Chapter-IV

STRUCTURAL CHANGE IN INDIAN ECONOMY

Introduction

The process of development requires structural change. The structural change of an economy takes place mainly along two dimensions: one is the changing sector-wise shares in GDP and the second is the changing share of the labour force, engaged in each sector. In case of developed countries, it is seen that as a first step, the agriculture sector loses its importance with a simultaneous growth of the manufacturing sector and/or tertiary sector. Most of the developed countries and some of the newly industrialized countries have crossed this threshold and are now experiencing a shift from manufacturing sector to the services sector (Madhusudan, 2001). But, the experience of Indian economy is unique. In India, the service sector has grown by bye-passing the secondary sector. In this context, this chapter is an attempt to trace the structural change in terms of input structure, production structure and employment structure.

Structural Change: Theoretical Evidence

The process of development requires structural change. The structural change of an economy takes place mainly along two dimensions: one is the changing sectoral share in GDP and the second is the changing share of the labour force engaged in each sector. In case of developed countries, it is seen that as a first step the agricultural sector loses its importance with a simultaneous growth of the manufacturing sector or tertiary sector. Most of the developed countries and some of the newly industrialized countries have crossed this threshold and are now experiencing a shift from manufacturing sector to the services sector (Madhusudan, 2001). For economists like Lewis, economic growth requires structural change in the economy, for example, a movement of workers from low value added agriculture sector to higher value added manufacturing and service sectors.

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 (Joshi, 2004). 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 of an economy, therefore, refers to changes in the input-output relations of production activities. Consequently, as an 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 implication for the future development patterns of the system.

Structural changes do not only characterize economic development, they are also necessary for sustaining economic growth. The neoclassical view that sectoral composition is a relatively unimportant by-product of growth has been convincingly questioned by structural economists like Kuznets, who have empirically demonstrated that growth is brought about by changes in sectoral composition. This is so both for the reasons of demand and supply. Though the emphasis laid on different factors by different economists has varied, the broad line of reasoning advanced by pioneers like Fisher and Clark and followed with some elaborations and modifications by later analysts has been as follows: Income elasticity of demand for agricultural products is low; that for industrial, particularly manufacturing goods, is high; and, for services, it is still higher. As a result, with rising levels of income, the demand for agricultural products relatively declines and that for industrial goods increases and, after reaching a reasonably high level of income, demand for services increases sharply. Accordingly the shares of different sectors in the national product get determined by the changes in the pattern of demand.

On the supply side, agriculture being mainly dependent on a fixed factor of production, namely land, faces a limit on its growth and is subject to early operation of the law of diminishing returns. Industry, specially manufacturing, on the other hand, offers large scope for use of capital and technology, which could be augmented almost without limit with human effort. Labour supply could constrain expansion of industry, but it is possible to overcome it by introducing labour-saving technological changes. The same applies to services, where application of technologies seems to offer much larger scope, as shown by the experience over the past few decades.

Growth of an economy is always associated with structural changes in the economy. The changes take place in the form of sectoral composition as well as occupational structure of the workforce. Economic structure is generally divided into three broad sectoral economic activities: primary, secondary and tertiary. The primary sector mainly covers the agriculture and allied activities; the secondary sector covers the manufacturing, construction etc; and the tertiary sector refers to the services. Service sector consists of trade and commerce, transport and other such activities. Most of the studies have shown that with development, the share of agriculture in production and employment that is typically high in the early stages begins to decline and that of manufacturing begins to increase. The next stage in this sectoral evolution is the shift towards services. According to Fisher, "in every progressive economy, there has been steady shift of employment and investment from the essential primary activities to secondary activities of all kinds and to a still greater extent into tertiary production".

Many countries in their early stages of economic development had followed a two-sector growth model that envisaged industry to be the 'engine of growth', whereby a significant transfer of investable resources, mainly labour and raw material, takes place from agriculture with active support of the government (Lewis, 1984; Thakur, 1992). Following Kuznet's analysis (Kuznet, 1979), it was also highlighted that a rise in productivity in agriculture is a precondition for economic growth and structural change since only then agriculture generates a surplus and be in a position to fulfill its developmental tasks. Accordingly, trade policies that promote import substitution industrialization through favourable terms of trade for manufacturing, easy availability of foreign exchange reserves, low effective protection for agriculture and high nominal industrial protection and direct taxation of agriculture income policies were designed. The broad implication of this type of growth strategy was a decline in the relative share of agriculture in gross national income and labour force, which was considered to be a natural outcome of structural transformation. Many development economists viewed this approach to have encouraged neglect of agricultural sector. A greater emphasis was laid on interdependence of the two sectors in the subsequent decades, which implied a much significant role of agriculture in the growth process.

India, which is one of the largest agricultural-based economies, remained closed until the early 1990s. By 1991, there was growing awareness that the inward-looking import substitution and overvalued exchange rate policy coupled with various domestic policies pursued during the past four decades, limited entrepreneurial decision making in many areas and resulted in a high cost domestic industrial structure that was out of line with world prices. Hence, the new economic policy of 1991 stressed both external sector reforms in the exchange rate, trade and foreign investment policies, and internal reforms in areas; such as industrial policy, price and distribution controls, and fiscal restructuring in the financial and public sectors. In addition, India's membership and commitment to World Trade Organization (WTO) in 1995 was a clear sign of India's intention to take advantage of globalization and face the challenge of accelerating its economic growth. One measure of economic growth is given by productivity growth as it forms the basis for improvements in real incomes and welfare. The concept of productivity growth gained importance for sustaining output growth over the long run as input growth alone is insufficient to generate output growth because of diminishing returns to input use.

While studying expansion of industry at the expense of agriculture and its significant contribution to economic growth and employment generation, attention was also given to emergence of tertiary sector in the developed economies. Fisher (1939) and Clark (1940) maintained that since demand for services and manufactured items are more elastic than that of agriculture, a shift away from agriculture towards services and manufacturing is expected in the course of development. This would happen only once agriculture and industry mature. A positive and significant association between manufacturing and services is hypothesized, which is anticipated to become stronger at the advanced stages of industrialization. The argument runs as follows: "with expansion of the economy, particularly in the manufacturing sector, demand for services like trade, hotel, and transport, banking and social services such as education, hospitals and other infrastructure increases and raises productivity of the industrial sector as well". In turn, the service sector growth depends on the development of manufactured inputs. With rising per capita incomes and high-income elasticity of demand for services, a bidirectional (two-way) growth linkage is envisaged between manufacturing and services through increase in demand for each other's output (Park and Chan, 1989). This argument very well applies in the case of developing countries too where both manufacturing sector and services have shown progressive growth over the decades.

