

# Growth and Forecasts of Service Sector in India: An Examination

\*Surinder Sharma

## ABSTRACT

The present study is an attempt to examine the growth and forecasts of service sector in India. On the basis of CAGR it is found that for the period of 2001-2014, 'community, social and personal services' stands at the first position followed by 'financing, insurance, real estate and business services' and 'trade, hotels, transport and communication' significantly. As far as forecasts are concerned, the period of fourteen years i.e. 2000-01 to 2013-14 are taken as a base for the forecasting of service sector for the period of ten years (2014-15 to 2023-24) in the study. The study forecasts that CAGR of 'financing, insurance, real estate and business services' is expected to lead followed by 'trade, hotels, transport and communication' and 'community, social and personal services' on the basis of estimated trend figures of the service sector for the period of 2014-15 to 2023-24 significantly. On the basis of the findings of the comparative study it is suggested that the policy makers have to devise the policies that can ensure the expansion of service sector in our economy. The results of the ongoing study are helpful for the government, researchers etc. for the expansion of service sector in India.

**Keywords:** *Forecasts, Growth and Service Sector*

## 1. Introduction

In the present scenario, the economies around the globe irrespective of their socio-economic features have assessed that the contribution of service sector contributes directly to the development of an economy significantly. As per the accessibility of the statistics with the World Development Report 2013-14, the contribution of service sector has raised substantially in the GDP of high, middle and lower income economies. The report shows a close link between the contribution of service sector to GDP and the status of an economy. The analogous source signifies that at the global level, the US stands at first rank in terms of GDP because the contribution of service sector is 79.2 per cent in GDP. The similar source also points out that in terms of contribution of the service sector in GDP India (56.9 per cent) stands at fourteenth position after the US (79.2 per cent), France (79.2 per cent), UK (78.8 per cent), Italy (73.8 per cent), Japan (72.3 per cent), Spain (71.6 per cent), Canada (71.1 per cent), Australia (69.5 per cent), Brazil (68.5 per cent), Germany (66.6 per cent), Russia (60.1 per cent), Mexico (60.1 per cent) and South Korea (57.7 per cent).

## 2. Earlier Studies

To emphasize the importance of service sector, so far many studies from different perspectives have been conducted around the globe over the different period of time. For instance, Riddle (1987) identifies that in an economy service sector contributes higher percentage to GDP than other sectors. Grubel and Walker (1989) show that service sector is instrumental in increasing the productivity of the manufacturing sector. It contains high level of human and knowledge capital and as a result their use as inputs has vital cost dipping effects. Bhattacharya and Mitra (1990) find that the service sector in our economy is rising speedily

ahead of the manufacturing sector and comparative difference between the two sectors has increased. Mohanty and Raghavan (1990) find that share of primary sector in the GDP has shown a continuous turn down which has been counterbalanced by increase in the GDP of the secondary and more particularly of the service sectors. Service sector has continued to rise irrespective of rise and fall in the other sectors. Sharma and Jayakumar (1995) conclude that unless the industrial sector expands at a rapid rate the increase of the service sector cannot be persistent for a long period. The study also points out that it is the service sector which has to soak up a substantial share of employment. Wolfi (2005) points out that the high performance of the service sector is important to enhance the cumulative economic growth rate of an economy. Clemes, *et al.*, (2003) identify that there is positive and significant effect of service sector growth on the growth of manufacturing sector and vice versa. The study also confirms that the government spending, imports and income growth have a significant effect on the growth of service sector in an economy. Wolfi (2005) points out that the high performance of the service sector is important to enhance the cumulative economic growth rate of an economy. Chakravarty (2006) recommends that diversification over the period of time is required in the commodity producing sector for fastening the growth in service sector. Mazumdar and Sarkar (2007) examine that there has been not only an external shift of the allocation in the tertiary sector but also increase in disparity and dualism in the sector and within its important sub sectors. Sharma (2010) opines that a sound policy exclusively designed for the escalation of service sector should be issued in accordance of the industrial and agricultural policies so as to have a vivid roadmap for inviting foreign direct investment inflows in service sector of India.

\* Lecturer, Department of Commerce and Business Management, Doaba College, Jalandhar. [surindersharma11@gmail.com](mailto:surindersharma11@gmail.com)

### 3. Objectives of the Study:

The present study has been conducted keeping in mind the following objectives:

- To study the growth of service sector during the period of pre (1950-1990) and post (1991-2014) economic reforms in India.
- To forecast the growth of service sector for the coming ten years i.e. 2014-15 to 2023-2024.

