Growth Rates

	Agriculture	Industry	Services	GDP
1980-81 to 1989-90	6.1	2.6	1.2	5.8
1990-91 to 1999-2000	4.0	4.2	2.0	5.8
1990-91 to 1995-96	3.2	5.1	1.9	2.2
1996-97 to 2000-01	5.0	2.2	1.9	1.4
2001-02 to 2005-06	6.3	2.2	1.5	1.9
2003-04 to 2005-06	5.0	0.7	0.9	0.5

Source: Authors' calculation on data from Central Statistical Organisation.

Fact 2: Muted Cyclicity in GDP

Measured through Hodrick-Prescott filter, the size of output gaps have tended to become more moderate especially in the nineties. The average depth and height of troughs and peaks, respectively have been lower than in the eighties (Chart 1). Looking at the supply side, services sector has been the growth driver in the recent growth process, with more than sixty per cent share in Gross Domestic Product. It being less cyclical in relation to other sectors, the cyclicity in GDP growth is actually on the decline, with muted cycles operating now. Moreover, services are less fuel-intensive compared to the industrial sector. This emerging growth dynamics of the Indian economy is expected to provide necessary a cushion to any likely international oil price shock to the economy.



Fact 3: Consumption demand as the major growth driver and the growing preponderance of services in consumption

Looking at India's growth dynamics, it is found that the growth process remains significantly domestic demand driven, engendered by consumption and investment, although the share of exports is witnessing a gradual rise over the years. Consumption accounts for more than 60 per cent of India’s GDP (Table 4). Since consumption is the least volatile component of demand, the volatility of this growth process is greatly reduced by the presence of its dominance.

Table 4: Share of Different Components of Demand to GDP

(Per cent)

Demand Factors	2000-01	2001-02	2002-03	2003-04	2004-05
1. Consumption	63.8	64.3	62.8	62.2	60.6
2. Investment	24.3	24.3	25.3	25.3	28.6
3. Government Expenditure	12.5	12.3	11.8	11.2	11.3
4. Exports	13.2	12.7	14.5	14.8	19.0
5. Imports	14.1	13.6	15.5	16.1	21.0

Source: Calculated from NAS, 2006.

Further, a significant aspect in respect of consumption demand has been that a large chunk of the consumption demand is now being driven by the services sector. It is found that the share of services in total private final consumption expenditure (PFCE) has more than trebled from 10.6 per cent in 1950-51 to 35.0 per cent in 2002-03 (Chart 2). Further, consumption expenditure on the services seems to have grown at a much faster rate than the overall consumption expenditure in the economy (Chart 3). This, in turn, suggests that services sector has added a dimension of stability to India's growth process through increased consumption demand.

Chart 2: Share of Services in Total PFCE

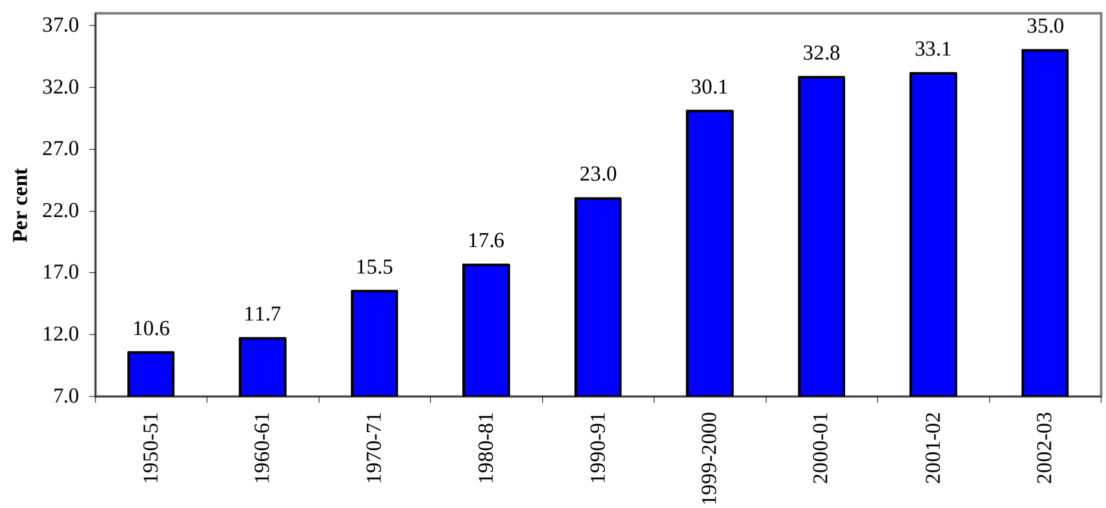
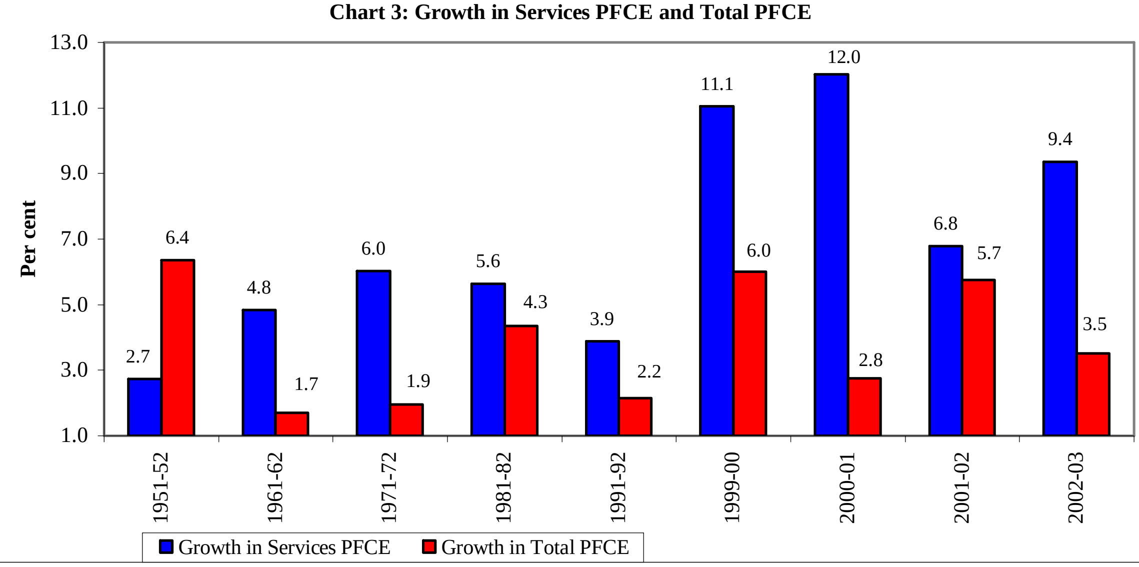