Economy on the Eve of Independence

We had inherited an economy, which was basically geared to the interest of our colonial masters. The rate of growth of per capita income during the hundred year period before Independence, from whatever scanty information is available, was just 0.5 per cent per annum. It has further been noted that there were long spells when the economy actually stagnated or declined.

In the past, it was known for producing fine cotton fabric, handicrafts and other merchandise. Even during the early British Raj, that is, before the onset of industrial revolution in Britain, our economy was an industrial economy by the standards of those days, whereas the European economies had yet to usher in modern civilization. Yet, by the time we got Independence, our economy was primarily reduced to an agricultural economy and we used to export mainly raw materials and minerals for the British industries and even food grains while we might have been hungry ourselves.

Trends in Distribution of National Income

Trends in the distribution of Gross Domestic Product (GDP) by industrial origin show that the Indian economy has undergone a vast structural change over the last few decades (Table 4.1). In the year 1950-51, ours was predominantly an agricultural economy with 56.70 per cent share of the GDP originating from primary sector. The share of the secondary sector being 13.66 percent in the same year is indicative of the fact that manufacturing and allied activities were just in the developing stage. The share of tertiary sector, almost the double of secondary, stood at 29.64 per cent.

Table 4.1: Percentage Sectoral Shares in GDP at 1999-00 Prices

Year	Primary Sector		Secondary Sector		Tertiary Sector		Total GDP
	Rs. Crore	Percent	Rs. Crore	Percent	Rs. Crore	Percent	Rs. Crore
1950-51	127062	56.70	30618	13.66	66418	29.64	224098
1960-61	172433	52.48	56143	17.09	99993	30.43	328569
1970-71	217862	46.00	96642	20.41	159087	33.59	473591
1980-81	256342	39.93	141420	22.03	244159	38.04	641921
1990-91	368907	34.05	251868	23.24	462797	42.71	1083572
2000-01	487992	26.18	438372	23.51	937937	50.31	1864301
2001-02	516584	26.19	450723	22.85	1005299	50.96	1972606
2002-03	486134	23.73	481758	23.52	1080394	52.75	2048286
2003-04	531302	23.90	519322	23.36	1172134	52.73	2222758
2004-05	535501	22.42	574072	24.03	1279195	53.55	2388768
2005-06	566278	21.65	635223	24.28	1414600	54.07	2616101
2006-07	591353	20.60	706280	24.60	1573485	54.80	2871118
2007-08	619121	19.78	766358	24.49	1744238	55.73	3129717
2008-09	751362	18.05	1071676	25.75	2339471	56.20	4162509
2009-10	760974	16.93	1158000	25.77	2574769	57.30	4493743

Source: *Economic Survey of India*, various issues

The primary sector includes activities like agriculture, forestry and fishing, mining and quarrying etc. The share of primary sector that was 56.70 percent of GDP in the year 1950-51, came down to 52.48 percent in 19601-61; to 46.00 in 1970-71; to 39.93 in 1980-81; further to 34.05 in 1990-91; 26.18 percent in 2000-01; and finally to 16.93 in the year 2009-10. Thus over a span of past 60 years, the share of primary sector related activities, in general, and the agriculture, in particular, in the GDP has come down to one-third of what it was initially. The decline of primary sector share with every increase in the GDP is indicator of a healthy economic development. It shows that a raw materials producing/supplying economy is gradually shifting to a manufacturing and rigorous processing economy that has a higher value added generation.

The secondary sector of the economy has shown a change at the snails pace. The share of secondary sector that was 13.66 percent of GDP in the year 1950-51 took a long span of 60 years to grow to 25.77 percent. The share of secondary sector during the decades of 1970s and 1980s remained in the range of 20 to 22 percent of GDP. The decade of 1990s shows that the pace of change in the share of secondary sector in the GDP was very negligible and just near stagnation. The structural change in India, during the last half-century, is characterized by a shrinking share of agriculture coupled with slow paced industrial development. Decade of 1990s and the last few years are indicative of the fact that the share secondary sector as a percentage of GDP has stagnated around 25 percent.

Tertiary sector consists of trade and commerce, transport and other such activities. The percentage share of tertiary sector in the GDP has almost doubled as compared to what it was in the year1950-51. It has grown to 57.30 percent in 2009-10 as compared to mere 29.64 percent in 1950-51. In the initial years, i.e., during the decades of 1950s, 60s and 70s there was an overall rise of not more 5 percent in this share. Most of the change in tertiary sector is during the last two decades. This implies that the tertiary sector has been the major beneficiary from the change.

Instead of percentage sectoral shares, the growth profile of the three sectors may display the underlying structural dynamics more clearly. Sector-wise decadal and the overall growth rates are presented in table 4.2 and chart 4.1. Table presents the average annual growth rate of GDP and three sectors during fifties, sixties, seventies, eighties and ninety onwards. On the whole the gross domestic product has grown at the rate of 4.46 percent per annum during the last half century under consideration. During this period the primary sector has grown at the rate of 2.74 percent per annum against the growth of secondary and tertiary sector at a more than 5 percent per annum. That is to say the rate of growth of secondary and tertiary sector has been almost the double that of the primary sector.

Further periodic breakup according to decades underscores some interesting facets of the underlying dynamics. The growth of GDP that was 3.79 percent per annum in the decade of fifties and 3.55 in the sixties came down to 3.42 percent per annum in the seventies. The average annual growth rate of GDP picked up in the eighties and ninety onwards. The growth rate of GDP was 5.29 percent per annum during the eighties and it was 6.01 percent per annum during the period of nineties and it went to 7.80 percent per annum during 2000-01 to 2009-10. Primary sector that grew at a rate of 2.87 per annum in the fifties and at 2.10 percent per annum in the sixties came down to 1.94 percent per annum during the seventies. During the eighties the primary sector grew at the rate of 3.41 percent per annum.