### 4. Research Methodology:

The ongoing study is primarily based on the secondary data for the period 1950 to 2014. The data have been extracted from the website of Indian Economic Survey. The term service sector is considered on the basis of Indian Economic Survey. The three sub-sectors of service sector viz., (a) trade, hotels, transport and communication; (b) financing, insurance, real estate and business services and (c) community, social and personal services are taken up for assessing the growth and forecasts of the service sector in the study. The Compound Annual Growth Rate is computed for determining the growth rate of the service sector in India. The least square linear trend model is also fitted for forecasting the service sector for the period of 2014-15 to 2023-2024 in the study. Though the selection method of the time series for forecasting is always subject to the nature and type of the available data but least square linear trend model is considered more appropriate and convenient to fit and forecast service sector than other methods of time series. The period of fourteen years (2000-01 to 2013-14) is considered quite sufficient for forecasting service sector for the period of ten years (2014-15 to 2023-2024) in the study. The abbreviations used in the study are CAGR (Compound Annual Growth Rate), GDP

(Gross Domestic Product), THTC (Trade, Hotels, Transport and Communication), FIREBS (Financing, Insurance, Real Estate and Business Services) and CSPS (Community, Social and Personal Services). For the computation/statistical analysis of CAGR and prediction of FDI inflows the SPSS version 11.0 for windows has been used in the present study. The present study has been divided into two sections. The growth for the period of 1950-51 to 2013-2014 and forecasts of service sector for the period of 2014-15 to 2023-24 is discussed under section I. Conclusion and suggestions are given in section II.

## Section I

### Growth and Forecasts of Service Sector in India

The growth and forecasts of service sector is covered in this section. This section is further divided into three parts: (a) The growth of all the three sectors i.e. primary, manufacturing and service is calculated for the period of pre (1950-1990), post (1991-2014) economic reforms and overall period (1950-2014) is reported in this part; (b) The growth of the service sector is calculated for the period of pre (1950-1990), post (1991-2014) economic reforms and overall period (1950-2014) is computed in this part and (c) The forecasts of service sector for the coming ten years i.e. 2014-15 to 2023-2024 is reported in this part.

#### (a) Growth of Primary, Secondary and Service Sector to GDP at Factor Cost

The growth of primary, secondary and service sector to GDP at Factor Cost is calculated and reported for the period of pre (1950-1990), post (1991-2014) economic reforms and overall period (1950-2014) in this part.

**Table 1**  
**Growth of Primary, Secondary and Service Sector to GDP at Factor Cost**

Period	Primary Sector	Secondary Sector	Service Sector (in per cent)
<b>I. Pre-Economic Reforms</b>			
1950-1960	53.66	15.94	30.40
1961-1970	46.06	20.93	33.01
1971-1980	41.42	22.61	35.97
1981-1990	36.26	23.41	40.34
<b>Total Pre-Economic Reforms (1950-1990)</b>	44.35	20.72	34.93
<b>CAGR</b>	<b>2.47*</b>	<b>5.11*</b>	<b>4.78*</b>
<b>II. Post-Economic Reforms</b>			
1991-2000	30.00	24.20	45.80
2001-2014	19.92	25.18	54.89
<b>Total Post-Economic Reforms (1991-2014)</b>	24.96	24.69	50.345
<b>CAGR</b>	<b>3.14*</b>	<b>7.22*</b>	<b>8.43*</b>
<b>Total (I + II) (Overall 1950-2014)</b>	37.89	22.05	40.07
<b>CAGR</b>	<b>2.86*</b>	<b>5.59*</b>	<b>6.02*</b>

\*t-values are significant at 1 per cent level of significance.

Source: Issues of various years of (a) Central Statistical Organisation, (b) National Accounts Statistics and (c) Indian Economic Survey.

Table 1 shows that on the basis of percentage for the period of pre-economic reforms (1950-1990), primary sector (44.35 per cent) holds the apex position followed by service sector (34.93 per cent) and manufacturing sector (20.72 per cent). On the basis of the comparison of the CAGR of the three sectors of GDP, the compound annual growth rate signifies that during the period of pre-economic reforms, the CAGR of manufacturing sector (5.11 per cent) stands at first position followed by service (4.78 per cent) and primary sector (2.47 per cent) significantly. The perusal of table 1 further shows that for the period of post-economic reforms (1991-2014), service sector (50.35 per cent) occupies the apex position followed by primary sector (24.96 per cent) and manufacturing sector (24.69 per cent). During the period of post-economic reforms, the CAGR of service sector (8.43 per cent) stands at first position followed by manufacturing sector (7.22 per cent) and primary sector (3.14 per cent)

significantly. As far as the overall period is concerned table 1 exhibits that for the overall period of pre and post-economic reforms (1950-2014), service sector (40.07 per cent) holds the apex position followed by primary sector (37.89 per cent) and manufacturing sector (22.05 per cent). The CAGR for the overall period of pre and post-economic reforms shows that the CAGR of service sector (6.02 per cent) stands at the first position followed by manufacturing sector (5.59 per cent) and primary sector (2.86 per cent) significantly.

