

CHAPTER 5

LABOUR PRODUCTIVITY OF SERVICE SECTOR

5.1 Introduction

To measure labour productivity, effect of structural change on labour productivity growth is essential to see. The effect of structural change has played a vital role in explaining growth performance of an economy. When the movement of resources is towards the high productivity level from relatively low productivity level then the effect of structural change would be positive. Difference in productivity level between the sectors and the change in share of employment from low productivity to high productivity sector is needed for above analysis. Labour productivity is used as a proxy of employment productivity. For this Shift Share Technique is used to measure the effects of shifts and difference in sector shares on aggregate growth rates through considering decomposition of aggregate productivity growth proposed by Maddison (1952).

$$\Delta y/y = \sum_{j=1}^k \frac{Y_j}{Y} \left[\frac{\Delta y_j}{y_j} \right] + \sum_{j=1}^k \left[\frac{y_j}{y} \right] \Delta s_j + \sum_{j=1}^k \left[\frac{y_j}{y} \right] \left(\frac{\Delta y_j}{y_j} \right) (\Delta s_j)$$

Where Δ represents change, y is aggregate labour productivity of service sector (or GVA of service sector per worker), y_j is labour productivity of sector j , Y is initial GVA, Y_j is initial output of sector j , and S_j is employment share of sector j .

This is often known as a 'Shift-Share Decomposition' of an aggregate growth rate. The first term in right hand side of equation represents the 'Growth Effect' it is that part of overall productivity change which is caused by productivity growth within the sectors. The second term is called 'Shift Effect' and measures the effect of the change in sectoral employment share on overall growth. The last term is expressed as an 'Interaction Effect' and it depicts the joint effect of changes in employment shares and sectoral productivity. The effect of last is usually small as in most cases sectors which have a rapid productivity growth and decline in employment shares.

All three effect of aggregate productivity growth are explained for services sector as a whole and separately for its sub sectors also.

5.2 The Growth Effect

It can be explained through table 5.1 which shows the decomposition of the growth rates of labour productivity by components and by sectors.

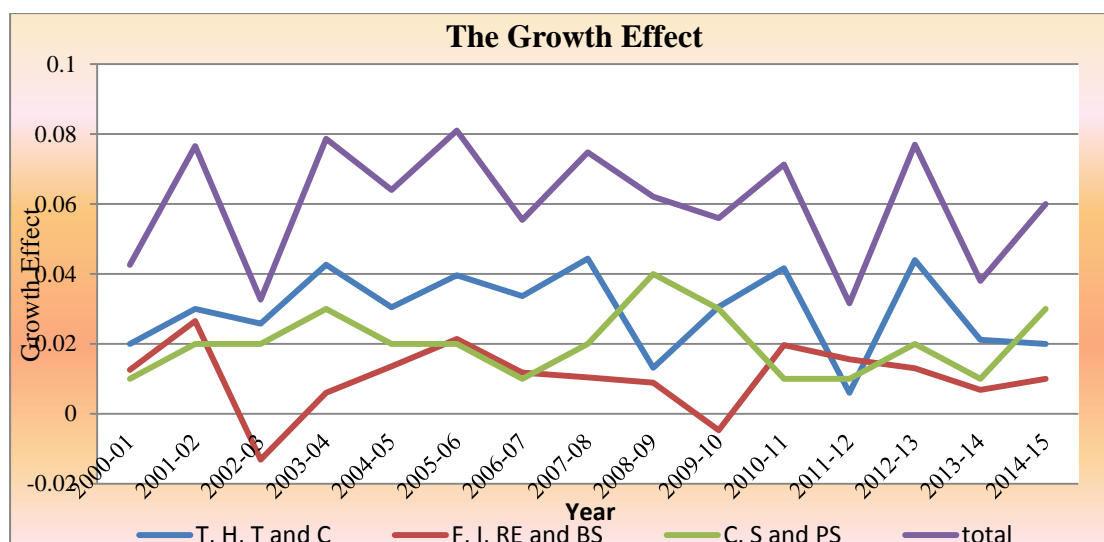
For all subsectors by far the largest part of the overall productivity increase is explained by the rise in growth effect. Overall growth effect of service sector has increased since 2000-01 but it has been showing stagnant performance.