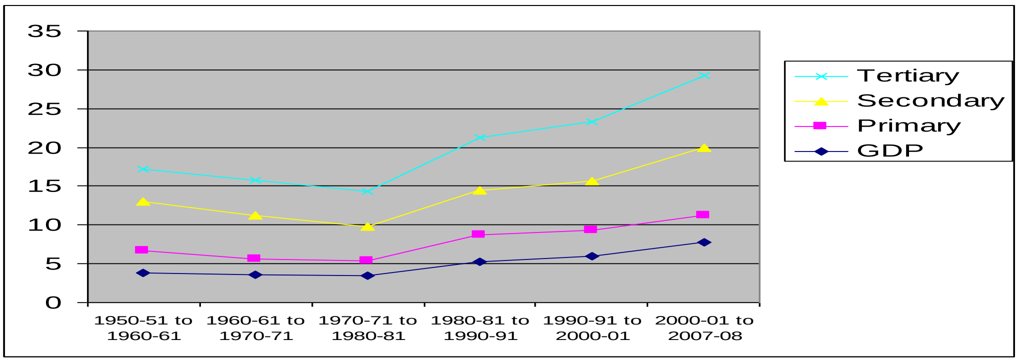
On the other hand, secondary sector has shown consistently a good performance, i.e., with an exception of decade of seventies, the rate of growth has always been above 5.50 percent per annum. The growth rate of secondary sector is slightly lower in the seventies as compared to that of the other decades. The tertiary sector which grew at 4.00 to 4.75 percent during the first three decades achieved the growth rate of 6.76 percent per annum in the eighties; 7.67 percent per annum in the nineties and an ever time high growth rate of 9.31 percent per annum during 2000-01 to 2009-10. This implies that tertiary sector has responded positively; the primary sector has responded adversely to the economic reforms process of the nineties and the secondary sector is in its transitional phase of making adjustment of capital, labour and technology.

Table 4.2: Growth Rate of GDP and Different Sectors during the Period 1950-51 to 2009-10

Years	GDP (Percent per annum)	Primary Sector (Percent per annum)	Secondary Sector (Percent per annum)	Tertiary Sector (Percent per annum)
1950-51 to 1960-61	3.79	2.87	6.35	4.22
1960-61 to 1970-71	3.55	2.10	5.52	4.57
1970-71 to 1980-81	3.42	1.94	4.38	4.59
1980-81 to 1990-91	5.29	3.41	5.78	6.76
1990-91 to 2000-01	6.01	3.26	6.33	7.67
2000-01 to 2009-10	7.80	3.40	8.80	9.31
1950-51 to 2009-10	4.46	2.74	5.40	5.67

Source: *Economic Survey of India*, various issues

Chart 4.1: Growth Profiles of GDP and Different Sectors during the Period 1950-51 to 2009-10.



Growth of tertiary sector accounts for more than half of the India's gross domestic product; it is comparable to any developed economy in terms of this share. It has grown by bye-passing secondary sector. The Indian economy is passing through a transition to finally culminate into a service sector growth lead economy. The viability of such a service sector growth lead economy with weak primary and secondary sectors is a million dollar question that needs a thorough research at this juncture of time.

Relative Shares of Sub-Sectors of GDP

Tertiary sector includes trade, hotels, transport and communication, financing, insurance, real estate and business services, public administration and defence and other services. Table 4.3 shows that the share of 'trade, hotels, transport and communication' improved from 11.34 percent in the year 1950-51 to 26.55 percent in 2009-10. During the period under analysis, its share has reached to level that is more than double what it was in the beginning.

This increase in the share has been gradual and consistent. The share of trade, hotels, transport and communications was 17.45 per cent in 1980-81 and improved to 18.34 per cent in 1990-91 and finally to 22.30 percent in the year 2000-01. The rise in share during the nineties decade is attributable more to the trade, transport and communication than to hotels. In the recent years, it is the communication only that has witnessed a more growth as compared to other components of the sub-sector.

Table 4.3: Percentage Distribution of GDP at Factor Cost by Industry of Origin at 1999-00 Prices

Year	Sector Code					
	1	2	3	4	5	6
1950-51	56.70	13.66	11.34	7.69	10.61	100.00
1960-61	52.48	17.09	13.05	7.03	10.35	100.00
1970-71	46.00	20.41	14.74	6.82	12.03	100.00
1980-81	39.93	22.03	17.45	7.49	13.10	100.00
1990-91	34.05	23.24	18.34	10.58	13.78	100.00
2000-01	26.18	23.51	22.30	13.04	14.98	100.00
2001-02	26.19	22.85	23.01	13.22	14.74	100.00
2002-03	23.73	23.52	24.25	13.75	14.75	100.00
2003-04	23.90	23.36	25.03	13.37	14.33	100.00
2004-05	22.42	24.03	25.78	13.52	14.24	100.00
2005-06	21.65	24.28	26.39	13.76	13.93	100.00
2006-07	20.60	24.60	27.13	14.26	13.41	100.00
2007-08	19.78	24.49	27.97	14.62	13.14	100.00
2008-09	18.05	25.75	26.13	16.98	13.10	100.00
2009-10	16.93	25.77	26.55	17.17	13.57	100.00

Sector Codes

1: Agriculture, forestry & fishing, mining and quarrying.
2: Manufacturing, construction, electricity, gas and water supply
3: Trade, hotels, transport& communication
4: Financing, insurance, real estate and business services
5: Public administration & defense and other services
6: Gross domestic product at factor cost

Source: Economic Survey of India, 2008-09

The share of financing, insurance, real estate and business services has also almost doubled during the last half century. The share of these services was 7.69 per cent of the total GDP in the year 1950-51 and increased to 17.17 per cent in 2009-10. As compared to real estate and insurance, it is the financing and business services that have registered a major share in this sub-sector. This is in response to the liberalization and privatization in the area of banking and finance. Many new business services have come into being, e.g., advertising, event management and so on. The share of public administration, defence and other services, including mainly the items of government expenditure, have reached at a level of 13.57 percent in the year 2009-10 as compared to 10.61 percent in 1950-51. The process of economic growth involves a rapid expansion of public administration, especially a rapid expansion of economic and welfare services such as education, health and family welfare.

Sector-wise Growth Profiles of GDP

Growth profile of the gross domestic product of various sectors, given in table 4.4, is indicative of the fact that in the primary sector (agriculture, forestry & fishing, mining and quarrying) the growth rate of gross domestic product was 4.46 percent per annum during the period 1950-51 to 2009-10, whereas, it was 2.74 percent per annum in the case of primary sector during the same period. Further, it was observed that the growth rate of primary sector remained highest during the reform period, i.e., 1990-91 to 1999-00 compared to pre-reform periods. It is important to note that primary sector did not grow at the pace of gross domestic product; as it always remained below considerably during all the decades. As far as the secondary sector is concerned, the analysis reveals that the growth rate of GDP turned out to be the highest (8.80 percent per annum) during the recent time period, i.e., 2000-01 to 2009-10. During the decade of nineties, it was the maximum, as compared to all earlier decades.

Further, in the tertiary sector, 'trade, hotels and communication' section that grew around five percent per annum in the decades of fifties, sixties and seventies rose to the level of 5.86 percent per annum in the decade of eighties and finally touched the growth level of 11.31 percent per annum, in the recent years. Financing and real estate grew at a rate of 3 to 4 percent in the first three decades and suddenly touched the growth level of 10 percent per annum.

