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Working Paper 16

Services Growth- Why is that important for growth of GDP and Employment?

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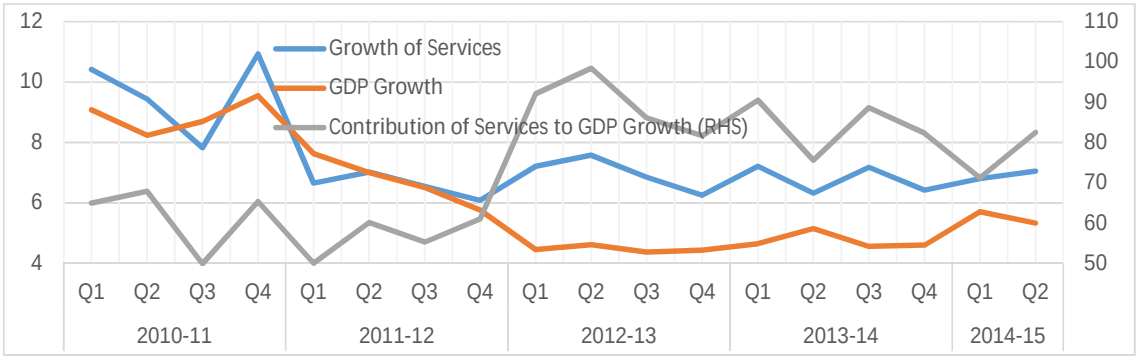
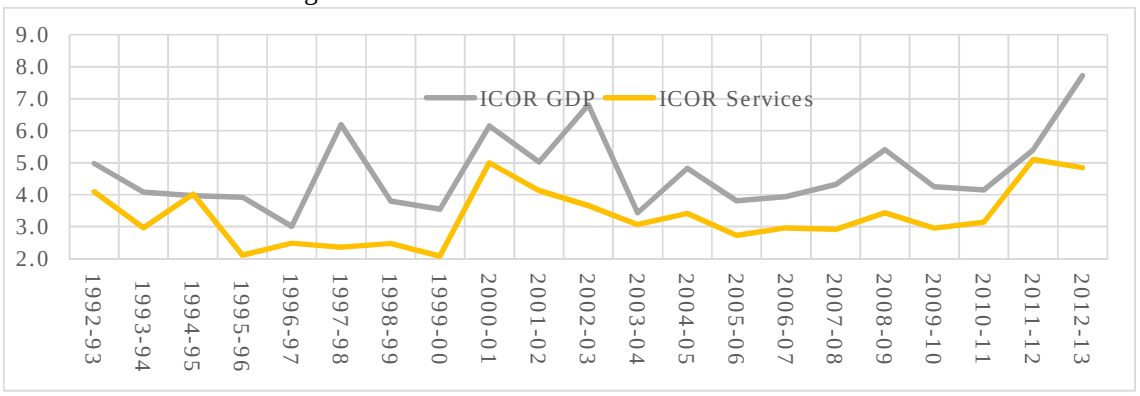
Services have significantly contributed to the structural transformation of Indian economy. Sustained growth of services in India has to an extent broken the myth which has considered acceleration in manufacturing in the initial stages of development as inevitable. Services have grown at a faster than the GDP[1] growth consecutively for last 10 quarters and its contribution to growth has averaged over 80 per cent during this period (Fig 1).

Fig 1: Contribution of Services to GDP Growth



2. Historically services have not only grown faster but have also required lower capital for each additional unit of value added. This has made services growth for a capital scarce country like India even more important. Throughout the post reform period, incremental capital output ratio (ICOR) of services has remained lower than overall GDP (Fig 2).

Fig 2: ICOR of Services and Overall ICOR



3. Inter industry comparison of growth and ICOR of services with other broad groups of economy clearly indicate that not only overall growth of services has been higher than agriculture and industry, in the post reform period even ICOR of services has been lower than both these sectors. It is only the construction sector which had a lower ICOR. Compared to industry, the ratio of gross capital formation to the GDP of that sector has been lower for services (Table 1)

