

Total Factor Productivity and Gross Value Addition In Services Sector of India From 2000 To 2010

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Abstract – Service sector of India has lately played a role of igniter so far as growth rate of GDP is concerned. Post globalization, Service sector alone emerged as a largest contributor to the GDP of India. Earlier by default an agrarian economy of India took a drastic turn and service sector today has occupied a driver's seat in steering the growth of India economy. This divergence from a product economy to service economy has not only accelerated the growth of India but it certainly has elevated the brand image of India across the world. It won't be out of place to mention here that before globalization of Indian economy the image of India in the eyes of the developed nation was far more negative than one could conceive of.

Keywords – Globalization, GDP, Service sector, Brand Image, etc

I. INTRODUCTION

Developed nations had an image about India as orthodox and conservative nation of snake charmers. It is majorly the service sector of India which plays a role of an eye opener of the world. All those nations which earlier used to despise India for not being an open economy today has reiterated it from the highest international platforms that India has mammoth potential and promise to become a super power of the world. In this way the service sector of India plays a role of a catalyst in reengineering the brand image of India across the globe. [1]

The economic reforms of the 1991 applied the levers of economics such a way that it has unlocked the potential of India's service sector. Internal liberalization, Privatization and globalization a three pronged strategy of Indian policy makers did wonder so far as the service sector of India is concerned. Prior to globalization of Indian economy the service sectors of India like banking, telecommunication, insurance to name a few were notorious for being arrogant, business carelessness and unfriendly and many a times inimical to the consumers.

Protection, absence of competition and not having both eyes fixed on the balance sheet of the business were just few of the causes at the root for such unwelcoming attitude of service providers. [2] However after liberalization, privatization and globalization the service sector was thrown open to intense competition from within the country as well as from abroad. The move of adoption of

globalization by Indian government proved to be a game changer for nation in general and for service sector in particular. The emergence of services as the most dynamic sector of the Indian economy has in many ways been a revolution. The most visible and well-known dimension of the take-off in services has been in software and information technology (IT)-enabled services (including call centers, software design, and business process outsourcing), which to some extent also help increase innovation capabilities in the sector. However, growth in services in India has been much more broad-based than IT. There have been many schools of thoughts which provide reasonable argument for catapulting the service sector of India in the forefront.

II. SERVICE SECTOR IN INDIA

1. The coverage of service sector the heterogeneity
The service sector in India is a heterogeneous group as the activities range from traditional services (barber shops and neighborhood retailing) to those based on cutting edge technology and standardization of delivery. Further given, India's quasi federal governance structure, services come under the union list (federal government), the states as well as joint administration of both.

Further, service sector in India is classified according to National Industrial classification (NIC) 2008. Disaggregated data for many services is not available for India, though different

organizations of government of India have been involved in developing the database.

III. SERVICES SECTOR UNDER DIFFERENT JURISDICTIONS ACCORDING TO THE CONSTITUTION OF INDIA.

- 1. Union List-** Telecommunications, postal, broadcasting, financial services (including insurance and banking), national highways, mining services.
- 2. State List-** Health and related services, real estate services, retail, services incidental to agriculture, hunting and forestry.
- 3. Concurrent List.** Professional services (legal, accounting, auditing and book-keeping, taxation, architectural, engineering, integrated engineering, urban planning and landscape architectural, medical and dental services and service provided by midwives, nurses, etc.), education, printing and Publishing, electricity[4]

IV. SERVICES A CASH COW SECTOR

The rapidness with which the service sector of India is emerging today has amazed many including the policy makers. Serendipitous emergence of service sector of India has transcended other conventional sectors of India like agriculture and manufacturing. Today there is a heavy emphasis on three pronged strategy for the growth of service sector of India which is known as 3 S namely Skill, Speed and Scale. Service sector in India like its developing counterparts in Asia follows the pattern of skipped industrialization and its rising share in GDP reflects the outcome of pro market reforms in India beginning mid 1980s. [5]

The structural reforms of 1990 have removed the omphaloskepsis from the service sector of India. Over the period of time the growth of service sector snowballed such a way that for decades it transcended the other erstwhile dominant sectors of India like agriculture and manufacturing. The policy reforms which led to privatization, removal of restrictions on FDI and streamlining of procedures of exports as well as imports had important consequences for the emergence of service led “growth” in India beginning 1990s.[6]

As of today the total service canvass of India is reasonably reach what we need is the richness in various tools to make service sector more proficient, quality conscious so that we can rub the shoulder with developed nations of the world.