Most of the growth of eighties decade was due to real estate segment. The financing and business services growth is phenomena of nineties decade. During this decade the growth of financing, insurance, real estate and business services has been 7.95 percent per annum and went to 9.35 percent per annum in the recent years. Public administration, defense and other services has grown from 3 to 5 percent per annum level of first three decades to 6.4 percent in eighties decade and to 5.81 percent per annum in the last segment.

Table 4.4: Sector-wise Growth Rates (Percent per Annum) of GDP at 1999-00 Prices

Sector	Compound Annual Growth Rate (percent per annum)						
	1950-51 to 1959-60	1960-61 to 1969-70	1970-71 to 1979-80	1980-81 to 1989-90	1990-91 to 1999-00	2000-01 to 2009-10	1950-51 to 2009-10
Agriculture, Forestry & Fishing, Mining and Quarrying.	2.75	1.64	1.86	3.24	3.42	3.40	2.74
Manufacturing, Construction, Electricity, Gas and Water Supply	6.15	5.73	4.49	5.57	6.43	8.80	5.40
Trade, Hotels, Transport & Communication	5.29	4.77	5.40	5.93	8.29	11.31	5.93
Financing, Insurance, Real Estate and Business Services	3.05	3.11	4.44	9.26	7.95	9.35	5.89
Public Adm. & Defence and Other Services	3.51	5.24	3.68	6.23	6.50	5.81	5.13
Total Gross Domestic Product at Factor Cost	3.66	3.36	3.41	5.17	6.05	7.80	4.46

Source: Various Issues of Economic Survey of India

Percentage share of components and the growth profile of the tertiary sector are indicative of the fact that half of the tertiary sector is formed by the financial sector and the government expenditure. The share of tradable services is just the half. If the economy has to achieve the highest level of service economy, i.e., the knowledge economy, it must increase the share of tradable services in the basket of tertiary sector.

Further, disaggregated picture of the different sectors of the economy in the post reforms era is given in table 4.5. It gives information both in terms of value (Table 4.5a) and percentage shares (Table 4.5b) for selected components of various sectors. The figures in the table depict that in overall, the share of primary sector in gross domestic product decreased from 54.88 percent in 1950-51 to 16.95 percent in 2008-09.

Further, at the disaggregated level, all the three sectors (agriculture, forestry & logging and fishing) registered a decline (48.30 percent to 16.34 percent, 5.59 percent to 0.65 percent and 0.99 percent to 0.81 percent respectively) in sharing the GDP during 1950-51 to 2007-08. Besides, the share of mining & quarrying showed marginal increase (1.42 percent to 1.92 percent) during 1950-51 to 2008-09 periods. As far as the secondary sector is concerned, the percentage share of manufacturing in GDP increased from 9.12 percent to 15.33 percent in 2006-07, and then decreased to 14.61 percent in 2008-09.

The disaggregated picture of the tertiary sector shows that the percentage share terms sector, 'trade, hotels and restaurants' in GDP, registered a positive increase; as it was 8.16 percent in 1950-51 that increased to 15.73 percent in 2008-09. Similarly, in the case of 'transportation, storage and communication' it increased tremendously from 3.38 percent to 12.85 percent during the same period. Amongst all the components of 'transportation, storage and communication', both 'transport by other means' and 'communication' showed massive increase (from 1.62 percent to 5.18 percent and 0.27

percent to 5.65 percent respectively) in its share in GDP during 1950-51 to 2007-08. Whereas, the railway transportation share, except marginal changes, is almost stagnant and share of storage activity is continuously on the decline. It is interesting to note that the share of communication segment of the tertiary sector has grown by more than three times in the last ten years. Further, the share of 'financing, insurance, real estate & business services increased two times from 7.44 percent to 14.77 percent during the same period under study. At the component level, the share of financing and insurance has grown vigorously from 1.00 percent in 1950-51 to 7.09 percent in 2007-08, whereas, the share of real estate, dwellings, business & legal services increased gradually from 6.45 percent to 7.53 percent during the same period. Moreover, the share of public administration and defence increased from 2.77 percent in 1950-51 to 5.18 percent in 2007-08, while, the share of other services including health, education, and social welfare and so on decreased marginally from 8.09 percent to 7.96 percent during the same period. On the whole, the trading and transport activity is picking up and communication segment has shown a massive growth. Banking and insurance segment of the tertiary sector is continuously improving. Real estate and dwelling activity is gradually improving. Half of the tertiary sector lead growth is due to non-tradable services. In the tradable services category trade (both wholesale and retail), commerce, banking insurance, finance and communication activities are leading the growth path which is a positive sign of growth. There is need of policy intervention to improve the share of later category of services.

Table 4.5a: Gross Domestic Product by Economic Activity (at Constant Prices, 1999-00) in Rs. Crores

