Structural Change and Dynamics of Tertiary Sector in India

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Modern economic development cannot be explained satisfactorily in terms of labour and capital alone. A large number of theories of economic development have been propounded in the recent past. Different factors have been identified as determinants of growth in different growth models. The modern economists emphasize the catalytic role that technological changes play in the growth of an economy. The technological changes bring about an increase in per capita income, either by reducing the amount of inputs per unit of output or by yielding more output for a given amount of input. Technological change in an economy, therefore, refers to change in the input-output relations of production activities. Consequently as the economy moves from lower to higher stages of development, there occurs a shift from simpler to more modern and complicated techniques of production on the one hand and from primary to secondary and/or to tertiary sectors on the other. The excess growth of tertiary sector coupled with state-of-the-art technology has got its own implications for the future development patterns of the system.

In India, the share of tertiary sector in the gross domestic product has crossed the fifty four percent mark. The nature and role of this excessive tertiariization has become a matter of concern. The work is an attempt to analyze the structure, linkage pattern and dynamics of the tertiary sector growth in India and its implications for the future.

Review of Studies

The studies available on tertiary sector may be classified into four broad categories. First, the nature, structure, characteristics and the growth of tertiary sector have been studied by most of the studies. The second category of studies deals with the changing pattern of employment generation and labour productivity in tertiary sector. Third set of studies relates to recent excessive and out-stretched growth of tertiary sector in some developing countries of world. Another set of studies relates to Leontief’s model wherein interrelatedness among different sectors has been studied.

The review of studies is indicative of the fact that most of the studies done, on Indian economy, so far are too aggregative or even if the
desegregation has been achieved, the coverage is too small. Most of the studies have dealt with individual sub-sectors or the overall economy-wide aggregates and have failed to capture the underlying structure, dynamics and linkage pattern of the tertiary sector. A study fortified with disaggregated data going rigorously into structure, dynamics and linkage pattern of the tertiarization of Indian economy is need of the time.

Objectives

In this work it has been broadly hypothesized that the liberalization, characterized by excessive and skewed tertiarization of the economy, has its own consequences in terms of structure, linkage pattern and macro dynamics of the system. From this point of view, the main objectives of the study are:

1. To analyze the nature, structure and growth of tertiary sector in India.
2. To delineate the structural change in tertiary sector into its time and space dimension in India.
3. To analyze the backward and the forward linkage behaviour of the tertiary sector at a disaggregated level.
4. To explore the macroeconomic dynamics of the out-stretched growth of tertiary sector in India.

Methodology

Keeping in view the broad objectives of the study, the secondary data on the Indian economy has been used. For analysis of structure, the sector level data from ‘National Accounts Statistics’ (CSO) have been used. In addition, some individual service sector specific sub-sector departmental data sources also form the database of the study. The structural change has been analyzed with reference to sectoral shares, production structure, employment structure, input structure and some other key elements of structure. Using statistical techniques, the temporal and spatial dimension of the tertiarization has been explored. In order to analyze the production structure, the data has been obtained from various issues of ‘Economic Survey of India’ for the year 1950-51 to 2006-07. The data for analyzing employment structure has been obtained from various rounds of surveys of National Sample Survey Organization for the year 1993-94, 2000-01 and 2004-05 respectively.

To analyze the linkage patterns and the underlying dynamics, a series of input-output transaction tables for the year 1968-69, 1973-74, 1978-79,
1983-84, 1989-90, 1993-94, 1998-99, and 2003-04 have been used. Wherever needed, appropriate price adjustments and data refinements have been done. In order to analyze the above data, tabular analysis has been supported with percentages, averages, growth rates and measures of forward and backward linkages.

**Conclusion and Policy Implications**

Keeping in view the objectives and using the methodology outlined above, following are the conclusions and policy implications:

1. By the end of the twentieth century most of the developed countries have shown a remarkably similar structure of their economies. In most of the developed countries of the world, the emerging pattern is indicative of the fact that the primary sector contributes less than 5 percent in GDP and labour force, secondary sector from 20 percent to 30 percent and services around 70 percent. The most striking feature is that today the employment structure of most developed countries is strikingly similar to their production structure, thus, reflecting a high degree of inter-sectoral equality in their productivity and income levels.