**(a) Growth in Service Sector and in its Components to GDP at Factor Cost**

The growth in service sector and in its components to GDP at Factor Cost is calculated and reported for the period of pre (1950-1990), post (1991-2014) economic reforms and overall period (1950-2014) in this part.

**Table 2**  
**Growth in Service Sector at Factor Cost**

Period	Trade, Hotels, Transport and Communication	Financing, Insurance, Real Estate and Business Services	Community, Social and Personal Services	Total
				(Rs. in crore)
<b>I. Pre-Economic Reforms</b>				
1950-1960	380779	267025	329570	977374
1961-1970	156430	362858	524635	1043923
1971-1980	1036463	529678	807256	2373397
1981-1990	1750588	992371	1314323	4057282
<b>Total Pre-Economic Reforms (1950-1990)</b>	3324260 (39.33)	2151932 (25.46)	2975784 (35.21)	8451976 (100)
<b>CAGR</b>	<b>5.15*</b>	<b>4.35*</b>	<b>4.66*</b>	<b>4.78*</b>
<b>II. Post-Economic Reforms</b>				
1991-2000	3331553	2271158	2321787	7924498
2001-2014	13806161	9111524	7122574	30040259
<b>Total Post-Economic Reforms (1991-2014)</b>	17137714 (45.14)	11382682 (29.98)	9444361 (24.88)	37964757 (100)
<b>CAGR</b>	<b>9.15*</b>	<b>8.98*</b>	<b>6.60*</b>	<b>8.43*</b>
<b>Total (I + II) (Overall 1950-2014)</b>	20461974 (44.08)	13534614 (29.16)	12420145 (26.76)	46416733 (100)
<b>CAGR</b>	<b>6.26*</b>	<b>6.38*</b>	<b>5.34*</b>	<b>6.02*</b>

\*t-values are significant at 1 per cent level of significance.

**Source:** Issues of various years of (a) Central Statistical Organisation, (b) National Accounts Statistics and (c) Indian Economic Survey.

As far as the growth of service sector is concerned, the results of table 2 show that on the basis of percentage growth for the period of pre-economic reforms (1950-1990), THTC (39.33 per cent) holds the first position followed by CSPS (35.21 per cent) and FIREBS (25.46 per cent). The results of

the CAGR for the same period show that the CAGR of THTC (5.15 per cent) stands at the top position followed by CSPS (4.66 per cent) and FIREBS (4.35 per cent) significantly. The perusal of table 2 further shows that for the period of post-economic reforms (1991-2014), THTC (45.14 per cent) holds

the apex position followed by FIREBS (29.98 per cent) and CSPS (24.88 per cent). The CAGR signifies that during the same period, the CAGR of THTC (9.15 per cent) stands at the leading position followed by FIREBS (8.98 per cent) and CSPS (6.60 per cent) significantly. Table 2 also shows that for the overall period of pre and post-economic reforms (1950-2014), THTC (44.08 per cent) holds the key position followed by FIREBS (29.16 per cent) and CSPS (26.76 per cent). Similarly during the period of pre and post-economic reforms (1950-2014), the CAGR of FIREBS (6.38 per cent) stands at the first position followed by THTC (6.26 per cent) and CSPS (5.34 per cent) significantly.

Becoming more specific and examining the contribution of the components of the service sector the perusal of the table 3 shows that on the basis of percentage growth during the period of 2001-2014, CSPS (54.89 per cent) stands at the first position followed by FIREBS (25.18) and THTC (19.92 per cent). The computed CAGR of the same period also reflects that CSPS with 1.27 per cent (positively) and FIREBS with 0.42 per cent (positively) have shown growth significantly. However, the CAGR of the same period for the component of THTC with -3.92 per cent (negatively) has shown growth significantly.