Sector	Year													
	1950-51	**1960-61**	**1970-71**	**1980-81**	**1990-91**	**2000-01**	**2001-02**	**2002-03**	**2003-04**	**2004-05**	**2005-06**	**2006-07**	**2007-08**	**2008-09**
1. Agriculture, Forestry & Fishing	**123129**	**166477**	**209344**	**243421**	**339893**	**445403**	**473249**	**438967**	**482677**	**482910**	**511114**	**531315**	**557122**	**566045**
1.1 Agriculture	108374	149838	186668	220624	311500	407176	433475	398206	441360	441647	467984	487010	511274	N.A.
1.2 Forestry & Logging	12542	12876	17355	15796	16280	18399	18964	19090	18872	19276	19536	20005	20432	N.A.
1.3 Fishing	2213	3763	5321	7001	12113	19828	20810	21671	22444	21987	23594	24300	25416	N.A.
2. Mining & Quarrying	**3178**	**5478**	**8019**	**12921**	**29014**	**42589**	**43335**	**47168**	**48626**	**52591**	**55164**	**60038**	**61999**	**64244**
3. Manufacturing	**20463**	**36466**	**59653**	**88740**	**161979**	**284571**	**291803**	**311685**	**332363**	**361115**	**393842**	**440193**	**476303**	**487739**
3.1 Registered	8659	17272	31741	45773	101467	186570	195107	209909	224919	245343	268100	299329	321985	N.A.
3.2 Unregistered	11804	19194	27912	42967	60512	98001	96696	101776	107444	115772	125742	140864	154318	N.A.
4. Elec. Gas & Water Supply	**691**	**1857**	**5364**	**10340**	**23559**	**45439**	**46228**	**48423**	**50735**	**54745**	**57513**	**60544**	**63730**	**65899**
5. Construction	**9931**	**18324**	**31426**	**42339**	**66330**	**108362**	**112692**	**121650**	**136224**	**158212**	**183868**	**205543**	**226325**	**242577**
6. Trade, Hotels & Restaurant	**18313**	**30350**	**48475**	**73454**	**130680**	**267326**	**293075**	**313221**	**344743**	**371155**	**409255**	**451911**	**497685**	**525356**
6.1 Trade	17017	28188	45052	68233	121048	243505	267382	286060	315240	338283	371568	408235	449001	N.A.
6.2 Hotels & Restaurants	1296	2162	3423	5221	9632	23821	25693	27161	29503	32872	37687	43675	48684	N.A.
7. Transport, Storage & Communication	**7582**	**12894**	**21749**	**38543**	**68089**	**148324**	**160772**	**183471**	**211627**	**244694**	**281144**	**326985**	**377713**	**429233**
7.1 Railways	3129	4934	7442	10278	15832	21996	23535	24864	26336	28257	30731	33800	36941	N.A.
7.2 Transport by Other Means	3629	6548	11661	23122	43378	88735	92311	101779	113907	127743	138371	150524	162132	N.A.
7.3 Storage	214	278	363	875	1221	1514	1523	1421	1493	1695	1716	1770	1746	N.A.
7.4 Communication	610	1134	2283	4268	7658	36079	43403	55407	69891	86999	110326	140891	176894	N.A.
8. Financing, Insurance, Real Estate & Business Services	**16705**	**22631**	**32065**	**48067**	**114670**	**243048**	**260737**	**281550**	**297250**	**323080**	**359888**	**409472**	**457584**	**493356**
8.1 Banking & Insurance	2239	4432	8288	15538	42684	103571	113036	125845	128659	139940	159881	192329	221884	N.A.
8.2 Real Estate, Ownership of Dwellings, Business & Legal Services	14466	18199	23777	32529	71986	139477	147701	155705	168591	183140	200007	217143	235700	N.A.
9. Community, Social & Personal Services	**24388**	**34625**	**57421**	**84095**	**149357**	**279239**	**290715**	**302153**	**318514**	**340266**	**364313**	**385118**	**411256**	**464926**
9.1 Public Administration & Defence	6225	10258	21861	36813	68967	124700	128351	130409	133789	142446	149473	155453	162034	N.A.
9.2 Other Services	18163	24367	35560	47282	80390	154539	162364	171744	184725	197820	214840	229665	249222	N.A.
10. GDP at Factor Cost (1 to 9)	**224380**	**329102**	**473516**	**641920**	**1083571**	**1864301**	**1972606**	**2048288**	**2222759**	**2388768**	**2616101**	**2871119**	**3129717**	**3339375**

Source: Government of India (2010), Ministry of Statistics and Programme Implementation, www.mospi.gov.in

Table 4.5b: Percentage Distribution of Various Sectors and Sub-Sectors of Economy in Total GDP

Sector	Year													
	1950-51	1960-61	1970-71	1980-81	1990-91	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09
1. Agriculture, Forestry & Fishing	**54.88**	**50.59**	**44.21**	**37.92**	**31.37**	**23.89**	**23.99**	**21.43**	**21.72**	**20.22**	**19.54**	**18.51**	**17.80**	**16.95**
1.1 Agriculture	48.30	45.53	39.42	34.37	28.75	21.84	21.97	19.44	19.86	18.49	17.89	16.96	16.34	0.00
1.2 Forestry & Logging	5.59	3.91	3.67	2.46	1.50	0.99	0.96	0.93	0.85	0.81	0.75	0.70	0.65	0.00
1.3 Fishing	0.99	1.14	1.12	1.09	1.12	1.06	1.05	1.06	1.01	0.92	0.90	0.85	0.81	0.00
2. Mining & Quarrying	**1.42**	**1.66**	**1.69**	**2.01**	**2.68**	**2.28**	**2.20**	**2.30**	**2.19**	**2.20**	**2.11**	**2.09**	**1.98**	**1.92**
3. Manufacturing	**9.12**	**11.08**	**12.60**	**13.82**	**14.95**	**15.26**	**14.79**	**15.22**	**14.95**	**15.12**	**15.05**	**15.33**	**15.22**	**14.61**
3.1 Registered	3.86	5.25	6.70	7.13	9.36	10.01	9.89	10.25	10.12	10.27	10.25	10.43	10.29	0.00
3.2 Unregistered	5.26	5.83	5.89	6.69	5.58	5.26	4.90	4.97	4.83	4.85	4.81	4.91	4.93	0.00
4. Elec. Gas & Water Supply	**0.31**	**0.56**	**1.13**	**1.61**	**2.17**	**2.44**	**2.34**	**2.36**	**2.28**	**2.29**	**2.20**	**2.11**	**2.04**	**1.97**
5. Construction	**4.43**	**5.57**	**6.64**	**6.60**	**6.12**	**5.81**	**5.71**	**5.94**	**6.13**	**6.62**	**7.03**	**7.16**	**7.23**	**7.26**
6. Trade, Hotels & Restaurant	**8.16**	**9.22**	**10.24**	**11.44**	**12.06**	**14.34**	**14.86**	**15.29**	**15.51**	**15.54**	**15.64**	**15.74**	**15.90**	**15.73**
6.1 Trade	7.58	8.57	9.51	10.63	11.17	13.06	13.55	13.97	14.18	14.16	14.20	14.22	14.35	0.00
6.2 Hotels & Restaurants	0.58	0.66	0.72	0.81	0.89	1.28	1.30	1.33	1.33	1.38	1.44	1.52	1.56	0.00
7. Transport, Storage & Communication	**3.38**	**3.92**	**4.59**	**6.00**	**6.28**	**7.96**	**8.15**	**8.96**	**9.52**	**10.24**	**10.75**	**11.39**	**12.07**	**12.85**
7.1 Railways	1.39	1.50	1.57	1.60	1.46	1.18	1.19	1.21	1.18	1.18	1.17	1.18	1.18	0.00
7.2 Transport by Other Means	1.62	1.99	2.46	3.60	4.00	4.76	4.68	4.97	5.12	5.35	5.29	5.24	5.18	0.00
7.3 Storage	0.10	0.08	0.08	0.14	0.11	0.08	0.08	0.07	0.07	0.07	0.07	0.06	0.06	0.00
7.4 Communication	0.27	0.34	0.48	0.66	0.71	1.94	2.20	2.71	3.14	3.64	4.22	4.91	5.65	0.00
8. Financing, Insurance, Real Estate & Business Services	**7.44**	**6.88**	**6.77**	**7.49**	**10.58**	**13.04**	**13.22**	**13.75**	**13.37**	**13.52**	**13.76**	**14.26**	**14.62**	**14.77**
8.1 Banking & Insurance	1.00	1.35	1.75	2.42	3.94	5.56	5.73	6.14	5.79	5.86	6.11	6.70	7.09	0.00
8.2 Real Estate, Ownership of Dwellings, Business & Legal Services	6.45	5.53	5.02	5.07	6.64	7.48	7.49	7.60	7.58	7.67	7.65	7.56	7.53	0.00
9. Community, Social & Personal Services	**10.87**	**10.52**	**12.13**	**13.10**	**13.78**	**14.98**	**14.74**	**14.75**	**14.33**	**14.24**	**13.93**	**13.41**	**13.14**	**13.92**
9.1 Public Administration & Defence	2.77	3.12	4.62	5.73	6.36	6.69	6.51	6.37	6.02	5.96	5.71	5.41	5.18	0.00
9.2 Other Services	8.09	7.40	7.51	7.37	7.42	8.29	8.23	8.38	8.31	8.28	8.21	8.00	7.96	0.00
10. GDP at Factor Cost (1 to 9)	**100.00**	**100.00**	**100.00**	**100.00**	**100.00**	**100.00**	**100.00**	**100.00**	**100.00**	**100.00**	**100.00**	**100.00**	**100.00**	**100.00**