2. On the other hand, in developing countries, primary sector is shrinking over time and at the cost of this shrinkage, the tertiary sector is emerging as a dominant sector followed by secondary sector in terms of its share in GDP. It is interesting to note that in some of the developing countries like India, leaving the standard growth pattern of primary, secondary and tertiary; the tertiary sector has grown by bypassing the secondary sector. However, this disproportionate growth in GDP shares of these developing countries including India has not been accompanied by similar shift in their labour force.

3. During the last few decades, since India attained independence, the focus of policy makers was primarily on agriculture and manufacturing sectors. The tertiary sector comprising of services was perceived as the by-product of developments in the primary and secondary sectors. It was believed that the tertiary sector had a low employment potential, was less remunerative and productive, and had poor revenue generating capacity with slow and negligible employment growth opportunities. In view of these negative impressions about the tertiary sector, it was given only a residuary status by the economic policy makers. As a result, its growth went unrecognized for several years. But in recent times there has been an unprecedented spurt in the tertiary sector
activities, as a result of which it has acquired a new status in Indian economy.

4. Last one and half decade has been characterized by a drastic change in the structure of Indian economy. At current prices, the share of tertiary sector in the gross domestic product of India has crossed the fifty percent mark and is around fifty five percent. At the current price level of 1999-2000, the contribution of primary sector which is composed of agriculture, forestry, fishery and mining has gradually declined from 56.84 percent of GDP in 1950-51 to 45.95 per cent in 1970-71 then finally to 20.55 percent in 2006-07. The contribution of secondary sector which is composed of manufacturing industries, electricity, gas and water supply has increased its share of GDP from 13.62 percent in 1950-51 to 20.50 percent in 1970-71 and then to 24.71 percent in 2006-07. The share of tertiary sector which is constituted of trade, transport and other personal and community services has gradually increased from 29.54 percent in 1950-51 to 33.55 percent in 1970-71 and to 42.72 percent in the year 1990-91 and finally touched to the level of 54.74 percent in 2006-07.

5. In response to the new policy regime and spate of reforms, different sectors of the economy depict a differential behaviour pattern. The impact of reforms on different sectors is not uniform on all the sectors. The primary sector has responded adversely to the process of economic reforms of the nineties. The declining share in GDP and damped growth rate of primary sector is a self-speaking fact. The secondary sector, with signs of indifference, is still in its transitional phase of making adjustments among different factors like labour, capital and technology etc. in the economy. The tertiary sector has responded positively with largest share in GDP and with a high growth rate of more than 10 percent per annum.

6. The relative share of different sub-sectors of tertiary sector is indicative of the fact that almost all the sub-sectors of the tertiary sector have registered an increase in percentage share of GDP over the entire period of analysis. The most consistent and highest share has been observed in the sub-sector ‘trade, hotels, transport and communication’ from 11.30 percent in 1950s to 18.34 percent in 1990s, and to 26.82 percent in the current decade. Thus, its latest share has more than doubled as compared to what it was during the beginning. In the recent years, it is the communication segment which has witnessed more growth as compared to other segments of this sub-sector. The sub-sector ‘finance,
insurance, real estate and business services’, has opened a new vista especially after opening up of the Indian economy in 1990's. The percentage share of this sub-sector in GDP after remaining constant around 7.00 percent up to 1980-81 increased to 10.58 percent in 1990-91 and it has further improved to 14.31 percent in 2006-07. In comparison to real estate and insurance, it is the finance and business services segment that has registered a major share in this sub-sector. Due to the encouragement given by the Government to the policy of liberalization and privatization in the area of banking and finance, many new business services like tele-banking, event management and advertising (both print and media) have now emerged on the surface. The relative percentage share of sub-sector ‘public administration, defence and other services' has also shown almost consistent increase in GDP from 10.57 percent in 1950-51 to 13.61 in 2006-07. This may be attributed to the fact that the process of economic development involves rapid expansion of social and economic welfare services such as education, public health and family welfare etc.

7. The sub-sector wise growth profile of the tertiary sector shows that within tertiary sector, over a period of time all the sub-sectors/segments have not grown uniformly. Tertiary sector growth of decade of eighties was led by real estate segment, whereas the growth of nineties was due to high growth rate of the finance and business services segment. Currently the ‘trading, hotels and communication’ segment is leading the growth of tertiary sector. Within this sub-sector, the growth leader is the communication segment followed by ‘trading, transport and hotels’.