Chart 3: Growth in Services PFCE and Total PFCE



Further, in order to examine how an increase in PFCE was affecting the services sector GDP, a regression analysis using ordinary least square (OLS) was carried out for the period 1980-81 to 2004-05. Our estimates suggest that a ten per cent rise in PFCE results in 11.9 per cent rise in services GDP, thus, suggesting that the former has a multiplier effect on the latter.

$$\underset{}{LnSERGDP} = -4.60 + \underset{(23.11)}{1.19\ LnPFCE} + \underset{(2.86)}{0.51\ AR(1)}$$

Adjusted $R^2 = 0.99$, F-statistics = 1225.1, DW = 2.07
where, SERGDP – services GDP and PFCE – Private final consumption expenditure.
Figures in parentheses are t-statistics.

III. GROWING COMPLEMENTARITY BETWEEN INDUSTRIAL AND SERVICES SECTOR GROWTH

The literature on the issue of complementarity between industrial and services sectors is scanty and has been empirically examined in a few studies (Hansda, 2003; Banga and Goldar, 2004) using alternative techniques. Hansda (2003) conducted a detailed input-output analysis (using 1993-94 data) and found that linkages from services to industry were strong. The input-output coefficients in this framework, however, reflect the use of services sector inputs in industry - capturing primarily the role of 'splinteering'[2]. Banga and Goldar (2004) have estimated a capital, labour, energy, material and services (KLEMS) production function for Indian manufacturing sector, for the period 1980-81 to 1999-2000 and separately for the eighties and nineties, based on the growth accounting framework, with the principal objective of assessing the contribution of services to industrial growth. They found that the contribution of services to output growth was a meager 0.06 per cent per annum during the eighties, which increased substantially to 2.07 per cent per annum during the nineties.

For the purpose of our analysis, we dis-aggregated the services sector value added into producer, consumer and government services[3] since the eighties. It is found that producer services with a lion share of 70.4 per cent in 2004-05 dominates over various other services (Table 5). This segment has been the main driving force behind the robust services sector growth in the economy. The dominance of producer services - largely the 'trade, transport and financial services' - reflects the growing complementarity between industrial and services sector in the economy.

[2] The term 'splinteering' refers to growing specialisation in production methods as the economy matures and adopts a more-service-input intensive method.

[3] Producer services comprise of 'trade, transport and communication', and 'financing, insurance, real estate and business services', while 'hotels and restaurants' and 'other services' form consumer services. Government services comprise of 'public administration and defence'.