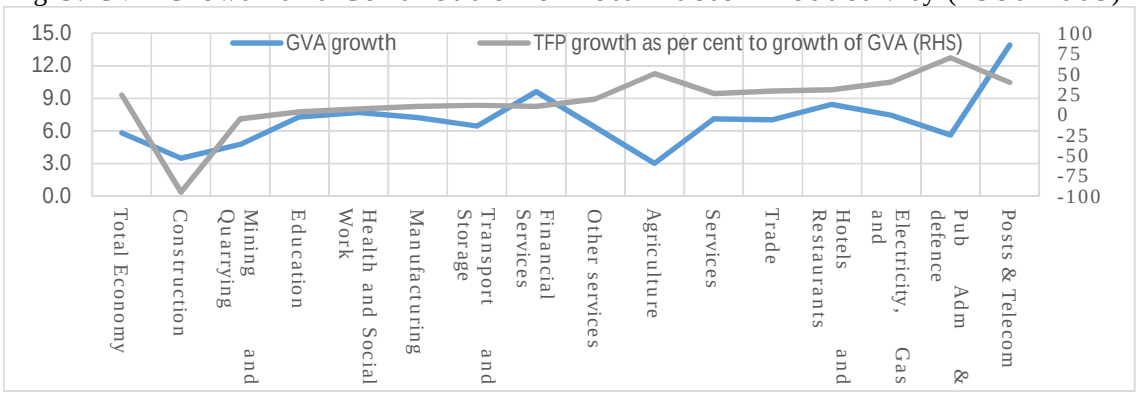
[1] CSO has moved to a new system of GDP estimates from January 30, 2015. The GDP at factor cost now corresponds to Gross Value Added at basic prices. But since the quarterly data based on that methodology are yet to be released and data for back years still not been available, the analysis is largely based on the earlier methodology of GDP and estimates released prior to January 30, 2015.

Table 1: Incremental Capital Output Ratio

	1950-51-1991-92	1992-93 to 2002-03	2003-04 to 2012-13	2011-12	2012-13
Ratio of Gross Capital formation to GDP (Current prices) (in per cent)					
Agriculture	6.94	9.86	15.12	16.79	16.89
Industry (IIP)	45.52	57.58	73.00	67.89	60.18
Construction[2]	9.83	12.06	24.32	22.37	21.25
Services	18.99	22.96	30.49	33.49	33.69
GDP	18.61	26.11	35.60	36.13	34.54
GDP Growth (Factor Cost 2004-05 prices) (in per cent)					
Agriculture	2.64	2.70	4.03	5.02	1.42
Industry (IIP)	3.20	4.13	5.97	6.28	1.27
Construction	5.01	5.53	9.23	10.80	1.11
Services	4.97	7.66	9.11	6.57	6.96
GDP	4.00	5.92	7.88	6.69	4.47
Incremental capital Output Ratio (ICOR)					
Agriculture	2.63	3.65	3.76	3.35	11.92
Industry (IIP)	14.24	13.93	12.22	10.82	47.31
Construction	1.96	2.18	2.64	2.07	19.14
Services	3.82	3.00	3.35	5.10	4.84
GDP	4.66	4.41	4.52	5.40	7.73

4. The economic reforms of the 1990s liberalised the services, particularly the banking, insurance and telecommunication and led to its emergence as one of most dynamic sectors of Indian economy. The growth of the services sector remained fairly broad based and the surge in growth was considerably due to productivity growth. In a paper prepared for the IARIW-UNSW Conference on Productivity: Measurement, Drivers and Trends, it has been observed that the total factor productivity growth (TFP) of services sector during 1980-2009 has nearly been three times the TFP growth of manufacturing. Within services, the contribution TFP to overall growth of GVA was particularly significant for trade, telecommunication and public administration. TFP growth was relatively lower for education, health and financial services (Fig 3)[3].

Fig 3: GVA Growth and Contribution of Total Factor Productivity (1980-2009)



[2] Though Construction is usually considered as part of overall Industry, this has been treated separately because of a lower ICOR and significant interventions made under MGNAREGA.

[3] Revisiting the Service-led Growth in India: Understanding India's service sector productivity growth- Deb Kusum Das, Abdul Erumban, Suresh Aggarwal and Sreerupa Sengupta

5. Using output data from National Accounts Statistics and employment data from other secondary sources, Bosworth and Maertens (2010) found that total factor productivity (TFP) in services sector was 2.1 per cent (1980-1990), 3.1 per cent (1990-2000) and 1.9 per cent (2000-2006) and was highest compared to the other two broad sectors of agriculture and industry[4].

6. Services are a heterogeneous mix comprising the services which are real sector dependant such as trade, transport & communication, banking, insurance and business services and autonomous such as public administration, defence and to an extent health and education. These are purely private goods such as trade and public and club goods as other services. Services have also been categorised as market and non-market services and within market services ICT intensive and ICT non intensive. Despite this heterogeneous mix, overall services growth is complimentary and this is getting stronger in the post reform period as is evident from the growth correlation matrix (Table 2).