Table 5.1 Total Growth Effect of Service Sector Growth				
Year	Growth Effect (1)	Growth Effect (2)	Growth Effect (3)	Total Growth Effect
1999-00	–	–	–	–
2000-01	0.02	0.01	0.01	0.04
2001-02	0.03	0.03	0.02	0.08
2002-03	0.03	-0.01	0.02	0.03
2003-04	0.04	0.01	0.03	0.08
2004-05	0.03	0.01	0.02	0.06
2005-06	0.04	0.02	0.02	0.08
2006-07	0.03	0.01	0.01	0.06
2007-08	0.04	0.01	0.02	0.07
2008-09	0.01	0.01	0.04	0.06
2009-10	0.03	0.00	0.03	0.06
2010-11	0.04	0.02	0.01	0.07
2011-12	0.01	0.02	0.01	0.03
2012-13	0.04	0.01	0.02	0.08
2013-14	0.02	0.01	0.01	0.04
2014-15	0.02	0.01	0.03	0.06

Source: Researcher's Calculation based on Economic Survey of India 2015-16 and CSO and Director General of employment and Training, Ministry of Labour and Employment.
Note: Here (1) indicates Trade, Hotels, Transport and Communication, (2) indicates Financing, Insurance, Real Estate and Business Services and (3) indicates Community, Social and Personal Services. Total Growth effect is of Service sector as a whole.

Most importantly, the contribution of growth in the service sector to improvements in aggregate labour productivity is highest in ‘Trade, hotels, transport and communication’ and followed by ‘Community, social and personal services’.

Figure 13: The Growth Effect of Service Sector



From figure 13 it is clear that total growth effect of service sector has been increasing i.e. productivity of service sector has been increasing due to increase in GVA of economy. Change in the productivity of service sector is composition of growth in the productivity of its different services. High productivity has found in ‘Trade, hotels, transport and communication’ and lowest in ‘Finance, insurance, real estate and business services’

5.3 The Shift Effect

It measures the effect of the change in sectoral employment shares on overall growth. The negative shift effect of sector represents the diminishing share of sector in overall growth. Table 5.2 depicts the Shift effect in service sector.

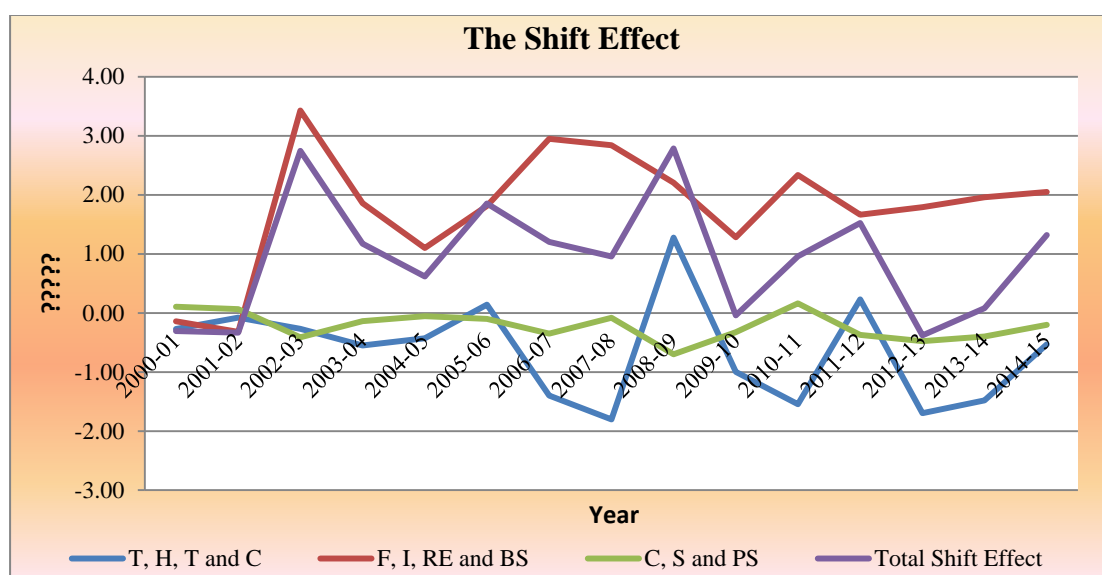
From the table it is clear that the positive shift effect of service sector represents the increases of services sector’s total contribution in overall growth except for few years. Moving towards the different services, negative shift effect of both sectors except ‘Financing, Insurance, Real Estate and Business services’ indicates diminishing share in the growth of service sector, leaving development in ‘Financing, Insurance, Real Estate and Business Services’ as the main positive driving force of growth in service

sector this is due to due to financial inclusion and increase in awareness of people towards the banking and insurance.