Table 5. Trends in Performance of Various Services – Growth and Share (Per cent)						
Services	1981-82 to 1990-91	1992-93 to 2004-05	2001-02	2002-03	2003-04	2004-05
Producer services	7.7 (67.5)	8.4 (70.0)	8.5 (68.7)	8.9 (69.6)	9.3 (70.4)	9.9 (70.4)
Consumer services	6.2 (18.1)	8.6 (17.6)	5.5 (18.8)	5.7 (18.6)	6.2 (18.2)	10.7 (18.4)
Government services	6.5 (14.4)	5.9 (12.4)	2.4 (12.5)	1.1 (11.8)	4.6 (11.4)	8.2 (11.2)

Note: Figures in parentheses indicate share in gross value added of services GDP, excluding construction. In the absence of detailed dis-aggregated data value added data for 2005-06, the numbers of 2005-06 cannot be worked out.
Source: RBI Annual Report 2005-06.

For a deeper insight on the growing complementarity between the services and industrial sector of the Indian economy, we estimated a regression using the OLS for the period 1985-86 to 2004-05. The results indicate that a ten per cent rise in industrial output results in 6.8 per cent rise in services output. This validates our hypothesis of the growing synergy between the commodity producing sectors and the services sector.

$$\underset{}{LnSER} = 2.54 + \underset{(4.27)}{0.68\,LnINDY} + \underset{(7.09)}{0.23\,LnSEREXP} - \underset{(-1.88)}{0.22\,LPR}$$

Adjusted $R^2 = 0.99$; F-statistics = 1322.9; DW= 1.27

where, Ln = Natural Logarithms; SER= Services Sector GDP; INDY = Industrial Output; SEREXP=Services Exports; PR = Price of services.

IV. EMPLOYMENT IN THE SERVICES SECTOR – NOT SO 'JOBLESS'

The concern that the acceleration in GDP growth in India in the post-reform period has not been accompanied by a commensurate expansion in employment has received a focused attention both from policy makers and academicians (GOI, 2001, Bhattacharya and Shaktivel, 2005, *etc*). Bhattacharya and Shaktivel (2004)[4] found that in the nineties there has been a de-linking between growth and employment ('jobless' growth) in the Indian economy. Their analysis establishes that in the post-reform years, the employment elasticity for all the sectors declined, with the elasticity in the primary

[4] Bhattacharya, B.B. and S. Shakthivel (2004), "Economic Reforms and Jobless Growth in India in the 1990s", *IEG Working Paper, E/245*.

sector virtually becoming nil, while the tertiary sector registered the highest employment elasticity, followed by the secondary sector.

On the contrary, while acknowledging the fact there has been a slower growth in generation of employment opportunities and increased unemployment in the economy in the post-reform years, the Planning Commission (2001) states that much of the slowdown in total employment growth was due to two important sectors *viz.* agriculture (including, forestry and fishing) and 'community social and personal services', as these sectors, accounting for almost 70 per cent of total employment, experienced no growth in employment in the period 1993-94 to 1999-2000 (GOI, 2001). Further, it adds that labour force participation rates in 1999-2000 have declined sharply as compared with the position in 1993-94. This is reflected in sharp deceleration in the growth of labour force from 2.06 per cent in the period 1983 to 1993-94 to only 1.02 per cent in the period 1993-94 to 1999-2000 (Table 6). It observes, "The observed deceleration in employment, therefore, can not be dissociated from the sharp decline in the growth of the labour force and indeed is derived from it".

Table 6: Annual Compounded Growth Rate of Employment for Usual Status (ps+ss) Workers by Residence and Production Sectors: 1983/1999-2000

(Per cent)

	Rural Workers		Urban Workers		All Workers	
Sector	1983 to 1993-94	1993-94 to 1999-2000	1983 to 1993-94	1993-94 to 1999-2000	1983 to 1993-94	1993-94 to 1999-2000
Agriculture	1.38	0.18	1.54	-3.40	1.39	0.05
Mining & Quarrying	3.84	-2.28	4.15	-3.71	3.95	-2.78
Manufacturing	2.14	1.78	2.21	1.83	2.17	1.80
Utilities*	4.70	-5.65	4.46	-4.19	4.56	-4.77
Construction	5.18	6.43	6.20	6.26	5.60	6.36
Trade	3.72	1.81	3.94	5.54	3.84	3.99
Transport, Storage and Communication	4.58	7.29	2.90	3.91	3.53	5.31
Finance, Insurance & Real Estate	5.99	2.51	5.63	7.05	5.71	6.07
Community Social and Personal Services	3.13	0.32	4.16	0.13	3.69	0.21
All Sectors	1.75	0.66	3.27	2.27	2.06	1.02

* : Utilities includes 'electricity, gas and water supply'.
Source: Sarvekshana, 89th Issue, Volume XXVI No. 2 , July 2006

It is unrealistic to look at trends in employment in the organised sector alone as it comprises less than one-tenth of the total work-force in the country and, thus, portrays an incomplete picture of the employment problems in the country[5]. Nevertheless, as the data

[5] Organised sector employment in 1999 was only was about 7 per cent of the total employment in the economy (GOI, 2001).

in respect of unorganized sector employment are scanty, organised sector data gives indicative trends that could be useful. It is observed that there has been a decline in job creation in organised sector (Table 7). The employment growth on an average decelerated from 1.7 per cent during the eighties to 0.8 per cent during the nineties and further to a negative at 1.0 per cent during 2000-03. Nevertheless, it is found that as compared to agricultural and industrial sectors, services sector has not been 'that' jobless in the organised sector.