Table 2: Growth Correlation Matrix

	1952-92	1992-2003	2004-2013	1952-92	1992-2003	2004-2013	1952-92	1992-2003	2004-2013
GDP	1.00	1.00	1.00						
Industry (IIP)	0.47	0.38	0.88	1.00	1.00	1.00			
Services	0.50	0.59	0.77	0.52	0.11	0.61	1.00	1.00	1.00
Agriculture	0.94	0.59	0.47	0.24	-0.14	0.20	0.25	-0.13	-0.02
Construction	0.45	-0.28	0.44	0.29	-0.19	0.47	0.20	0.40	0.06
Trade, hotels & restaurants	0.73	0.45	0.80	0.65	0.64	0.57	0.72	0.36	0.71
Transport, storage & communication	-0.01	0.40	0.77	0.19	0.18	0.73	0.30	0.69	0.60
Financing, insurance, real estate & business services	0.23	0.21	0.21	0.28	-0.19	0.29	0.73	0.81	0.41
Community, social & personal services	-0.01	0.56	-0.10	0.06	-0.23	-0.16	0.56	0.81	0.39

Employment, Capital & Labour Intensity in Services

7. A more inclusive and employment generating economic growth has been the central objective of our development strategy. Employment numbers are not available on an annual basis as these are usually generated by the National Sample Survey Organisation (NSSO) on quinquennial basis. Overall employment growth in the services sector has nearly been a percentage point higher than the growth of employment for the economy as a whole. Within services, financing, insurance, professional and business services as a group have recorded the highest growth and the growth in this sector only a shed lower than the growth of employment in construction sector (Table 3)[5].

[4] Bosworth, Barry and Annemie Maertens.2010. Economic Growth and Employment Generation: The Role of the Service Sector. In Ejaz Ghani, ed. *The Service Revolution in South Asia*. New Delhi: Oxford University Press.

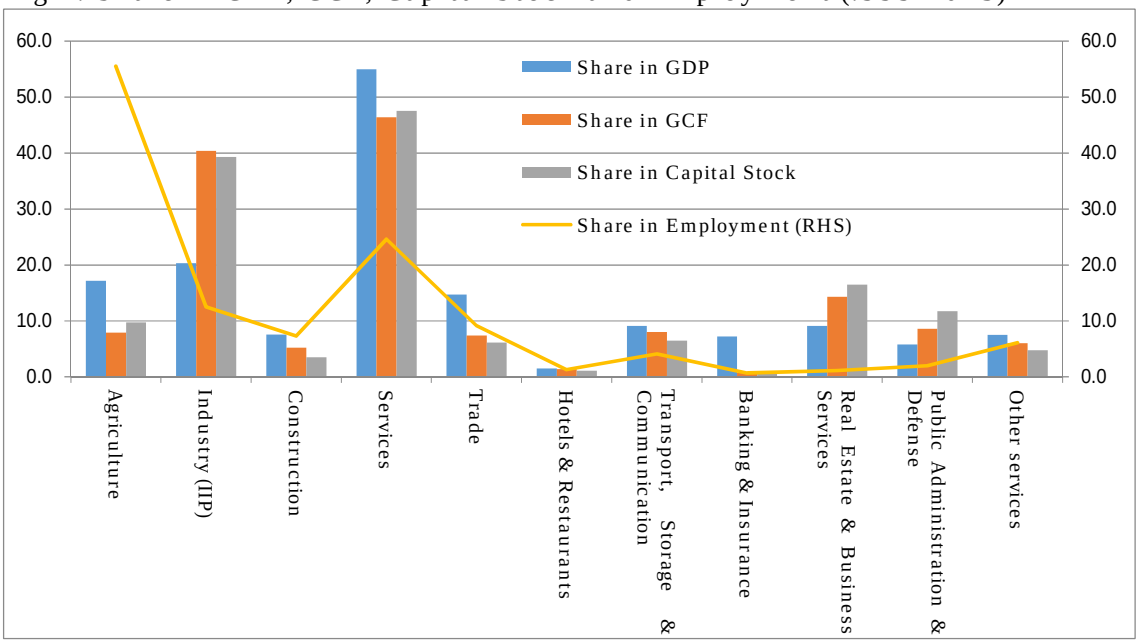
[5] Employment is measured in terms Usual Principal and Subsidiary basis.