Table 5.2 Total Shift Effect of Service Sector Growth				
Year	Shift Effect (1)	Shift Effect (2)	Shift Effect (3)	Total Shift Effect
1999-00	-	-	-	-
2000-01	-0.27	-0.14	0.11	-0.31
2001-02	-0.08	-0.32	0.07	-0.33
2002-03	-0.27	3.43	-0.41	2.75
2003-04	-0.55	1.86	-0.14	1.17
2004-05	-0.43	1.10	-0.05	0.62
2005-06	0.14	1.81	-0.10	1.85
2006-07	-1.40	2.95	-0.35	1.20
2007-08	-1.80	2.84	-0.08	0.96
2008-09	1.28	2.21	-0.70	2.79
2009-10	-1.00	1.28	-0.32	-0.04
2010-11	-1.54	2.34	0.16	0.96
2011-12	0.23	1.66	-0.37	1.52
2012-13	-1.70	1.79	-0.48	-0.38
2013-14	-1.48	1.96	-0.40	0.08
2014-15	-0.53	2.05	-0.20	1.32
Source: Researcher's Calculation based on Economic Survey of India 2015-16 and CSO and Director General of employment and Training, Ministry of Labour and Employment. Note: Here (1) indicates Trade, Hotels, Transport and Communication, (2) indicates Financing, Insurance, Real Estate and Business Services and (3) indicates Community, Social and Personal Services. Total Growth effect is of Service sector as a whole.				

Figure 14 clearly shows that the shift effect is highest in 'Financing, insurance, real estate and business services' and lowest in 'Trade, hotels transport and communication' followed by 'Community, social and personal services'. Figure represents that even the shift effect of 'Financing, insurance, real estate and business services' is higher than the overall shift effect of service sector which indicates that this sub sector of service is contributing more in service sector than the contribution of service sector in overall GVA of economy.

Figure 14: The Shift Effect of Service Sector



5.4 The Interaction Effect

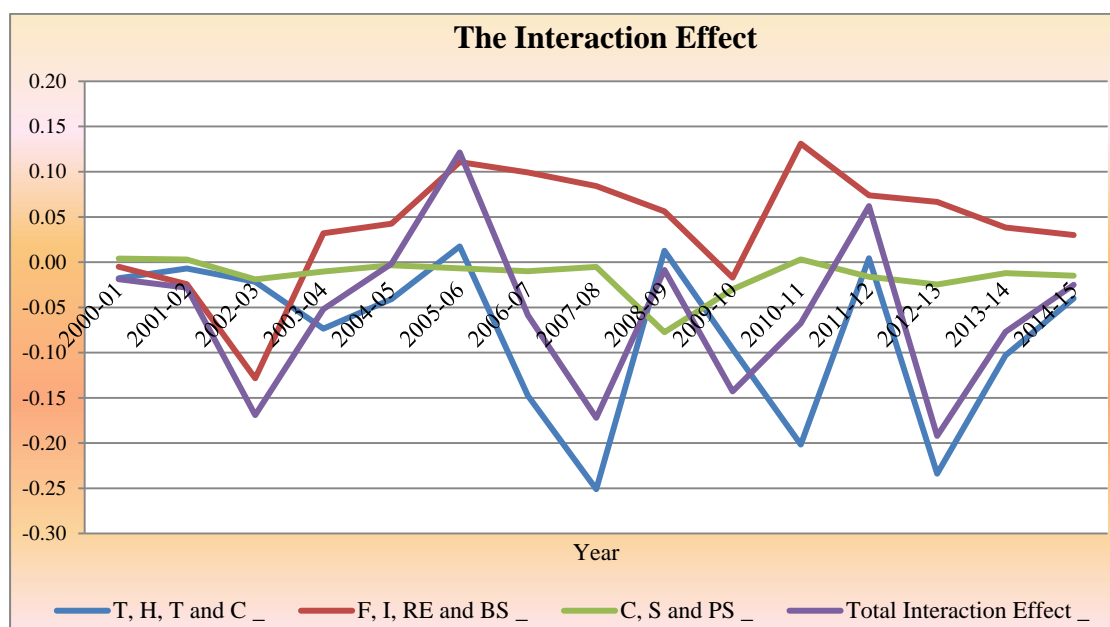
This effect shows the negative relationship between labour productivity and employment share. It represents that value will low in case of sectors with rapid productivity growth. Table 5.3 depicts the interaction effect of service sector.