Table 7. Employment Trends in Organised Sector of the Indian Economy

(Per cent)

	Share			**Growth**		
	1980s	1990s	2000-03	1980s	1990s	2000-03
Agriculture and Allied activities	5.5	5.3	5.0	1.3	-0.2	0.4
Mining & quarrying	4.2	4.0	3.5	1.7	-0.4	-2.6
Manufacturing	25.7	23.9	23.4	0.7	0.8	-2.9
Electricity, Gas & Water Supply	3.2	3.5	3.5	3.1	1.0	-1.0
Construction	5.0	4.4	4.1	1.0	-0.3	-4.2
Wholesale & Retail trade	1.7	1.7	1.8	1.4	1.1	2.9
Transport, storage & communications	12.0	11.4	11.3	1.3	0.4	-1.1
Finance, Insurance, Real estate, *etc.*	4.6	5.6	5.9	4.8	2.0	2.3
Community, Social & personal services	38.1	40.1	41.4	2.2	1.2	-0.3
Total	100.0	100.0	100.0	1.7	0.8	-1.0

Source: Economic Survey, Various Issues

Now, moving on to total employment (both organised and unorganised sector) trends as captured in the NSSO surveys are indicative of the fact that services sector has recorded a relatively faster growth in employment (Table 8). Further, amongst the services sector, there has been a structural shift in the pattern of employment generation since the eighties. The growth in employment in 'community, social and personal services' (which happened to be major segment of tertiary sector employment) has declined from 2.9 per cent during 1983-94 to 0.55 per cent during 1994-2000. Similarly, the growth in 'financial services' employment has also declined marginally. But, there has been a higher growth in employment in respect of other services *viz.* 'whole sale, retail trade' 'construction', and 'transport, storage and communication'. The Planning Commission’s (2001) employment elasticity estimates also suggest that as compared to agriculture and industrial sectors, services sector components have higher employment elasticity and, more so, it is improving for components like ‘transport, storage and communication’. The elasticities suggest that achieving higher growth - overall as well as in the services sector - would help in extending employment opportunities to a larger mass of population.

Table 8. Trends in Employment Elasticity and Growth in Employment				
	Employment Elasticity		Annual Growth in Employment (UPSS) (Per cent)	
Sector	1983-84 to 1993-94	1993-94 to 1999-2000	1983-94	1994-2000
Agriculture	0.50	0.00	1.51	-0.34
Mining and quarrying	0.69	0.00	4.16	-2.85
Manufacturing	0.33	0.26	2.14	2.05
Electricity, gas and Water supply	0.33	0.26	4.50	-0.88
Construction	1.00	1.00	5.32	7.09
Trade	0.63	0.55	3.57	5.04
Transport, Storage and Communication	0.49	0.69	3.24	6.04
Financial services	0.92	0.73	7.18	6.20
Community Social and Personal Services	0.50	0.07	2.90	0.55
Total	0.41	0.15	2.04	0.98
Source: Government of India, 2001.				

It is envisaged that the services sector would be the major source for employment generation in future providing about 70 per cent of the new job opportunities in the economy (GOI, 2001). The share of agriculture in total employment would fall in the coming years, while the share of services would increase. The dominant source of new employment possibilities in the services sector would be construction, trade, transport, storage, financial services, communication and personal services. Employment in manufacturing would also expand, but its contribution to the total increase in employment would only be around 17 per cent. In this backdrop, the Government has recognised that adequate attention has to be given and address sectoral policy constraints, which hold back employment in services.

Furthermore, structure of employment creation also holds a key to addressing this problem of growing unemployment in the country. It is observed that the growing synergy between the services and industrial sectors in the recent years could have increased the demand for skilled labour rather than unskilled workers in India. In this backdrop, with near stagnation of the agricultural sector, growth of low-value added manufacturing becomes critical in expanding the employment opportunities for unskilled and semi-skilled labour (Jha, 2007) [6]. This is corroborated by the experiences of China and the tiger economies of South-East Asia, wherein economic growth was accompanied by a rapid expansion of employment in low-value added in manufacturing. To sum up the discussion, given the employment trends as emerging from diverse sources and the employment potentials at the sectoral levels, it may be argued that a broad-based high

[6] Jha, Raghbendra (2007), Comments on 'Growth and Inclusion', Livemint.com.

growth of GDP would lead to higher employment in the economy, with services sector playing a lead role.