Table 3: Number of Persons Employed and average annual growth

Industry	Sector wise employment (Million)				Average Annual Rate of Growth (2011-12/1999-2000)
	1999-00	2004-05	2009-10	2011-12	
Agriculture	238.3	267.7	246	231.3	-0.25
Mining	2.2	2.7	2.8	2.6	1.40
Manufacturing	44.2	53.5	50.9	59.6	2.52
Electricity	1.1	1.4	1.4	2.5	7.08
Construction	17.6	25.6	44.4	50.1	9.11
Services	94.5	106.6	117.0	127.0	2.49
Trade, Hotels & Restaurants	41.4	47.1	49.9	51.8	1.89
Transport, Storage & Communication	14.7	17.4	19.9	22.8	3.73
Financing & Business Services	4.9	6.9	9.7	12.2	7.90
Community & Personal Services	33.5	35.2	37.5	40.2	1.53
Overall Economy	397.9	457.6	462.5	472.9	1.45

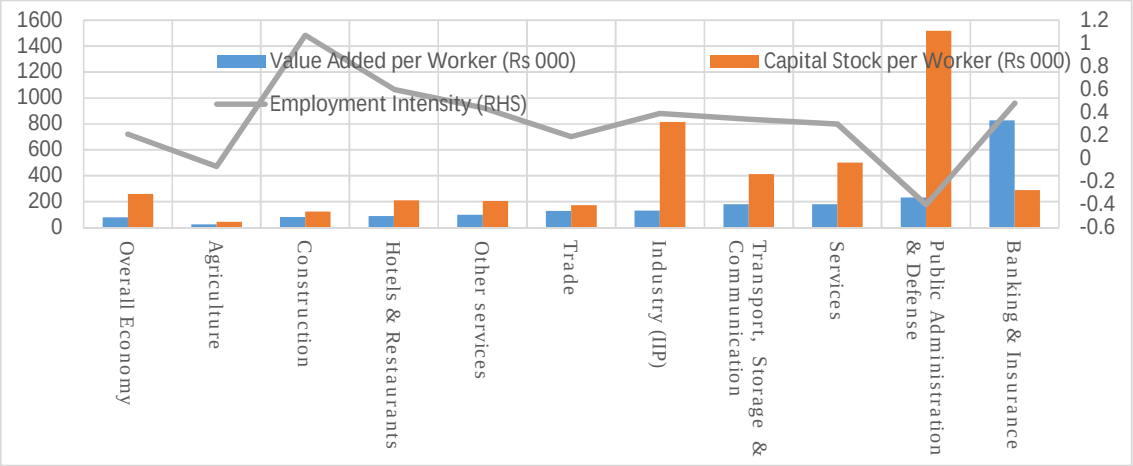
8. Absolute employment and the share in employment in services in isolation do not reveal the structure of the sector and its implication for growth and capital formation. Between 1999-2013, services had a share of 55 per cent in GDP and 46-47 per cent in gross capital formation and net capital stock of the economy. As against that, this sector provided jobs to about a quarter of the overall persons employed. Agriculture has continued to be the dominant job provider. Industry (excluding construction and comprising mining, manufacturing and electricity) though had a share of nearly 40 per cent in investment (both as a flow and as a stock) employed only 12.5 per cent of the work force. This sector indeed needed far more capital for any additional job creation than services, though within services some services like real estate and business services and public administration and defence were even more capital intensive relatively (Fig 4). Services which are complimentary to the real sector, such as trade, transport and banking services have on an average been less capital intensive and growth supportive.

Fig 4: Share in GDP, GCF, Capital Stock and Employment (!999-2013)



9. Another way of looking at the services sector importance is how much value added is there for each person employed in this sector and what is the elasticity of employment for each percentage of growth (Fig 5).

Fig 5: Value Added & Capital stock[6] per worker and Employment Intensity



10. Value added per worker in services as a whole has been more than double the value added per worker at aggregate level. Even compared with industry, value added per worker has been higher by around 40 per cent. As expected, value added in financial services (including banking and insurance and business services) has been even higher making them the most attractive job destinations. Overall growth of value added per person averaged 5.8 per cent during 1999-2012 with services sector having a growth of 5.9 per cent, only a marginally higher. Within services, however, growth of value added per person averaged 8.2 per cent for public administration and defense and 6.6 per cent for trade (Table 4).