Year	Interaction Effect (1)	Interaction Effect (2)	Interaction Effect (3)	Total Interaction Effect
1999-00	-	-	-	-
2000-01	-0.02	-0.01	0.00	-0.02
2001-02	-0.01	-0.02	0.00	-0.03
2002-03	-0.02	-0.13	-0.02	-0.17
2003-04	-0.07	0.03	-0.01	-0.05
2004-05	-0.04	0.04	0.00	0.00
2005-06	0.02	0.11	-0.01	0.12
2006-07	-0.15	0.10	-0.01	-0.06
2007-08	-0.25	0.08	-0.01	-0.17
2008-09	0.01	0.06	-0.08	-0.01
2009-10	-0.10	-0.02	-0.03	-0.14
2010-11	-0.20	0.13	0.00	-0.07
2011-12	0.00	0.07	-0.02	0.06
2012-13	-0.23	0.07	-0.02	-0.19
2013-14	-0.10	0.04	-0.01	-0.08
2014-15	-0.04	0.03	-0.02	-0.03

Source: Researcher Calculation based on Economic Survey of India 2015-16 and CSO and Director General of employment and Training, Ministry of Labour and Employment.
 Note: Here (1) indicates Trade, Hotels, Transport and Communication, (2) indicates Financing, Insurance, Real Estate and Business Services and (3) indicates Community, Social and Personal Services. Total Growth effect is of Service sector as a whole.

Table represents that service sector with low value of interaction effect represents the rapid productivity growth. ‘Trade, hotels, transport and communication’ and Community, social and personal services’ with negative and low interaction effects shows that their employment share has decreased on an average with the increase in labour productivity while on an average positive interaction effect of ‘Financing, insurance, real estate and business Services’ represent the slow productivity growth it depicts that increase in labour productivity with rise in employment share in service sector.

Figure 15: The Interaction Effect of Service Sector



5.5 Conclusion

Therefore it has been observed that services which are generating large share of employment have low labour productivity while services with a low share in employment generation have high labour productivity. ‘Trade, hotels, transport and communication’ and ‘Community, social and personal services’ have been grown with rapid labour productivity growth with low employment share. Though ‘Financing, insurance, real estate and business services’ is contributing highest employment in service sector, yet labour productivity is lowest i.e. quality of employment is not as good as it should be. It represents that there is negative relationship between labour productivity and employment.

CHAPTER 6

CONCLUSION, MAJOR FINDINGS, POLICY IMPLICATIONS AND LIMITATIONS OF THE STUDY

The present study was an attempt to find out the trend and pattern of India's service sector and its different services. Further the effect of structural change on labour productivity growth has been carried out to analyse the performance and labour productivity of service sector. It's a well-known fact that service sector in India has experienced sustain and secular growth but the maximum growth was noticed in 2005-06 when financial inclusion came in existence and service sector could not effected due to recession of 2008 just because of the growth of 'Financing, insurance, real estate and business services'. It has grew with a sustain growth except for few years. Overall growth is satisfactory. Share of service sector is continually increasing; it has placed at first with the highest share among all other sectors in terms of contributing in growth. This all is due to increase in economic affluence, changing role of women, cultural changes, IT revolution, markets development, market orientation, health care consciousness, economic liberalization, widespread urbanisation and export potential. The increases in these all factors are process of development which indicates that the economy is moving towards the path of development and service sector is working as a catalyst in this process. Study has only focused on three services broadly as considered by NIC 2008: 'Trade, hotels, transport and communication', 'Financing, insurance, real estate and business service' and 'Community, social and personal services'.

6.1 Major Findings

Major findings of study can be summarized as follows:

- 1) Service sector has been growing with high growth rate.
- 2) Share and Growth rate of 'Financing, insurance, real estate and business services' are highest followed by 'Trade, hotels, transport and communication' and 'Community, social and personal services'.
- 3) 'Trade, hotels, transport and communication' and 'Community, social and personal services' have low employment share in service sector with rapid

productivity growth while 'Financing, insurance, real estate and business services' has been contributing largest employment share in service sector with lowest labour productive employment.