Source: www.mospi.gov.in

Employment Structure

Analysis of any macro relation between growth of output and that of employment in any economy as a whole is of considerable importance, as it bears a significant implication. For the design of developments strategy for any economy has two basic objectives, i.e., economic growth and creation of employment opportunities. In most of the countries of the world the service sector plays a significant role in the expansion of both GDP and employment. In India the service sector has failed to play any significant role in employment generation. In India, we see that the share of the services sector in GDP has lately increased dramatically. This has led to an interest in examining this growth. The share of the primary sector in GDP is declining and those of the secondary and tertiary is growing over the years. The share of tertiary sector has been large to begin with and over the years it has become the highest contributor to GDP displacing the primary sector.

The share of the workforce in the primary sector has remained high. The tertiary sector's share in the workforce has increased but it has not been able to displace the primary sector's position in this regard. Thus, in terms of employment the primary sector remains the sector which provides the maximum employment.

Two features of the Indian case stand out in contrast to the developed coronaries' pattern of structural transformation. *First*, the developed countries the decline in the share of agricultural GDP was accompanied by an increase in the share of manufacturing GDP and only after that did the share of services increase but in India, the share of manufacturing did not increase much. The process of structural change has been characterized by a decline in the share of agriculture GDP and an increase in the share of GDP from services. *Secondly,* the changing shares of the three sectors in GDP have mirrored in the changing share of employment/labour force in these three sectors. In India, on the other hand, the changing shares of sectoral GDP have not been mirrored by the changes in the labour force shares.

Table 4.6 reveals that the share of primary sector in the workforce was to tune of around 72.1 per cent in 1950-51. This is followed by tertiary sector, which accounted for only 17.2 per cent and was higher than that of secondary sector. Between 1951 and 1981, the share of the secondary and tertiary sectors taken together, in the workforce has been stagnant. However, as we come down from 1981 to 2008-09, there appears to be some marginal improvement in the labour absorption capacity of these sectors. The percentage share of employment was 56.5, 18.8 and 24.8 in primary, secondary and tertiary sectors respectively during the year 2008-09, as this marginal change is very slow.

Table 4.6: Sectoral Distribution of Workforce in India

Sector	1950-51	1960-61	1970-71	1980-81	1990-91	1999-00	2008-09
Primary	72.1	71.8	72.1	68.8	66.8	56.7	56.5
Secondary	10.7	12.2	11. 2	13.5	12.7	17.5	18.8
Tertiary	17.2	16.0	16.7	17.7	20.5	25.8	24.8

Source: Website www. Circonidia.com

Growth Rate of Sectoral Employment

Table 4.7 presents the comparative growth rates of employment by major activities. The figures show that the average growth rate of total employment was 1.58 during 1983-88, which increased to 2.29 during 1988-94. After that during the period of 1994-00, it decreased to 1.07 and then went negative, i.e., -0.69 during the period 2000-09. Thus, in an agrarian economy like India, liberalization has only a marginal impact on the structure of employment. Among various activities, the long-term growth rate of employment in agriculture has been only about 1.54 percent per annum while that of employment in tertiary and its sub-sectors have been over 3 per cent per annum, whereas, it was 0.02 per cent per annum in agriculture and remained more than 5 per cent per annum in tertiary and its sub-sectors during the years 1994-00. After that the average growth rate of employment went negative in various sectors and sub-sectors named manufacturing, electricity, gas and water supply, construction, transport, storage and communication, and community, social and personal services.

Table 4.7: Growth Rates of Employment by Major Sectors

Sector	Compound Annual Growth Rate (percent per annum)					
	1973-78	1978-83	1983-88	1988-94	1994-00	2000-09
Agriculture	1.88	1.42	0.40	2.01	0.02	0.67
Mining & Quarrying	4.87	5.65	6.16	2.29	-	4.18
Manufacturing	5.83	2.92	2.62	1.70	2.58	-2.24
Electricity, Gas and Water Supply	12.48	4.27	6.7	3.08	-	-1.65
Construction	1.96	6.85	13.84	0.25	5.21	-3.18
Wholesale and Retail Trade	7.15	2.72	4.52	3.13	5.72	2.68
Transport, Storage and Communications	6.31	5.02	2.99	4.07	5.53	-2.21
Financing, Insurance, Real Estate & Business Services	1.69	5.89	5.93	8.85	5.40	4.59
Community, Social and Personal Services	3.27	3.41	2.65	4.58	-	-0.76
Total	2.73	2.13	1.58	2.29	1.07	-0.69

Source: NSSO, 32nd, 38th, 43rd, 50th, Tenth Five Year Plan and Economic Survey of India, 2009-10

Composition of Employment in Organized Sector

Sector-wise composition of employment in organized sector in both public and private sector is given in tables 4.8a and 4.8b. The share of agriculture & hunting in generating the employment in public sector increased marginally from 4.63 lakhs in 1981 to 4.71 lakhs in 2008. Besides, mining & quarrying increased its share from 8.18 lakhs in 1981 to 11.21 lakhs in 2008. Contrary to it, in the private organized sector, the share of agriculture & hunting increased marginally from 8.58 lakhs in 1981 to 9.92 lakhs in 2008 and the share of mining & quarrying decreased from 1.30 lakhs to 1.11 lakhs during the same period.