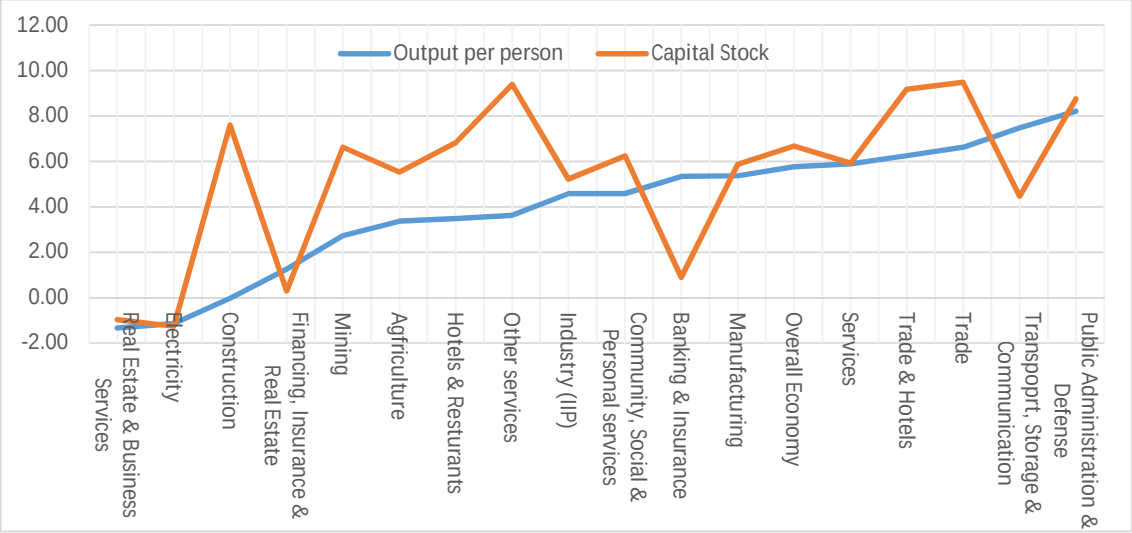
Table 4: Value Added, Capital stock per Worker and Employment Intensity

	Value Added per Worker			Capital Stock per Worker			Employment Intensity		
	1999-2013	2002-2007	2007-2012	1999-2013	2002-2007	2007-2012	1999-2013	2002-07	2007-12
Overall Economy	80.2	67.2	97.8	259.4	210.2	320.7	0.21	0.24	0.07
Agriculture	24.8	21.9	28.2	45.2	38.6	54.1	-0.07	0.31	-0.55
Industry (IIP)	130.1	109.9	159.1	816.4	653.4	1017.6	0.39	0.24	0.37
Construction	82.9	86.7	82.6	124.1	101.2	143.9	1.07	0.77	1.21
Services	179.4	151.6	217.0	501.2	427.2	593.8	0.30	0.25	0.30
Trade	127.9	108.7	157.5	172.6	127	218.9	0.19	0.2	0.11
Hotels & Restaurants	88	79.1	104.8	209.6	154.8	263.8	0.60	0.28	1.08
Transport, Storage & Communication	178.3	145.5	221.2	411.5	347.1	468.7	0.34	0.25	0.37
Banking & Insurance	826.2	667.8	970.0	289.3	291.9	293.3	0.48	0.39	0.50
Real Estate & Business Services	662.7	663.0	661.1	3860.4	4037.7	3818.1	1.16	1.07	1.24
Public Administration & Defence	232.7	200.9	288.6	1518	1360.2	1846.6	-0.40	-0.46	-0.19
Other services	99	89.5	113.4	205.9	156.2	272.8	0.44	0.33	0.51

[6] Value Added and Net Capital Stock per worker is at constant 2004-05 prices.

11. While business services (including real estate services) have been highly capital intensive, other services has indeed been less capital intensive. Overall capital stock per person in services grew at an annual rate of 5.9 per cent compared an economy wide growth of 6.7 per cent and a growth of 5.2 per cent for industry. Trade and public administration sectors recorded a much higher growth of 9.5 per cent and 8.8 per cent, respectively during this period. Services growth to an extent was due to capital deepening. During 1999-2013 period, overall elasticity of labour with respect to GDP growth was 0.21, lower than the elasticity observed for both industry and services. However, apart from construction which had an elasticity greater than 1 (indicating that the employment growth actually was higher than the GDP growth of that sector during this period), in services, real estate and business services also had employment elasticity greater than one. Hotels & restaurants, other services covering education, health and skill development, banking and insurance and transport and communication also suggest significant potential for quality employment growth and possibility of greater labour absorption. Average annual growth of output per person and net capital stock (both at 2004-05 prices) is indicated in Fig 6 below.

Fig 6: Average Annual Growth (1999-2000 to 2012-13)



12. On January 30, 2015, Central Statistical Office announced the key GDP related numbers based on a new methodology consistent with global practices. The new series provides the details for 3 years beginning 2011-12. Broad parameters continue (Table 5) to show results in line with historical picture presented above.