Alternative schools of thoughts exists which tells different views about the growth of services at a

lightning speed in India. One such view holds that for a very long period of time the industries in India were tied up in the red tape of “License-Permit-Raj” and were suffocating under excessive regulation from the government. On the other hand the service sector was relatively unregulated hence became a natural outlet for Indian entrepreneurs. Others held that splintering of industrial capacities resulted in growth of service sectors. Services have been critical part of the overall economic liberalization process in India since the mid 1980s. Several sectors like telecommunications, banking, financial and insurance (BFI segment) have been the beneficiaries of the economic liberalization which transformed the entire scenario of India.

FDI was attracted in a big way in the service sector and alongside technological tie-ups were happening in a big way which resulted into catapulting the service sector of India. [7] A significant feature of service sector reforms has been the elimination of governmental monopoly and establishment of independent regulatory authority- telecommunications.

Reforms in service sector have raised considerable debate; two case to mention being the case of FDI in retail as well as Higher Education Legislation. Independent regulators have replaced the monopoly of government in key sectors like Telecom and Education. Further to tide over the problem of fiscal deficit the successive governments of India have been the strong votaries of gradual divestment of public stake holdings in PSUs. The corpus mopped up from profitable divestment was started to be utilized for other capital starving areas of economy. The impressive contribution of services to India’s trade flows have been on an upward trajectory since 1990s.

Absolute credit goes to a revolutionary decision on the part of government of India to adopt an open economy model. The exports trajectory of India started looking impressive ever since the service exports from India started writing its own script. The share of India in service exports in the world increased from 0.6 per cent in 1990 to around 3 percent in 2009-10. It proves the point beyond any iota of doubt that the service sector has more agility, adaptability, and it is free from heaviness unlike other traditional sectors like agriculture and manufacturing. Evidence reflects India’s growing competitiveness in service exports and resultantly there has been a shift from traditional services towards business services with ICT being predominant.

[8] On the flip side one must not turn a blind eye towards some of the grey areas in so far as the exports of services are concerned. Domestic barriers like poor

infrastructure, the rudimentary status of technology in use, lack of absolute quality consciousness, supply bottlenecks and insufficient financial furtherance have been dampening the healthy flow of exports. Apart from this beyond the border regulations are always their which can be stated as tariff walls, trade embargo, unhealthy bilateral relations, excessive protectionism are few of the examples which are dampening the spirit of international trade.

Table 1 Gross value added by service sector after globalization.

Year	GVA	Year	GVA
1990	47	2000	50
1991	46	2001	51
1992	47	2002	52
1993	45	2003	53
1994	46	2004	54
1995	47	2005	55
1996	47	2006	56
1997	47	2007	57
1998	46	2008	58
1999	48	2009	60
		2010	60

Source: computation from National Accounts Statistics, Government of India. [9]

The above table indicates that:

- GVA by service sector of India is constantly on the rise after liberalization.
- From 2000 onwards which is a study period of this research that GVA has been robust for overall service sector of India. First decade of liberalization from 1991- to 1999 stand lower compared to second decade of liberalization from 2000 to 2010 with regard to GVA. The reason being the slow momentum during first decade.

1. Panel A- Gross Value Added. %/Annum

Source: computation from National Accounts Statistics, Government of India. [10]

The above table indicates following: -

- For all most all sub sectors of Indian services GVA is impressive when it is compared with first decade of liberalization and globalization in India.
- GVA in not marketing services like education, health has not shown the upward trend in 2010 alone.

Source: computation from National Accounts Statistics, Government of India. [10]

The above table indicates following:-

- Across all the sectors of Indian service sector comparative analysis of employment in last three decades shown positive and rising trend.
- Total services employment in 2000 was 23.67% while same in the year 2010 was 27.97% which shows a remarkable improvement.

- A new age era of ICT shown great deal of employment added progressively.
- ICT non incentive has also been a decent and impressive contributor to employment in India.
- Trade has emerged as a facilitator of good employment provider.

Table 2 Sector - wise services in India value. Added and employment.

Sector	1990	2000	2010
Total services	43.98	50.98	54.72
Market services	22.61	27.56	29.83
ICT	16.42	20.14	22.03
Trade	11.66	13.21	15.11
Financial Services	3.85	5.41	5.44
Post and telecomm.	0.91	1.52	1.47
ICT non intensive	6.19	7.42	7.80
Hotels and restaurant	0.95	1.32	1.44
Transport and storage	5.23	6.10	6.35
Non market services			
Education	3.13	4.13	3.87
Health and social work	1.24	1.60	1.58
Other services	11.12	11.16	12.78

Table 3 Panel B - employment Added %/Annum.