**Table 3**  
**Components of Service Sector (at Factor Cost)**

Year	Trade, Hotels, Transport and Communication	Financing, Insurance, Real Estate and Business Services	Community, Social and Personal Services  (in per cent)
2000-01	25.22	24.30	50.49
2001-02	25.25	23.68	51.07
2002-03	23.12	24.40	52.48
2003-04	23.17	24.38	52.44
2004-05	21.89	25.06	53.05
2005-06	20.92	25.34	53.74
2006-07	19.97	26.05	53.98
2007-08	19.28	26.28	54.45
2008-09	18.12	25.77	56.11
2009-10	16.94	25.98	57.09
2010-11	16.84	25.67	57.48
2011-12	16.48	26.11	57.42
2012-13	15.92	25.29	58.79
2013-14	15.80	24.27	59.93
<b>Average (2000-01 to 2013-14)</b>	19.92	25.18	54.89
<b>CAGR</b>	<b>-3.92*</b>	<b>0.42*</b>	<b>1.27*</b>

\*t-values are significant at 1 per cent level of significance.

**Source:** Issues of various years of

- (a) Central Statistical Organisation,
- (b) National Accounts Statistics and
- (c) Indian Economic Survey.

**(c) Forecasts of Service Sector for the coming ten years i.e. 2014-15 to 2023-2024**

After computing growth the forecasts of service sector is also covered in this section. The least square linear trend model subject to its limitations/assumptions is fitted for

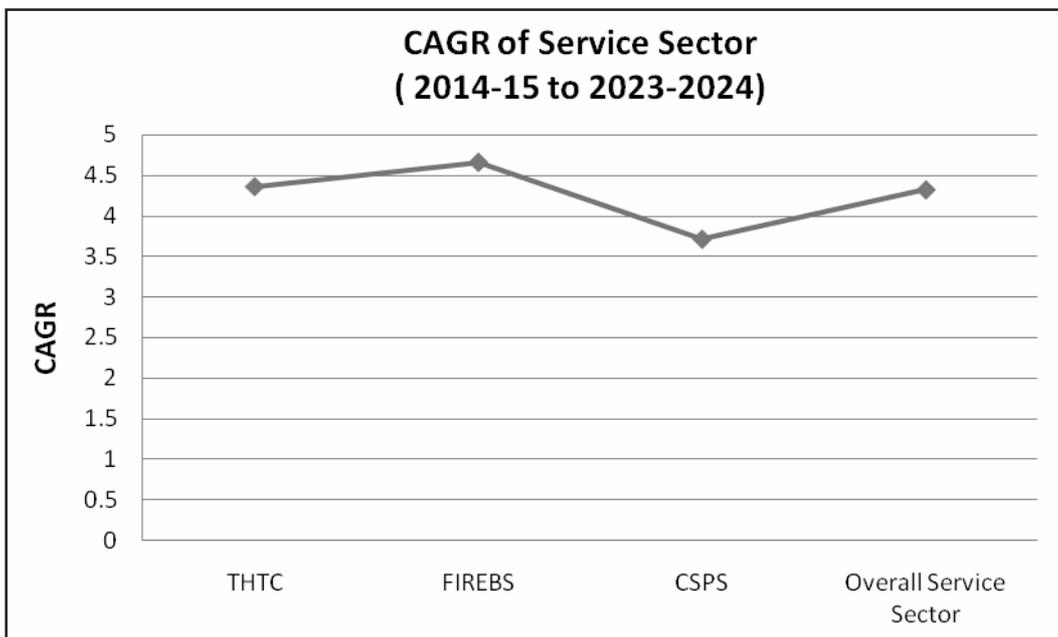
estimating the forecasts of service sector for the period of 2014-15 to 2023-2024 in the study. The period of fourteen years (2000-01 to 2013-14) is considered quite sufficient for forecasting service sector for the period of ten years (2014-15 to 2023-2024) in the study

**Table 4**  
**Forecasts of the Components of Service Sector (at Factor Cost)**

Year	Trade, Hotels, Transport and Communication	Financing, Insurance, Real Estate and Business Services	Community, Social and Personal Services	Total
			(in per cent)	
2014-15	1620965	1130172	752867	3504004
2015-16	1705607	1194085	785416	3685107
2016-17	1790248	1257998	817964	3866210
2017-18	1874890	1321911	850512	4047313
2018-19	1959531	1385824	883060	4228416
2019-20	2044173	1449737	915609	4409519
2020-21	2128814	1513650	948157	4590622
2021-22	2213456	1577563	980705	4771724
2022-23	2298097	1641477	1013253	4952827
2023-24	2382739	1705390	1045802	5133930
<b>Total (2014-15 to 2023-24)</b>	20018520	14177807	8993345	43189672
<b>CAGR</b>	<b>4.36*</b>	<b>4.66*</b>	<b>3.71*</b>	<b>4.32*</b>

\*t-values are significant at 1 per cent level of significance.