Table 5: GDP Parameters from the New Series (Average of 2011-14 at constant prices)

	Output	GVA at basic prices	GVA Growth	GCF/GVA	Implicit ICOR
Agriculture	10.37	17.75	16.36	2.43	6.74
Industry	44.77	23.59	50.34	5.20	9.68
Construction	11.13	8.76	25.04	-0.93	-26.97
Services	33.74	49.91	39.75	8.55	4.65
Overall Economy	100.00	100.00	36.81	5.78	6.37

13. Economic liberalisation considerably improved the growth prospects of Indian economy including the services sector. Both the complementarity of this sector with the real sectors of the economy and autonomous growth impetus provided by trade liberalisation not only sustained the growth but made this growth broad based. Based on revealed comparative advantage (RCA) calculated using Balassa's index (Balassa 1965) it was observed that India has a strong comparative advantage in computer and information services with index value averaging over 8 during 2005-2010[7], which is vindicated by the share of ICT exports (Table 6).

Table 6: ICT service exports (% of service exports, BoP)

Country Name	2005	2006	2007	2008	2009	2010	2011	2012	2013
China	24.91	24.36	26.51	28.33	31.81	31.28	32.85	31.17	34.56
United Kingdom	37.55	37.11	36.29	36.05	37.79	41.63	39.33	40.21	39.86
India	67.22	68.29	68.15	69.29	66.34	64.10	61.84	65.89	66.73
Japan	19.85	21.67	21.69	24.38	29.80	25.52	28.09	20.71	23.05
United States	19.79	20.59	21.00	21.74	23.37	22.38	22.58	23.21	22.82
World	27.58	27.96	28.33	28.97	31.00	30.90	31.41	31.52	32.76

Policy Options for Services Growth

14. Policy options for sustained services sector growth could be considered broadly as regulatory reforms, skill development and the ones that would facilitate larger investment flows. It should. It is important to remove the procedural hurdles by implementing single window clearances for projects, FDI inflows, etc.

Need for a separate administrative set up

15. There is no nodal ministry for services like retailing while for others like transport and energy there are multiple ministries with conflicting interests. The quasi-federal governance structure has led to multiple regulatory bodies, numerous regulations, and multiple clearance requirements. For example, there are around 13 regulatory bodies for higher education, and each of them functions in isolation[8].

Regulatory Reforms

16. In India many of services particularly railways and air transport, banking and insurance, posts and telecommunication were public sector monopolies before their privatisation or continue to remain so even now, the vested interests continue to affect their growth and variability. Though privatisation has usually followed institutionalising regulatory system (telecommunication, ports, banking and insurance) it is often alleged that it is difficult for the private sector to enter and operate due to lack of third party access, transparent procedures for sharing of scare resources, etc. The regulations have usually taken the service on as is where is basis and have generally been unable to in consideration their evolving nature and linkages with other sectors and support that may be needed for growth of the sector. In sectors like transport there is a lack of comprehensive regulation that can enable integrated door-to-door services and also multi-model transport system. The existing regulations do not take into account the characteristics of the new IT enabled services such as cloud computing, direct selling and express delivery

[7] Arpita Mukherjee- Service Sector India- Asian Development Bank Economics Working Paper 352/2013

[8] Arpita Mukherjee- Service Sector India- Asian Development Bank Economics Working Paper 352/2013 & Twelfth Plan Working Group Report on Higher Education

services. There is also an absence of prescribed standards and common accreditation process which adversely affects services such as construction and education. Real estate sector hardly has any regulation to improve comfort level of investors and consumers alike. Moreover, the government procurement process is not always transparent. Private companies working for the railways have to procure materials from vendors selected by the railways. Price preferences are given to PSUs in sectors like energy[9].

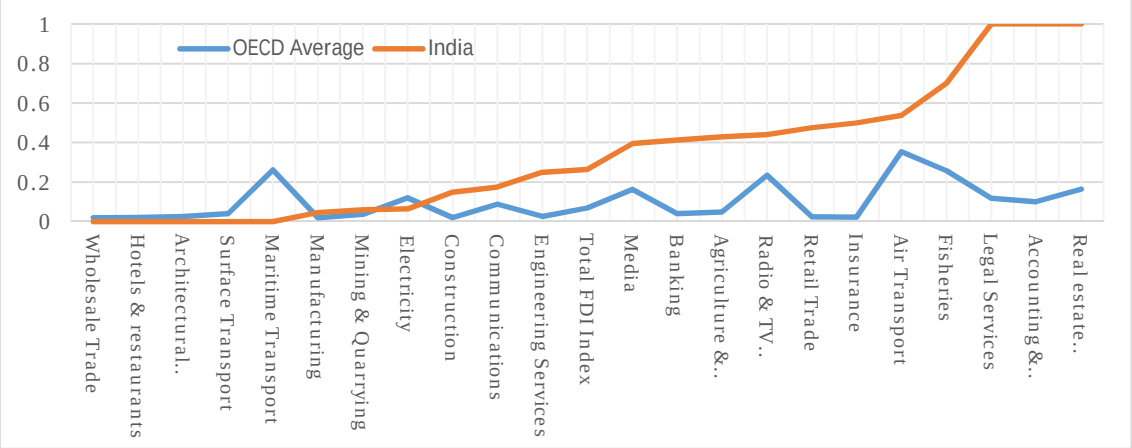
Allowing Private players

17. Monopolies in sectors such as railways and postal should be gradually phased out – at least commercially delivered services should be privatised. Further most professional services lack independent regulators resulting in unevenness of standards across professional services.[10]