Sector	1990	2000	2010
Total services	20.04	23.67	27.97
Market services	11.15	14.69	16.87
ICT	8.05	10.49	11.37
Trade	7.36	9.23	10.07
Financial Services	0.51	0.58	0.88
Post and telecomm	0.18	0.33	0.43
ICT non intensive	3.50	4.55	5.51
Hotels and restaurant	0.92	1.18	1.37
Transport and storage	2.58	3.37	4.14
Non market services	8.49	8.89	11.10
Education	1.63	2.18	2.67
Health and social work	0.56	0.73	0.86
Other services	3.45	3.63	5.37

One of the noteworthy features of India's economic growth over the past few decades has been the services sector emphatically outpacing manufacturing. The clear cut prevalence of animal spirit in services sector convinces us of the fact that there were no active traces of sluggishness. Two possible explanations can be given for the observed trend. First the degree of agility, pro-activeness and expeditious responsiveness takes several decades to get anchored in manufacturing sector. It is important to note that from the pure connotation of economics employment generation cannot be viewed in isolation.

When we talk about employment creation one has to keep in mind the overall quality of employment which consists of educational requirements, and quality of employment which includes wages, job security and social protection. [11] Service sector is not free from the negative dent with regard to bad jobs where the educational requirement is lowest and quality of job is merely absent. Even some cosmetic sectors like aviation we observe that more emphasis is on plastic smile than real knowledge and resource quotient [12].

The regime of globalization ushered in an era of intense competition for every player. This competition is emanating from domestic as well as foreign source. Easy access to modern technology is changing the operating canvass from labor intensive to capital intensive. This naturally resulted in eventual decline in employment generation over the period 1980-2010. [13]

India's service sector growth performance begins from the 1990s, but skeptics have raised doubts about both the quality and sustainability of the increase in service sector activity and its implications for economic development. Looking at the 30 year period from 1980-2010, we find on an average a growth of almost 7 percent per annum. The growth momentum of the 1990s accelerated to an average of 9 per cent per annum in the decade of 2000-2010 and substantiates the role played by services growth in India even during the period of global financial crisis. [14]

V.PERFORMANCES OF SERVICES- A DISAGGREGATED PICTURE

- The overall services growth needs a detailed examination to understand the contribution of different subsectors to the overall performances of services in India. Further, given the heterogeneous nature of services in general, it is important to understand where the concentration of service sector growth is.
- We observe that the service-sector growth is widespread across activities. In accounting for growth

in value added in different sectors, we find that post and telecommunication shows the maximum growth around 15 per cent per annum for the period 1990-2010. Hotels and restaurants and financial services are the other two sectors to register more than 10 per cent growth for the above period. [15].

- If we consider the period of 2000-2010, we find that post and telecommunications and financial services exhibiting high growth rates of around 23 per cent and 12 per cent respectively. Amongst the non market services- notably education, health and social work, public administration and defense the growth rates have been around 6 per cent, which is in line with the aggregate services growth of around 6.8 percent per annum for the period 1990-2010.[16]

An appraisal of the different sub sectors shows that the performance of post and telecommunication has been remarkable. The telecommunication liberalization began in 1994 with the private sector being allowed to offer telecom services. Financial services include banking and insurance, with banking being the largest and fastest growing. The reforms in the financial sector saw emergence of private sector banks with a substantial increase in their shares in overall banking over the time period. The performance of hotels and restaurant underlies the fact that tourism contribution of around 6.8 per cent to India's GDP in 2009-10.[17].

Table 4 Labor productivity trends in service industry

Sector	1990-99	2000-10
Total services	4.2	5.6
Market services	3.8	7.0
ICT	4.2	7.8
Trade	4.5	8.0
Financial Services	6.0	4.8
Post and telecomm	5.3	16.9
ICT non intensive	2.5	4.9
Hotels and restaurant	6.9	7.6
Transport and storage	2.1	4.2
Non market services	4.3	3.2
Education	5.4	2.9
Health and social work	2.9	3.8
Other services	3.1	2.1

Source: computation from National Accounts Statistics, Government of India [18]

The above table indicates following:-

- A few interesting developments from the disaggregated picture is worth a mention. Three sectors- Hotels and Restaurant, Post and Telecommunications, Trade and Transport and Storage showed large improvements in productivity from a very low base in the decade of 1990s.
- All the three sectors mentioned above had significant changes in their business environment beginning 1990s covering regulation as well as policy measures. For road transport; we find reforms from early 1990s covering entry of private players, amendments in motor vehicle laws, setting up of National Highways Act.
- In case of telecom services, most of the manufacturing services were totally under governmental domain and entry of private firms in providing telecommunication services started in 1992 with the introduction of value added services.
- In the financial services especially banking services, substantial reforms were undertaken pertaining to new banks, licensing policies. Reforms in the insurance sector commenced in the latter part of 1990s and securities markets were also streamlined. Except for public administration, all other sub sectors of non market services registered lower levels of labor productivity growth for the period 1980-2010.