Further, the share of services sector in total employment is much higher in public sector in comparison to the private sector. In the public sector services, the share of community, social and personal services is the highest. In the organized private sector employment, the share of manufacturing stands at the top and next to it is the service sector. Total employment in the organized tertiary sector of the central government's public sector increased from 109.29 lakhs in 1981 to 133.46 lakhs in 1990, 141.07 lakhs in 2003 and 130.00 lakhs in 2008. The share of community, social and personal services increased from 73.55 lakhs in 1981 to 96.09 lakhs in 2003 and then decreased marginally to 88.54 in 2008. In the private organized sector, employment in the community, social and personal services increased from 12.22 lakhs in 1981 to 16.58 lakhs in 1996 to 17.56 lakhs in 2003 and to 21.73 lakhs in 2008. The share of manufacturing sector in private organized employment stood almost same as it was 45.45 lakhs in 1981 and 49.70 lakhs in 2008.

Table 4.8 a: Employment in Organized Public Sector in India

Industry	Public Sector Employment (lakh persons) in year											
	1981	1991	1996	2000	2001	2002	2003	2004	2005	2006	2007	2008
Agriculture, Hunting etc.	4.63	5.56	5.40	5.14	5.02	4.83	5.06	4.93	4.96	4.69	4.75	4.71
Mining & Quarrying	8.18	9.99	9.93	9.24	8.75	8.61	8.47	10.30	10.14	11.46	11.37	11.21
Manufacturing	15.02	18.52	17.38	15.31	14.30	13.50	12.60	11.89	11.30	10.92	10.87	10.44
Electricity, Gas and Water Supply	6.83	9.05	9.46	9.46	9.35	9.23	9.13	8.74	8.60	8.49	8.49	7.96
Construction	10.89	11.49	11.59	10.92	10.81	10.26	9.48	9.32	9.11	8.94	8.66	8.52
Wholesale and Retail Trade	1.17	1.50	1.62	1.63	1.63	1.57	1.82	1.81	1.84	1.82	1.78	1.65
Transport, Storage and Communications	27.09	30.56	30.92	30.77	30.42	30.09	29.39	28.15	27.51	26.75	26.37	26.34
Financing, Insurance, Real Estate & Business Services	7.48	11.94	12.80	12.96	12.81	12.30	13.77	14.08	14.08	13.90	13.69	13.47
Community, Social and Personal Services	73.55	92.27	95.20	97.71	98.30	97.35	96.09	92.76	92.52	91.76	90.90	88.54
Total	154.84	190.58	194.29	193.14	191.38	187.73	185.80	181.97	180.07	178.73	176.88	172.84

Source: *Economic Survey of India*, various issues

Table 4.8 b: Employment in Organized Private Sector in India

Private Sector Employment (lakh persons)											
Industry	1981	1991	1996	2000	2001	2002	2003	2004	2005	2006	2007	2008
Agriculture, Hunting etc.	8.58	8.91	9.19	9.04	9.31	8.55	8.95	9.17	9.83	10.28	9.50	9.92
Mining & Quarrying	1.30	1.00	1.07	0.81	0.79	0.68	0.66	0.65	0.79	0.95	1.00	1.11
Manufacturing	45.45	44.81	50.49	50.85	50.13	48.67	47.44	44.89	44.89	45.49	47.50	49.7
Electricity, Gas and Water Supply	0.35	0.40	0.42	0.41	0.52	0.42	0.50	0.47	0.49	0.40	0.50	0.51
Construction	0.72	0.73	0.53	0.57	0.57	0.56	0.44	0.45	0.49	0.55	0.70	0.69
Wholesale and Retail Trade	2.77	3.00	3.17	3.30	3.39	3.35	3.60	3.51	3.75	3.87	4.10	2.72
Transport, Storage and Communications	0.60	0.53	0.60	0.70	0.76	0.76	0.79	0.81	0.85	0.87	1.00	1.04
Financing, Insurance, Real Estate & Business Services	1.96	2.54	3.06	3.58	3.70	3.91	4.26	4.58	5.23	6.52	8.80	10.96
Community, Social and Personal Services	12.22	14.85	16.58	17.23	17.34	17.42	17.56	17.92	18.20	18.78	19.50	21.73
Total	73.95	76.77	85.12	86.46	86.52	84.32	84.21	82.46	84.52	87.71	92.40	98.38

Source: *Economic Survey of India*, various issues

Thus, it is obvious that the percentage share of service sector in total organized employment is much higher in public sector compared to private sector. In public sector too, percentage share of local bodies in service sector is the maximum. Employment in central government comes to be the next. It is evident that there is no significant change in occupational structure in India. But the shift in workforce from the primary sector to the tertiary sector is more than that of secondary sector.

For the economy as a whole, labour productivity growth can be achieved through technological progress and/or by moving resources from low- to higher-productivity sectors. As mentioned earlier, the type of productivity growth achieved by the latter approach tends to be more important for the developing countries. The introduction of new technology and a structural shift of the economy may, however, cause employment problems if output is not increased. Hence, sufficient dynamism (output growth) in the higher-productivity sectors will be required in the process of structural change if remunerative jobs are to be generated for all workers and the creation of unemployment is to be prevented.

Output Disposition and Input Structure of the System

To analyze the input and output structure and changes over time six Input-Output Transaction Tables (IOTTs) have been used. Big 115 sector tables have been summarized to show only a two sectors economy: ‘commodity sector’ and ‘service sector’ (see Appendix A-I & A-III). Table 4.9 gives a comparative picture of percentage distribution of output disposition and input structure of commodities and services for the years: 1973-74, 1978-79, 1983-84, 1989-90, 1993-94, 1998-99, 2003-04 and 2006-07.

Output Disposition

The commodities have utilized 47.6 percent of commodity-output for intermediate consumption in 2006-07, as against 45.7 percent in 2003-04, 41.2 percent in 1998-99, 40.3 per cent in 1993-94, 42.5 percent in 1989-90, 40.3 per cent in 1983-84 38 per cent in 1978-79 and 34.5 percent in 1973-74. The input use of commodities by commodity sector has improved from 34.5 percent in the year 1973-74 to 47.6 percent in 2006-07. On the other hand, the Service sector have utilized 13 per cent of service output for intermediate consumption in 2006-07 as against 12.9 percent in 2003-04, 13.2 percent in 1998-99, 11.7 per cent in 1993-94, 12.8 per cent in 1989-90, 13.1 per cent in 198-84 15.5 per cent in 1978-79 and 9.4 per cent in 1973-74. Thus the use of services as input in the service sector has improved to 13 percent in the year 2006-07 as compared to the same as 9.4 percent in 1973-74. In the last quarter of a century, the intermediate input use of the commodity production has increased its dependence on the commodity sector and service sector has increased its dependence for its intermediate input use on the service sector. The intermediate-use of services in commodity sector has changed marginally in the entire period under consideration. The overgrowth of service sector is going more to the final use than to the intermediate input. This implies the emerging structure of the economy is going to be characterized by development of sectors that are loosely connected to the production and tightly connected to the consumption. The system is going to be a producer of final consumption goods rather than intermediate inputs.