Encouraging FDI inflows and domestic investment

18. UNCTAD had estimated that during 2010-12, global FDI flows in trade, finance and business activities amounted to US$ 828 billion constituting 56 per cent of total flows, most of bypassed India. Health care has no FDI cap, but there remains barrier on foreigners providing medical services for profit. Education services in India come under the jurisdiction of both state and federal governments and there are regulations on setting up of new education services in some fields like medicines etc. In the banking & insurance sector, there is still need for regulatory approvals for routine business matters such as opening of new branches, minimum capitalization norms (insurance sectors). OECD compiles a FDI restrictiveness index and in most services India is considered more restrictive (Fig 7)

Fig 7: FDI Restrictiveness Index (2013)



19. Further, as the education policy in vogue accredition can be given to only those entities which are non-profit making bodies, registered as trust or societies. This restricts flow of investment in this sector. Real estate business also suffers from non-uniformity of stamp duty rates. Uniform rates will not only simplify the capital gains taxation would also encourage disclosures of correct considerations. Reduced duty with Cenvat credit will facilitate monetizing the real estate business improving the investment climate and investable resources.

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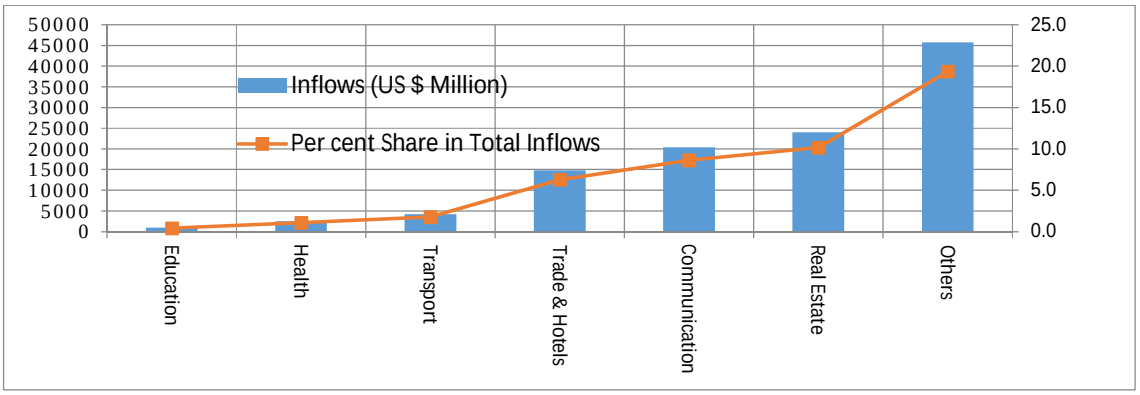
9 Arpita Mukherjee- Service Sector India- Asian Development Bank Economics Working Paper 352/2013

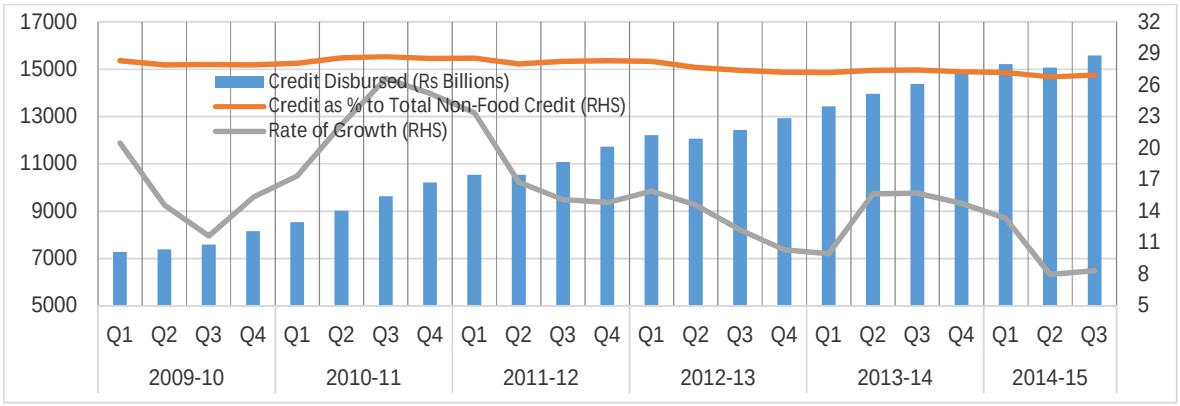
10 Prasad and Sathish (2010) argue that lack of a proper all India accredited system legitimizes foreign restrictions. This is particularly true in case of services like Bar Councils of India, Medical, Dental and Nursing Councils of India and Institute of Chartered Accountants of India to name a few.