Source: Calculations are made on the basis of Table 3



The perusal of the table 4 and pictorial presentation signifies that subject to the limitations/assumptions of the method of least square linear trend model for calculating the trend values with CAGR 4.66 per cent, FIREBS is expected to lead followed by THTC with 4.36 per cent and CPCS China with 3.71 per cent on the basis of estimated trend figures of the components of service for the period of 2014-15 to 2023-24 significantly.

## Section II

### 5. Conclusion and Suggestions

The service sector contributes in the process of development of an economy significantly. The objective of the ongoing study is to examine the growth and forecasts of service sector in India. The results of the study submit that during the pre-economic reforms the primary sector holds the apex position followed by service and manufacturing

sector. The CAGR of manufacturing sector stands at the first position followed by service and primary sector significantly. For the period of post-economic reforms service sector occupies the leading position followed by primary and manufacturing sector. The CAGR of the same period shows that service sector stands at the first position followed by manufacturing and primary sector significantly. As far as for the period of pre and post-economic reforms is concerned, service sector possesses the leading position followed by primary and manufacturing sector. The CAGR of service sector stands at the first position followed by manufacturing and primary sector significantly.

Further, the sub-sector analysis of the service sector shows that for the period of pre-economic reforms, THTC holds the main position followed by CSPA and FIREBS. The CAGR indicates that THTC stands at the first position followed by CSPA and FIREBS significantly. For the period of post-economic reforms, THTC stands at the apex position followed by FIREBS and CSPA. The CAGR shows that THTC stands at the first position followed by FIREBS and CSPA significantly. During the period of pre and post-economic reforms, THTC holds the leading position followed by FIREBS and CSPA. The CAGR of FIREBS stands at the first position followed by THTC and CSPA significantly. The study also submits that during 2001-2014, CSPA stands at the main position followed by FIREBS and THTC. It is interesting to note that the CAGR of the CSPA and FIREBS have shown positive but the THTC has shown negative growth significantly. The study forecasts that FIREBS is expected to lead followed by THTC and CSPA on the basis of estimated trend figures of the components of service for the period of 2014-15 to 2023-24 significantly.

On the basis of the findings of the study it is suggested that the policy makers have to know that service sector is crucial for the development of an economy. The growth of service sector is must for the growth of the primary and manufacturing sectors of the economy. The positive correlation of the service sector and the development of the economy compel the regulating authorities to devise effective and practical policies for the expansion of service sector in our economy. The results of the ongoing study signify that during the period of post economic reforms the supportive changes in the concerned economic policies have contributed substantially to the growth of service sector. This compels the government for extending the process of liberalization, privatization and globalization for increasing the share of service sector in the economy.

Similarly it is also to be taken care of that the service sector is the sector which is primarily based on the quality of human capital. Only the educated and skilled manpower can contribute in the economy. Mere relaxing the norms and issuing the conducive and congenial policies will not yield anything until the skilled manpower is missing. Thus,

appropriate efforts are required for having adequate supply of human capital in the economy. Last but not the least, it is important that the service sector is closely associated with the primary and secondary sectors of the economy. The growth of service sector depends on the growth of primary and secondary sectors of the economy. Rather some of the studies assimilated for the ongoing study submit that unless the primary and secondary sector expands at a reasonable rate the increase of the service sector cannot be ensured for a long period.

As far as limitations of the ongoing study are concerned forecasts is subject to the limitations/assumptions of the least square linear trend model of the time series. The inter and intra comparative analysis among the three sub-sectors of the service sector viz., 'community, social and personal services', 'financing, insurance, real estate and business services' and 'trade, hotels, transport and communication' has also not been covered in the study. The study has confined itself only to the share of these three sub-sectors to the service sector in the economy. The results of the ongoing study are helpful for the government, researchers of the area for the expansion of service sector in India.

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**About the Author:**

**Surinder Sharma**, Ph.D. is Lecturer in the Department of Commerce and Business Management, Doaba College, Jalandhar. His areas of interest include Human Resource Management and Corporate Financial Accounting. He has published many research papers in leading journals such as *Management and Labour Studies*, *IUP Journal of Management Research*, *Business Analysts*, *Management Dynamics*, *Arthanvesan* etc. and has participated in various seminars and conferences.

*Reference # Envision - C -06*