V. POTENTIAL OF SERVICES TAX AS AN IMPORTANT SOURCE OF REVENUE IN INDIA: SOME POLICY ISSUES

The provisions relating to service tax were brought into force with effect from 1st July 1994 and it extends to whole of India except the state of Jammu & Kashmir. The canvass of services tax has been expanded in subsequent budgets since 1994-95. The number of services being taxed in India has increased progressively from 3 in 1994-95 to about 92 in 2006-07 (Table 9). To begin with, the services tax was imposed at the rate of 5 per cent[7], which has now been increased to 12 per cent. There has also been a substantial growth in assesses base, which increased from 3,493 in 1994-95 to 7,74,988 in 2004-05. The collection of the services tax revenue has witnessed a substantial expansion since 1994-95, rising from Rs. 407 crore in 1994-95 to Rs. 23,000 crore in 2005-06. The collection of services tax revenue for 2006-07 is estimated to be Rs. 34500 crore.

Table 9: Services Tax - Revenue and Number of Tax Assesses

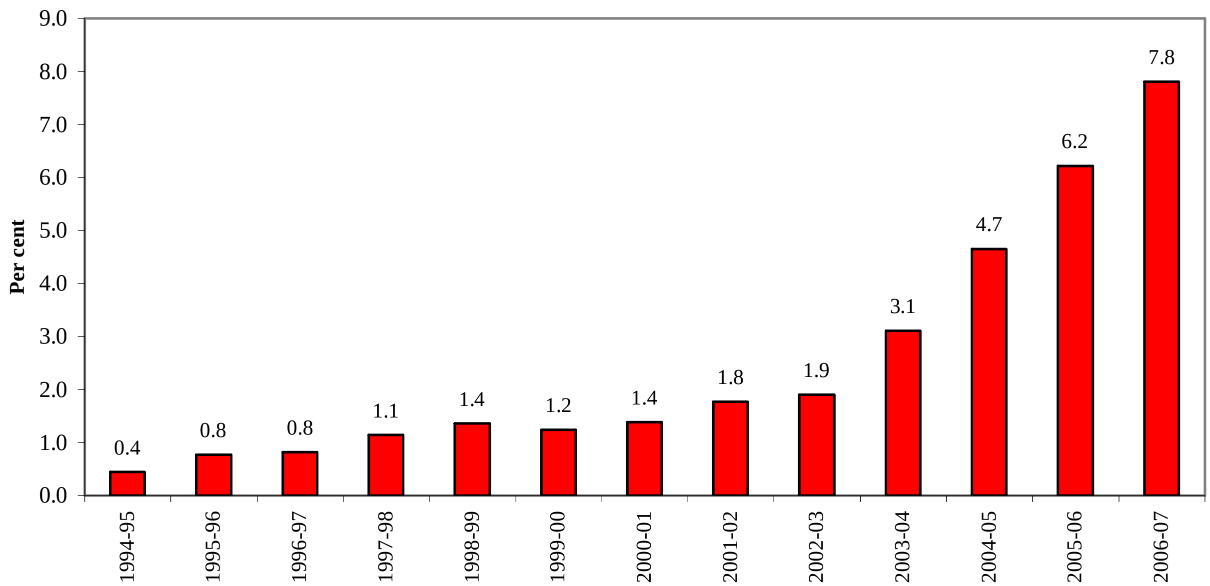
Year	No. of Services under tax purview	Rate of Service Tax (Per cent)	No. of Assesses	Services tax revenue (Rs Crore)	Gross Tax Revenue (Rs Crore)
1994-95	3	5	3943	407	92294
1995-96	3	5	4866	862	111224
1996-97	6	5	13982	1059	128762
1997-98	18	5	45991	1586	139221
1998-99	30	5	107479	1957	143797
1999-00	27	5	115495	2128	171752
2000-01	26	5	122326	2613	188603
2001-02	41	5	187577	3302	187060
2002-03	51	5	232048	4122	216266
2003-04	58	8	403856	7891	254348
2004-05	71	10	774988	14200	304958
2005-06	80	10	N.A.	23000	370141
2006-07 AE	92	12	N.A.	34500	442153