20. Overall FDI inflow in India amounted to US $236 billion during April 2000 to November 2014. The share of services sector in this inflow was 47.7 per cent or US $ 113 billion, but the bulk of this inflow was in other services. Education, health, trade and transport together had a share of 9.5 per cent.



21. Services sector has also suffered due to its relatively less preference for credit flow. The credit flow to this sector has not only remained sticky as percentage to non-food credit, despite a sustained increased in its share in GDP, but has also witnessed moderation in growth (Fig 6).

Fig 6: Credit Flow to Services Sector



Improving the apprenticeship system

22. In most countries, apprenticeship concept is the most important intermediary step for improving employability of the workers. In India, however, there is no institutionalized infrastructure which matches an apprentice candidate to an employer; an employer to a candidate; and a trained apprentice to a job. The apprenticeship programme needs to be remodelled so that it becomes an effective on the job training rather than a compliance with the Act without any focus on the outcome. The list of Trades for the Trade Apprentices program has to be increased manifold on urgent basis. The process of adding a trade should not only be continuous but time bound. Reason for the limited use of apprenticeship route for employment for the trainees is the low rates of stipend and for the enterprises its cost. It could be raised to at least 50 per cent of minimum wages so that it covers normal costs of maintenance of the apprentice. Linking it to an economic variable would also endure its getting revised automatically. A weighted deduction of 125 to

150 per cent for all apprentices hired under the Apprentice Act and for all stipends paid to the apprentices (excluding the reimbursement paid by DGE&T & Ministry of HRD) could be considered to make the scheme attractive enough.

Training modules and material

23. National Skill Development Corporation had earlier assessed the incremental human resource requirement till 2022 of 240 million persons and half of that are in the services sector (Table 7).

Table 7: Incremental human resource requirement till 2022

Sector	Incremental Need	Sector	Incremental Need
Informal employment sectors	37.6	IT and ITES	5.3
Transportation and Logistics	17.7	Banking, Financial Services, and insurance	4.2
Organised Retail	17.3	Tourism & Hospitality services	3.6
Real Estate Service	14	Education and Skill Development	5.8
Healthcare	12.7	Media and Entertainment	3
Total Requirement for Services Sector 121 Million Persons			

24. The Skill standard-based curriculum and assessments which provide students with credentials that link recognition with workplace requirement needs to be evolved. Industries should, therefore, be involved in developing benchmark for assessments to evaluate skills, knowledge, and abilities in classrooms and on-the-job training or internships. The training modules and materials for most of the trades have become outdated and are not in line with the needs of the industry/sector. This should be a continuous exercise. For the work of identifying learning needs and skill identification and standardization, bodies like Sector Skill Councils or Consortia should be mandated to identify skills needs and quality assurance in VET delivery. Modular employable skill (MES) should be employed in a big way in all sectors and allocation for this scheme should be enhanced. It should be seen as an opportunity for continuing skill upgradation.

Improving access and reducing cost

25. In education, health, ICT and financial services access is an important issue. In 2010, India had 1.53 internet subscribers per 100 inhabitants compared to 8.35 in China and 35.68 in Korea.[11] This is a cause for concern as India aspires to develop as a knowledge hub. One of the reasons for low ICT penetration may be the lower literacy rate in the country. Due to low IT penetration, 67 per cent of revenue of the Indian IT an ITeS sector is from exports and domestic market only accounts for 33 per cent.[12] Small enterprises have also not been able to realise the full benefits of ICT penetration. To improve ICT penetration, particularly in small units, expenditure incurred in ICT may be provided a weighted deduction of 125 per cent.

26. In health and education, India could become a global hub because of the cost advantages. There could also be cross subsidisation for domestic users. This could improve access and make these quality services all the more affordable.

11 ICT Statistics Database", International Telecommunication Union, May 11, 2012.

12 Arpita Mukherjee, Asian Development Working Paper 352/2013