8. The GDP share and growth profiles of different sub-sectors of the tertiary sector shows that the communication, finance, insurance and business services segment have grown well above that of the economy especially during the reform process of 1990's. During the last ten years the communication segment alone has grown by more than three times. Finally, the Indian economy is now passing through a transitional phase to ultimately culminate into a tertiary sector led economy. But the long-term sustainability of such a tertiary sector led economy with weak primary and secondary sectors is a million dollar question.

9. The total output growth may be decomposed into four components, i.e., domestic final demand expansion, export expansion, import substitution and intermediate demand expansion. At aggregate level during the new regime, the Indian economic growth has been primarily import
substitution driven and there is no visible technological change output driver in the system. The much needed technological change is missing in the system. Primary sector is banking upon domestic demand and import substitution component and the secondary sector is relying on import substitution alone. The resulting tertiarization of the Indian economy is the outcome of enhanced domestic and international demand and that too in the absence of any major technological change in the system. The export demand has played a significant role in tertiary sector, but the other two sectors have lagged behind in this regard. The much needed change in the intermediate input demand component which signifies technological change is altogether missing in the system. In such a situation, the very viability of overgrown tertiary sector also comes under scanner.

10. Spatial and temporal patterns of sectoral shares of tertiary sector in relation to other sectors shows that on the onset of effects of new policy regime, in 1994, the share of primary, secondary and tertiary sector in the national income was 35.90, 21.30 and 42.80 percent respectively. It was a period when the tertiary sector had started taking off. The share of a sector when related to per capita level of the states shows that level of per capita income (PCI) of a state and its primary sector share are inversely correlated. That is higher per capita income means the lower share of primary sector and vice-versa. On the other hand, there is a positive and statistically significant correlation between PCI level and the share of secondary and the tertiary sector.

11. At the juncture of new regime, some of the states/union territories were in an advantageous position as far as the tertiary sector level of development is concerned. The states/union territories, with above average national share of tertiary sector in national income, were Delhi, Goa, Andhra Pradesh, West Bengal, Jammu and Kashmir, Kerala, Maharashtra, North-Eastern states and group of union territories. On the other hand, low PCI states like Bihar and Orissa were primary sector dominated states. The state of Punjab with higher PCI was the only primary sector dominant state. So, the larger percentage share of tertiary sector in state domestic product was confined to union territories or some specifically endowed states. In the year 2004-05, all states joined the tertiary sector led growth bandwagon except the states of Chhattisgarh, Jharkhand, Himachal Pradesh and Punjab. Out of these tertiarization trailing states, Himachal Pradesh replaced its primary sector by industrialization, but Punjab has missed the bus and has
remained traditionally a primary sector led economy. This is, what explains the deteriorating position of Punjab in terms of PCI in relation to other states. The higher PCI is a function of secondary sector or tertiary sector development level.

12. During the process of economic growth, the Indian economy has experienced a change in production structure with a shift away from agriculture towards industry and tertiary sector. However, this corresponding shift in the sectoral shares of GDP has not been accompanied by similar shifts in labour force. The GDP share of primary sector has although declined from 56.84 percent in 1950-51 to 39.93 percent in 1980-81 and to 20.55 percent in 2006-07. However, during the same period the percentage share of labour force in this sector has shown a marginal decline from 72.10 percent in 1950-51 to 68.80 percent in 1980-81 and to 50.20 percent in 2006-07. Thus, half of India’s labour force is still engaged in primary sector activities, whereas its percentage contribution in GDP has come down to merely one fifth. The share of secondary sector in GDP has shown a marginal increase from 13.62 percent in 1950-51 to 22.03 percent in 1980-81 and to 24.71 percent in 2006-07. In comparison to that its corresponding percentage share in employment has also shown a marginal improvement from 10.70 percent in 1950-51 to 13.50 percent in 1980-81 and then to 20.40 percent in 2006-07. Thus, the percentage share of labour force in secondary sector has moved almost similar to that of its GDP share, but in India the level of labour productivity from this sector has been quite low. The share of tertiary sector in GDP has shown a substantial increase from 29.54 percent in 1950-51 to 38.04 percent in 1980-81 and to 54.74 percent in 2006-07. In comparison to this, during the same period the percentage share of employment in this sector has shown a somewhat increased share from 17.20 percent to in 1950-51 to 17.70 percent in 1980-81 and to 29.40 percent in 2006-07. However, in India this proportionate change is very slow and does not conform well to the experience of developed countries.