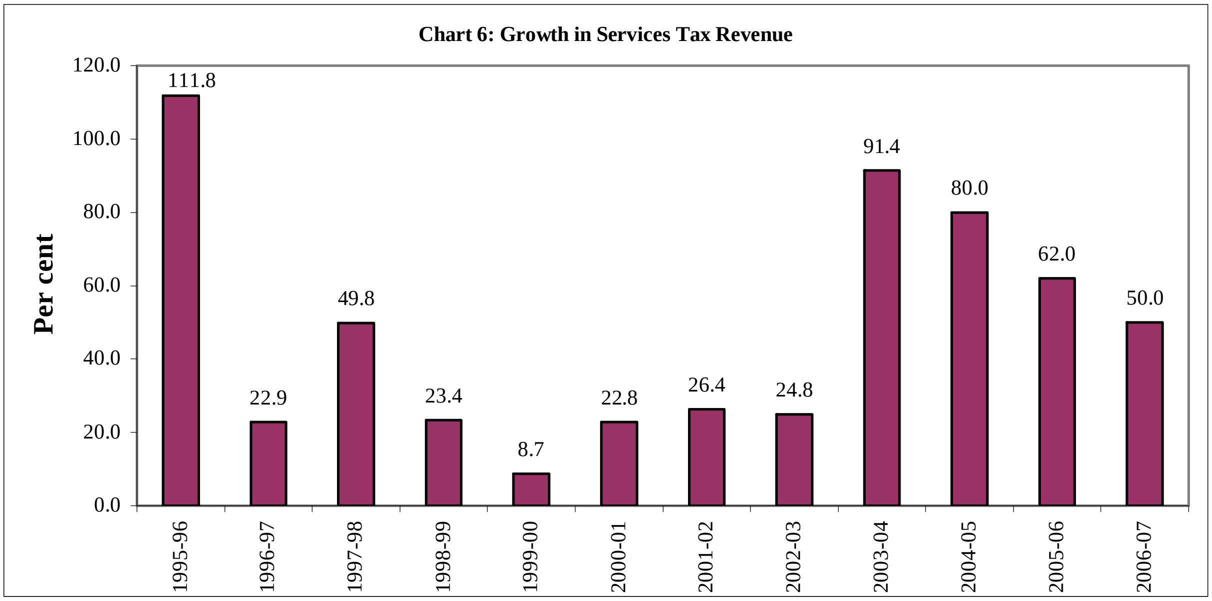
AE: Advance Estimates
Source: Ministry of Finance, Government of India.

[7] The rate of service tax was increased from 5 per cent to 8 per cent w.e.f. 14th of May 2003. Further, from 10th of September, 2004, it was enhanced to 10 per cent. The Union budget 2006-07 has increased the service tax rate further to 12 per cent.

Services tax revenue as a percentage of total tax revenue has also increased substantially from 0.4 per cent in 1994-95 to 6.2 per cent in 2005-06 and is expected to reach 7.8 per cent in 2006-07 (Chart 5). The growth in services tax collection has equally been impressive. The highest growth in services tax collections has been 112 per cent in 1995-96 owing to base-effect (Chart 6). Growth in services tax revenue has been facilitated both by increase in rate of taxation as well as increased number of services being taxed. In more recent years, after recording a higher growth of 91.4 per cent in 2003-04, the growth in services tax collection has come down to 62 per cent in 2005-06, which is, by and large, impressive, owing to base effect.

Chart 5: Services Tax Revenue as a Per cent of Total Tax Revenue





Further, services tax is emerging as an important component of indirect taxes. The share of services tax in indirect taxes has increased more than twenty-folds from a mere 0.6 per cent in 1994-95 to 13 per cent in 2005-06 (Table 10). On the contrary, following the rationalisation of duty structure, the share of indirect taxes has decreased over the years. Thus, it appears that falling share of custom duty has been amassed by the services tax.

Table 10: Components of Indirect Taxes - Share (Per cent)

Year	Service Tax	Custom Duty	Excise Duty
1994-95	0.6	41.1	57.4
1995-96	1.1	46.6	52.3
1996-97	1.2	48.2	50.6
1997-98	1.8	44.8	53.4
1998-99	2.0	42.4	55.5
1999-00	1.9	43.1	55.0
2000-01	2.2	40.1	57.7
2001-02	2.8	34.7	62.5
2002-03	3.1	34.2	62.7
2003-04	5.3	32.9	64.5
2004-05	9.6	33.0	61.6
2005-06	13.0	30.5	61.5

Source: Economic Survey, Various Issues

At present about 60 per cent of the GDP is contributed by the services sector alone. The growth in absolute quantum of GDP and higher proportion of services sector therein holds promise for a larger revenue generation. With the high growth in services at

10 per cent and above and its increased share in GDP, the services tax revenue is further expected to rise substantially. To know the responsiveness of total tax revenues to services tax collection, we carried out a regression analysis using OLS for the period 1994-95 to 2006-07.

$$LnTAX = C + 0.35\ LnSERTAX$$
$$(99.4) \qquad (31.2)$$

$R^2 = 0.99$; F-Statistic= 973.05; DW=2.03.

where, Ln = Natural Logarithms; TAX= Total Tax Revenue and SERTAX=Services tax revenue.

The regression analysis suggests that a ten per cent rise in services tax revenue results in 3.5 per cent rise in total tax revenue. The estimate suggests that the services sector bears enormous potential as a significant source of tax revenue for the Government. Continued growth in GDP accompanied by higher growth in service sector promises newer and wider avenues of taxation to the Government. Service tax is envisaged as the tax of the future. As seen earlier, since the consumption of various services is growing at an increasing rate, expanding the coverage of services tax allows more adequate revenue growth to support public services.