Table 5 Sectoral contribution to aggregate labor productivity growth.

Sector	1990-99	2000-2010
Total services	4.16	5.58
Market services	2.54	3.74
ICT	1.97	2.95
Trade	1.12	1.82
Financial Services	0.69	0.62
Post and telecom.	0.15	0.51
ICT non intensive	0.58	0.79
Hotels and restaurant	0.12	0.18
Transport and storage	0.45	0.61
Non market services	2.25	1.34
Education	0.29	0.22
Health and social work	0.08	0.11
Other services	1.13	0.40

Source: Ministry of employment govt. of India. [19]

The above table indicates following:-

- Over the decades it is observed that market services segment of services sector of India has registered impressive growth in terms of labor productivity.
- On the other hand contemporary colleague i.e. non market services productivity contribution declined

from about 2% in 1980s to 1.3%, in 1990s. In the same period the market services has witnessed an increase in its contribution from less than 1% to above 3%.

- Almost all non-market services have shown a deceleration in their contribution to aggregate service sector productivity in the 1990s, while Health sector improved slightly its contribution in the 2000s.
- The real growth of any service sector can be approved only when the labor productivity grows simultaneously. Without labor productivity the growth of sector will be deceptive and the situation of labor overhang and later mass retrenchment can take place which is highly harmful for any society.
- The service sector performance in terms of labor productivity is summarized. The main observation is that labor productivity in India's service sector has been growing substantially over decades, and much of this productivity gain is accruing through acceleration in market services labor productivity.
- For the two decades, non market services showed higher labor productivity relative to the market services, with the reverse happening in the decade of 2000s, a period of rapid slow down in the global economy. A closer look at this further suggests that ICT intensive sectors, in particular post and telecom and financial intermediation has brought much of the service sector productivity growth.
- For the period as a whole, labor productivity in services have grown at the rate of 4 per cent per annum. Turning attention to the individual sectors within services, we find overall, majority of the sectors show labor productivity growth higher than the sectoral average, the exceptions being transport and storage, health and other services which register low growth in labor productivity in the region of 2-3 per cent.

VI. TOTAL FACTOR PRODUCTIVITY THAT CATAPULTED SERVICE SECTOR OF INDIA

The evolution of total factor productivity (TFP) is a key determinant of long-run economic growth of a country. The decomposition of output growth into its sources is shown for different broad sectors and the economy.

The whole period 1990 to 2010 is considered for the analysis. The contributions of different inputs to output growth are shown in the following Table. Factor inputs have played an important role in the growth of the Services sector.

Table 6 Contribution of factor inputs and TFP to GVA growth by broad sectors 1990 TO 2010.

Broad Sector	Real Value Added Growth	Contribution of Labour	Contribution of Labour quality	Contribution of capital	TFP Growth
Agriculture	3.03	0.37	0.15	0.99	1.52
Mining & Quarrying	4.75	0.68	0.38	3.93	-0.24
Manufacturing	7.22	0.68	0.44	5.37	0.73
Electricity, Gas	7.44	0.66	0.34	3.49	2.96
Water Supply	3.48	5.21	0.21	1.37	-3.31
Construction Services	7.11	1.73	0.53	3.00	1.84
Total Economy	5.82	0.84	0.69	2.89	1.40

Source: calculation based on India KLEMS dataset [20]
The above table indicates following:-

- The maximum value added growth was registered by electricity and gas followed by manufacturing and construction services.
- The highest input factor contribution was by capital for manufacturing.
- The highest total factor productivity growth was registered by electricity and gas.

In water supply contribution of labor as input factor was highest but other factors contribution was negligible hence negative total factor productivity

Inference on the findings.

Undoubtedly over the span of a decade from 2000 to 2010 services sector of India has come out with flying colors. However it needs to be observed whether it will be a sustainable enough and most importantly addresses government of India's major concern of inclusive growth. Other important aspect is that to what extent the services sector of India will remain insulated against the external economic shocks like recession.

We In so far as the Labor productivity in Indian service sector is concerned it is growing handsomely and upward trend is majorly observed in market services and non market services were found to be declining. This observed productivity gain in the market services, and in particular ICT intense services, might indicate the role of increasing ICT in contributing to labor productivity growth.

Finally, there remain several issues which need to be addressed in a holistic manner. India needs to adopt outward looking approach than inward looking if she wants to have genuine assessment of her services sector. Cross border comparison with the fortune 500 players makes a good sense here which will keep the sector on a constant learning curve and will create good vibes in the industry. After all in an era of globalization the ultimate aim of every sector must be to put a lasting smile on the faces of consumers rather than just giving a leap service, cosmetic smiles and eventual frustration to the consumers.

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