13. Spatial structure of the Indian economy is characterized by the dominance of rural workforce in the primary sector and that of urban workforce in the secondary and tertiary sector. Urban area is a supplier of 57 percent of the workforce compatible to the tertiary sector’s share of more than 54 percent in the GDP. Sectoral employment shares have displayed a marginal decrease in primary sector and slight rise in secondary and tertiary sectors. In rural areas, in primary sector, the
shrinking in employment has been shared more by the male workforce and enhanced opportunity in employment, in secondary and the tertiary sector has also gone in favour of the male workforce. That is to say emerging opportunity in the rural secondary and tertiary sector has been availed by a shift of male workforce from primary to other two sectors. On the other hand, in urban areas, in primary sector, the shrinking in employment has been shared more by the female workforce and enhanced opportunity in employment, in secondary and the tertiary sector has also gone in favour of the female workforce. That is to say emerging opportunity in the urban secondary and tertiary sector has been availed by a shift of female workforce from primary to other two sectors. One line conclusion that follows from this discussion is that tertiary sector led growth of GDP is urban centric and new opportunities of this growth are being shared by the female workforce also, but in the rural area, any marginal change is shared by the male workforce.

14. Area and gender-wise distribution of workforce in various sub-sectors of tertiary sector highlights some interesting facts. ‘Trade, hotels and communication’ form a major chunk as far as the employment is concerned. In year 2000-01, in urban area, 72.88 percent of the workforce was engaged in this sector. This share came down to 49.62 in just a span of four years in 2004-05. In this reduced share of employment, male is the major sufferer, as compared to the female. In rural areas this sub-sector has not shown any change, as far as the employment share is concerned. But within the same share of employment, the share of female has improved and the space has been vacated by the male. Next sub-sector is the ‘financing, insurance, real estate and business services’. The share of employment in this sub-sector, in urban area, has improved to 7.30 percent in 2004-05 as compared to 6.84 percent in the year 2000-01. But in rural area, the share is stagnant at 1.79 percent. The entry of female in this sub-sector in the rural area is a new phenomenon. In the new policy regime, in public administration, defence and other services sub-sector, the ‘other services’ component dominates the sub-sector. In urban areas, the employment share which was 20.26 percent in 2000-01 has touched the level of 43.07 percent in the year 2004-05. Both the sexes are gainers in the employment with male slightly on the higher side. On the other hand, rural area is almost stagnant in this aspect with minor adjustment of employment in favour of male labour. On the whole, sub-sector-wise
employment has depicted a higher change in the urban area as compared to that in the rural area. In this process of change in employment structure, female are appearing as gainers of the change as far as the new employment opportunities in the tertiary sector are concerned.

15. Spatial and temporal patterns of output/labour ratio in tertiary sector in relation to other sectors have been analyzed. In 1993-94, the output/labour ratio in primary, secondary and tertiary sector at the national level were 0.78, 1.05 and 1.28 respectively. That is to say, at the time of take off stage of tertiary sector, the efficiency of labour was the highest in tertiary sector as compared to the other two sectors. The two important facts emerge out of analysis at this level. First, invariably, the states/union territories with higher output/labour ratio in tertiary sector have a higher per capita income. Secondly, during the new policy regime, the output/labour ratio has improved in almost all the states/union territories over the passage of time. Since the labour in general and the intellectual capital in particular is the major input in tertiary sector, so states/union territories with higher labour efficiency are leading the tertiarization process. This is a lesson for the states trailing in this tertiary sector revolution that if higher growth level of income and higher PCI is to be achieved, the key to success lies in the development of human resources. Lastly, the tertiarization of a region is a function of intellectual capital endowments of that region.

16. The percentage distribution of output in the Indian economy shows that intermediate use of goods and services was 36.80 percent in the year 1968-69. It rose to 42.40 in 1978-79; to 44.60 in year 1993-94 and to 48.40 percent in the year 2003-04. On the other hand, the use of goods and services for final consumption purposes has decreased proportionately. From 63.20 percent in the year 1968-69, it came down to 51.60 percent in the year 2003-04. Improvement of intermediate use is indicative of the fact that processing part of the system is improving over time. The final use component is progressively being replaced by the processed or manufactured one; which is a positive development. But this pace of change is very slow as compared to some other economies of the world.