Further, in the wake of declining tax-GDP ratio and rationalisation of customs and excise duties, the services tax offers hope for boosting the tax efforts of the Government. This would require a widening of tax canvass and bringing various other services under the tax net. However, bringing the uncovered services under the tax net is itself a challenging job because of various vested interests and political lobbying. The administration of services tax and evolution of the culture of voluntary tax compliance are some the challenges facing the Government. To boost the collection of services, the following things merit attention. First, there is a need for greater clarity, streamlined procedures, greater taxpayer assistance for improving the administrative machinery. Second, efforts should be made at increased voluntary tax compliance on the part of taxpayers through various advertisement campaigns and awareness drive. Thirdly, the tax net of the services tax should be widened. The Government should also make provisions for levying service tax on doctors, advocates, corporate schools and hospitals, *etc*.

VI. SERVICES SECTOR AND INFLATION IN THE INDIAN ECONOMY

Despite the preponderance of services sector in the economy, little is known about its contribution to inflation as the current indicator of inflation, wholesale price index (WPI), does not capture the services sector adequately. This has obviated the need for broadening the coverage of the WPI and construct 'services' price index', which have already been initiated by the Government of India.

It is argued that to the extent to which the services sector is not commodity producing in nature is, by concept, inflationary and has attracted research attention in the literature (Bhattacharya and Mitra, 1990; IMF, 2006). Some of the possible channels of the inflationary impact of services sector expansion in an economy as argued are as follows:

- ✓ A high growth in services without a corresponding growth in commodity-producing sector leads to a divergence in growth in incomes in the two sectors, which is reflected in demand and supply gap of consumer goods in the economy and thereby has an inflationary impact on the economy (Bhattacharya and Mitra, 1990).
- ✓ A faster growth in services leads to a divergence between the inflation rates in traded and non-traded goods sectors (IMF, 2006). In the process of economic development, faster technological progress and productivity growth in the tradable sector increases the relative price of non-tradables (Balassa-Samuelson effect). This leads to movement of workers from the latter sector to the former and, therefore, the wages in the non-tradable sector also rises. The IMF study (2006) finds that trade liberalisation and the consequent reduction in tariff rates in India had led to the lowering of prices in the tradable sector, particularly the manufacturing sector.
- ✓ Since public administration and defence (PAD) expenditure directly enters as 'wages and salaries' in the national product, a higher services growth could have had an inflationary impact on the economy.

On the contrary, an examination of the NAS and price data indicates that the contemporary growth process is characterised by the co-existence of high services growth with low and stable inflation (Table 11), thanks to the credible monetary policy, which has kept the inflationary expectations at bay. An empirical exercise was undertaken to examine this phenomenon.

Table 11: Trends in Services, GDP and WPI – Growth and Share
(Per cent)

	GDP growth	Services growth	Share of Services in GDP	WPI growth
1971-72 to 1980-81	3.16	4.22	40.69	..
1981-82 to 1990-91	5.64	6.44	44.38	..
1991-92 to 1995-96	5.38	6.67	47.97	7.99
1996-97 to 2000-01	5.92	8.03	51.68	5.08
2001-02 to 2004-05	6.30	7.95	56.28	4.74

Source: Handbook of Statistics on the Indian Economy, 2005-06

In the regression analysis (OLS) for the period 1990-91 to 2004-05, wholesale price index (log transformed, LWPI) formed the dependent variable with the explanatory variables being aggregated value added of agricultural and industrial sectors (log transformed, LAGI), share of services sector in GDP (SHSER), money supply (log transformed, LM3), and dummy for monetary policy (DUMMP). The dummy (DUMMP) was introduced in order to capture the effectiveness of monetary policy in containing inflation in the economy. DUMMP assumes a value equal to 1, when the inflation rate remains below or equal to 5.5 per cent[8], otherwise it assumes a value equal to 0.

$$LWPI_t = -3.54 + 0.34\,LnAGI_{t-1} - 0.01\,SHSER_t + 0.35\,LnM3_t - 0.02\,DUMMP_t + 0.56\,AR(1)$$

(1.67) (1.83) (1.96) (7.48) (2.09) (3.82)

Adj $R^2 = 0.99$; F-Statistics= 1026.6; DW=1.94.

The result clearly suggests that services sector share in GDP is not positively associated with inflation in the Indian case. What needs to be emphasised is that the rise in services sector share in GDP along with effective monetary policy have, in fact, had a moderating impact on inflation as indicated through the sign and the level of significance of their respective coefficients. Although the coefficient of commodity-producing sector (aggregated value added of agricultural and industrial sectors) has a positive sign, contrary to expectations, its significance is beyond the acceptable level.

Some of the factors that could explain the co-existence of high services growth with low inflation could be the following. First, it is found that there is a secular decline in the share of PAD in the services GDP since the eighties. Further, during 2000-01 to 2004-05, the growth in services sector with PAD has far exceeded the growth in PAD (Table 12). Thus, in the recent years, inflationary impact of the services through growth in PAD appears to have been limited (Hansda, 2002). Experience shows that the Pay Commissions' impact on Government services has been rather limited, with the impact of the award tending to peter out in the next two-three years subsequent to the reward.