6.2 Conclusion

As already discussed in detail about two objectives of the study and on the base of findings of the study which have detailed in chapters 4 and 5 the main conclusion can be explained as follows:

Study has only focused on three services broadly as considered by NIC 2008. 'Trade, hotels, transport and communication', 'Financing, insurance, real estate and business service' and 'Community, social and personal services', Their trend can be explained as follows:

'Trade, hotels, transport and communication' have been showing a mean growth rate with the increasing share in service sector and it places at third and second in terms of growth rate and share in service sector respectively. Much fluctuation have been seen in its growth rate but maximum times its growth rate is high than the overall growth of service sector so it can be say that its contribution is noticeable. Directly or indirectly it encourages tourism which is contributing approximately 6 per cent in GDP and trade is an essential factor of economy for growth.

'Financial, insurance, real estate and business services' has grown with high growth robustly and its contribution is highest in service sector growth followed by 'Trade, hotels, transport and communication' and 'Community, social and personal services'. By considering the overall trend of growth rate it has been found that it has a highest growth rate also. It has found that maximum time especially since 2005 its growth rate was higher than the overall growth rated of service sector. Since 2005-06 after financial inclusion these services have become a catalyst for service sector and Indian economy. In this case development of service sector of India is following normal trend of development which is also followed by maximum of countries with the increasing share and growth of 'financing, insurance, real estate and business services'.

‘Community social and personal services’ has grown with lower growth rate except for few years 2009, 2010 and 2015 with the lowest share in service sector. Share of service sector has been decreasing since 2000.

Finally, to conclude the second objective it is essential to talk about the all three effects of aggregate labour productivity measurement for different services with a service sector as whole and for better understanding it should be written in points:

- 1) Total growth effect of service sector represents that many fluctuations have found in the overall productivity increase in service sector but on an average it has increased since 1999-2000.
- 2) Positive shift effect in service sector represents that the contribution of service sector is increasing in growth and resources are shifting towards the service sector from other two sectors.
- 3) Negative or low interaction effect represents rapid productivity growth in service sector along with the declining share of employment.

Hence, service sector overall productivity has been increasing along with the contribution in growth.

4) The overall productivity has increased in all three services but in case of ‘Trade, hotels, transport and communication, and ‘Financing, insurance, real estate and business services’ it is stagnant when it is compared with 2000-01 to 2014-15 while productivity of ‘Community, social and personal service’ has increased. Whole picture of growth effect represents that productivity in ‘Trade, hotels, transport and communication’ and ‘Community, social and personal services’ have increased.

5) The negative shift effect of ‘Trade, hotel, transport and communication’ and ‘Community, social and personal services’ represent that the contribution of both services in terms of providing the employment share in service sector has decreased while the contribution of ‘Financing, insurance, real estate and business services’ is increasing therefore employment share of these services has been increasing and shifting towards it from other two sectors.

6) Rapid productivity growth has found in ‘Trade, hotels, transport and communication’ and ‘Community, social and personal services’ with decreasing

employment share while on the other hand financing has been not showing rapid productivity growth with the large employment share.

Therefore, it can be concluded that 'Financing, insurance, real estate and business services' have provided large employment to service sector but its labour productivity is low while on the other hand with high labour productivity 'Trade, hotels, transport' and 'Community, social and personal services' have been constituting less employment share in service sector.

6.2 Policy Implications

Policy implications of the study on the basis of analysis are as follows:

- 1) It is important for developing countries like India, where service sector is dominant that government should create new opportunities for the development of service sector.
- 2) India needs more private investment in 'Trade, hotels, transport and communication' and 'Community, social and personal services' because where on the one hand former services are highest productive services with the lowest employment share while on the other hand latter services are lowest productive among other services with the highest employment share.

6.4 Limitations of the Study

Present study has also some limitations which are as follows:

- 1) Only organised public and private employment has considered in study, unorganised sector has not taken because of unavailability of data so may be result will be different by the consideration of unorganised sector also.
- 2) Broadly only three services which are contributing highest share in services among all are taken into consideration.

6.5 Future Scope of the Study

Present study is one step to move towards the attempt to analyse the role of service sector in Indian economy. But there are so many limitations of study, which can be overcome by other rational researcher through new ideas and methodologies. Limitations of the study are as follows:

- 1) Only service sector has considered in study it can be extended to various sectors.
- 2) Time period of analysis can be enhanced for wide study.
- 3) Study is at national level it can also be done at regional level.