17. When this output structure is viewed at a disaggregate level, the intermediate use of commodities has improved from 38.80 percent in 1968-69 to 48.00 percent in 1993-94 and to 55.00 in the year 2003-04. But the corresponding change in the use of services for intermediate use
has not improved that much. It has improved from 31.20 percent in 1968-69 to 38.50 percent in 1993-94 and then slightly declined to 37.40 percent in the year 2003-04. This shows that the intermediate use has changed significantly for commodities as compared to the services. Most of the services in the system belong to the final use categories only.

18. Input flow matrix shows that the total intermediate input requirement of the system has grown over the time. As compared to 36.80 percent in the year 1968-69, it became 48.30 percent in 2003-04. At disaggregate level input requirement of primary sector grew from 23.90 percent in 1968-69 to 34.30 percent in the year 2003-04. Likewise, the input requirement of secondary sector grew from 60.60 per cent to 70.00 percent. The change of similar range is seen in the ‘transport, communication and trade’ segment. But in ‘other services’, the change is not that very significant. Over a period of time, for its input requirements, the backward linkage of primary sector on itself has remained almost the same, but its dependence on the other sectors has improved. Similarly, the dependence of secondary sector for input requirements on primary sector is almost the same, but it has improved significantly with other sectors. The input requirement of ‘transport, communication and trade’ sub-sector has shrunk with primary and itself, but there is an improvement in secondary sector and other services. In ‘other services’ segment, the input side linkage has shrunk over time. The emerging structure of the Indian economy is characterized by foot loose growing tertiary sector with weaker backward linkage with primary and secondary sectors.

19. From the backward linkages analysis, it is clear that the structural change in the Indian economy is characterized by the following input patterns: (a) over a period of time, the primary sector’s dependence on itself and the secondary sector for input requirements has improved significantly, but its backward linkage with tertiary sector has also shown a tendency of improvement in the recent past; (b) over a period of time the secondary sector has reduced its input dependence on primary and the tertiary sectors; and (c) input dependence of tertiary sector is more aligned with the secondary sector than with the primary sector. Thus, the primary and secondary sectors of the Indian economy have a poor backward linkage with the tertiary sector which at present is a growth engine of gross domestic product. This puts a question mark
on the very viability of tertiary sector in India which has emerged not by the natural outgrowth of the system, but as a foot loose sector.

20. Analysis of forward linkages or the sectoral demand linkages shows that the demand linkage of primary sector was found to be stronger with secondary sector than with tertiary sector. Demand linkage of the secondary sector with the primary sector declined during the period from 1968-69 to 2003-04. Demand linkage of tertiary sector with secondary sector improved significantly in the same period, indicating rising importance of secondary for tertiary sector, though it remained almost static in case of primary sector.

21. The outgrowth of service sector in India is not the natural outcome of growth of other two commodity producing sectors. It has a moderate backward and forward linkage with secondary sector, but it is poorly linked to the primary sector on the input side and output side. This implies that any growth of tertiary sector will not affect much to the primary sector which is presently in a state of crisis.

The thesis that emerges from the above analysis is that excessive tertiaization of the Indian economy is the result of two factors: first being the higher efficiency of labour in this sector and second being the domestic and export demand for products of this sector. The tertiary sector has not been the result of natural outgrowth and linkage patterns of the system. It is a poorly linked sector on both production and the distribution front. The footloose nature of this outgrowth raises many issues relating to its viability in the long run. In this context following are the policy implications.

1. Excessive tertiary sector growth has bypassed the natural transition of primary to secondary and then to tertiary sector. As a result, it has developed as a sub-system which is not a natural outgrowth of the system. Long-run viability and sustainability of such a standalone sub-system needs to be analyzed with a larger database.

2. Tertiary sector growth is driven by domestic and export demand, but the much needed technology driven change is missing in the economy. To keep this change viable, heavy investment in technological change in tertiary sector is needed. Steps must be taken to improve technological base of the production system. The public and private initiative to invest in research and development is need of the time.

3. Tertiary sector growth and its translation into higher per capita income growth is a function of human capital. The states with poor human
capital need to develop it and improve the efficiency of the labour, if the benefits of the tertiary sector led growth are to be obtained.

4. There is a weak backward linkage between the fast growing tertiary sector and the commodity sector. This is because of the weak human resource base and incompatible growth of commodity sector. Hence the commodity sector needs to be planned to grow in consonance with the service sector.

To sum up, the above conclusions and policy implications are indicative of the fact that there is an ample scope to improve the economic growth via tertiary sector growth, provided the proper human resource planning and integration of tertiary sector with commodity sector is done.