Table 12: Trends in PAD Expenditure and GDP – Share and Growth

(Per cent)

	Share		**Growth**			
Period	**PAD in Services sector**	**PAD in GDP**	**PAD**	**GDP**	**Services Sector**	**Services without PAD**
1970-71 to 1979-80	11.7	4.7	5.6	2.9	4.1	3.9
1980-81 to 1989-90	12.7	5.6	7.0	5.8	6.4	6.3
1990-91 to 1994-95	11.9	5.6	2.4	5.0	5.9	6.4
1995-96 to 1999-2000	10.9	5.5	9.8	6.5	8.9	8.8
2000-01 to 2004-05*	10.7	6.2	3.6	6.0	7.7	8.2

Note: * Calculations on New Base 1999-2000.
Source: National Accounts Statistics, Government of India.

[8] Although the RBI's indicative price range keeps changing from year-to-year, we have for the purpose of empirical analysis taken the current upper band of 5.5 per cent.

Second, as opposed to current account, which had surplus only in three years (2001-02 to 2003-04), the services invisibles have been running surplus since the beginning of the nineties. Rising flow of services invisibles has significantly been responsible for lower current account deficit (CAD) in the Indian economy since the early nineties. As can be seen from column 7 of Table 13, in the absence of net services exports, the level of current account deficit in India could have been much higher. Hence, to the extent that services invisibles have enabled a comfortable level of current account deficit that facilitated a more orderly movement of the exchange rate, in turn, moderating the inflationary impact on the economy. Finally, as seen in the preceding sections, there has been a growing complementarity between the industrial and services sectors, the two growth drivers of the Indian growth process in recent years. To the extent to which the services growth has led to industrial expansion, and thereby resulted in commodities production, the inflationary impact would get constrained accordingly.

Table 13: Trends in Services Exports and Current Account Deficit in India

(Rs Crore)

	Services Net Exports	Actual Current Account Deficit	CAD without Services Exports	Services Exports a Per cent of CAD without Services Exports (Per cent)	Actual CAD as a Per cent of GDP (Per cent)	CAD without Services Exports as a Per cent of GDP (Per cent)	Difference in CAD as a per cent of GDP (Per cent)
	(1)	(2)	(3)= (2)-(1)	(4)=(1)/(3)	(5)	(6)	(7)=(6)-(5)
1990-91	1761	-17366	-19127	-9.2	**-3.1**	**-3.4**	-0.3
1991-92	3133	-2235	-5368	-58.4	**-0.3**	**-0.8**	-0.5
1992-93	2698	-12764	-15462	-17.5	**-1.7**	**-2.1**	-0.4
1993-94	1677	-3634	-5311	-31.6	**-0.4**	**-0.6**	-0.2
1994-95	1883	-10583	-12466	-15.1	**-1.0**	**-1.2**	-0.2
1995-96	-702	-19646	-18944	3.7	**-1.7**	**-1.6**	0.1
1996-97	2621	-16282	-18903	-13.9	**-1.2**	**-1.4**	-0.2
1997-98	4943	-20883	-25826	63.1	**-1.4**	**-1.7**	-0.3
1998-99	9114	-16789	-25903	-35.2	**-1.0**	**-1.5**	-0.5
1999-00	17670	-20331	-38001	-46.5	**-1.0**	**-2.0**	-1.0
2000-01	7905	-11598	-19503	-40.5	**-0.6**	**-0.9**	-0.3
2001-02	15889	16426	537	2958.9	**0.7**	**0.0**	-0.7
2002-03	17644	30660	13016	135.6	**1.3**	**0.5**	-0.8
2003-04	46381	63983	17602	263.5	**2.3**	**0.6**	-1.7
2004-05	63519	-24786	-88305	-71.9	**-0.8**	**-2.8**	-2.0
2005-06	98437	-46856	-145293	-67.8	**-1.3**	**-4.1**	-2.8

Source: Handbook of Statistics on the Indian Economy, 2005-06.

VII. CONCLUDING OBSERVATIONS

We found that the higher growth in services sector has added a dimension of stability to India's growth process. Growing complementarity between the industrial and services sectors augurs well for the medium-term growth performance of the Indian economy. Unlike other commodity-producing sectors, which have either seen a stagnant growth or decline in employment, we found that the services sector has generated some employment opportunities. In the aftermath of nearly one and a half decades of sustained growth, services sector has led to widening of not only the tax base but also the buoyancy of taxes. With regard to inflationary impact of services sector expansion, the paper finds that growing service sector share in GDP has coexisted with low and stable inflation on account of inflation moderating forces operating, *inter alia* through the synergy between the two growth drivers.

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