Final Use

The component of final use in the output shows a consistent decline (table 4.9) with slight exceptions. Thus, the share of commodities in final use to total commodity output is 43.5 percent in 2006-07 as against 45.0 percent in 2003-04, 50.9 per cent in 1998-99, 52.0 percent in 1993-94; 51.4 per cent in 1989-90, 53.2 per cent in 1983-84; 56.1 per cent in 1978-79; and 60.2 per cent in 1973-74. The decrease in the share of commodities in final use indicates that production system of the economy is picking up. There is slight decrease in the share of services in final use to total output of services, which is 60.9 per cent in 2006-07, as compared to 62.6 per cent in 2003-04. The final use of services during the same period has rather increased in the same period. Thus the emerging structure is gradually altering the final use basket by reducing the commodity consumption and increasing the share of services.

Table 4.9: Percentage Distribution of Output

Item	Year	Commodity	Services	Intermediate Use (3+4)	Final Use	Total Output (5+6)
1	2	3	4	5	6	7
Commodity	1973-74	34.5	5.3	39.8	60.2	100
	1978-79	38.0	5.9	43.9	56.1	100
	1983-84	40.3	6.5	46.8	53.2	100
	1989-90	42.5	6.2	48.6	51.4	100
	1993-94	40.3	7.6	48.0	52.0	100
	1998-99	41.2	7.9	49.1	50.9	100
	2003-04	45.7	9.3	55.0	45.0	100
	2006-07	47.6	8.8	56.5	43.5	100
Services	1973-74	21.2	9.4	30.6	69.4	100
	1978-79	23.4	15.5	38.9	61.1	100
	1983-84	24.4	13.1	37.5	62.5	100
	1989-90	27.8	12.8	40.6	59.4	100
	1993-94	26.8	11.7	38.5	61.5	100
	1998-99	23.6	13.2	36.8	63.2	100
	2003-04	24.5	12.9	37.4	62.6	100
	2006-07	26.1	13.0	39.1	60.9	100
Subtotal	1973-74	31.2	6.4	37.6	62.4	100
	1978-79	33.7	8.7	42.4	57.6	100
	1983-84	35.5	8.5	44.0	56.0	100
	1989-90	37.9	8.2	46.2	53.8	100
	1993-94	35.6	9.1	44.6	55.4	100
	1998-99	34.5	9.9	44.4	55.6	100
	2003-04	37.7	10.6	48.3	51.7	100
	2006-07	39.8	10.3	50.2	49.8	100
Net In-direct Taxes	1973-74	46.3	11.9	58.2	41.8	100
	1978-79	49.8	14.5	64.3	35.7	100
	1983-84	48.5	11.9	60.4	39.6	100
	1989-90	54.0	10.6	64.5	36.5	100
	1993-94	23.3	17.1	40.4	59.6	100
	1998-99	29.2	18.1	47.4	52.6	100
	2003-04	32.3	13.5	45.8	54.2	100
	2006-07	31.1	11.2	42.4	57.6	100
GVA	1973-74	70.1	29.9			100
	1978-79	63.3	36.7			100
	1983-84	63.0	37.0			100
	1989-90	71.2	28.8			100
	1993-94	56.1	43.9			100
	1998-99	54.2	45.8			100
	2003-04	47.2	52.8			100
	2006-07	47.9	52.1			100

Source: *Input Output Transaction Tables*, various years

Input Structure

On the other hand, in the case of services producing industries the Gross Value Added (GVA) to output ratio is almost the same for 2006-07 and 2003-04 at 69.7 per cent and 70.1 per cent, respectively (Table 4.10). The GVA to total output ratio of all industries are same for both the years of 2006-07 and 2003-04. The material inputs of commodities has increased from 39.1 per cent in 1993-94 to 39.5 per cent in 1998-99, 45.5 percent in 2003-04 and 47.4 percent in 2006-07, where as in the case of services, it was 14.2 percent in 1993-94, then decreased to 13.8 per cent in 1998-99, then increased to 14.8 percent in 2003-04 and again decreased to 14.7 percent in 2006-07.

The component of commodities as input in the service producing industries has increased marginally from 15.4 per cent in 2003-04 to 15.7 in 2006-07. And, there is also a slight increase in the component of services as input in the service producing industries, from 13 per cent in 2003-04 to 13.1 percent in 2006-07. Looking into the composition of final use, it is observed that of the total final use 53.0 percent relates to commodities and 42 per cent to services, in 2006-07. The corresponding figures for 1993-94, 1989-90, 1973-74, 1978-79 and 1973-74 were, 58 per cent and 37 per cent; 64 per cent and 33 per cent; 64 per cent and 32 per cent; 66 per cent and 30 per cent and 70 per cent and 26 per cent respectively. Commodity input requirement of the service sector is continuously on decline and service input requirement by the service sector is on the rise.

Table 4.10: Percentage Distribution of Inputs

Item	Year	Commodity	Services	Intermediate Use (3+4)	Final Use
1	2	3	4	5	6
Commodity	1973-74	34.5	16.4	30.0	69.9
	1978-79	38.0	14.1	31.0	66.3
	1983-84	39.5	16.0	32.8	63.9
	1989-90	41.3	14.8	33.7	63.5
	1993-94	39.1	14.8	31.0	57.6
	1998-99	39.5	14.0	30.5	54.6
	2003-04	45.5	15.4	34.2	51.9
	2006-07	47.4	15.7	36.0	53.0
Services	1973-74	6.9	9.4	7.6	26.4
	1978-79	9.7	15.5	11.4	29.9
	1983-84	10.2	13.7	11.2	32.1
	1989-90	12.0	13.7	12.5	32.6
	1993-94	14.2	12.4	13.6	37.1
	1998-99	13.8	14.2	13.9	41.1
	2003-04	14.8	13.0	14.1	43.9
	2006-07	14.7	13.1	14.1	42.0
Subtotal	1973-74	41.4	25.8	37.6	96.3
	1978-79	47.7	29.6	42.4	96.2
	1983-84	49.7	29.7	44.0	96.0
	1989-90	53.3	28.5	46.2	96.0
	1993-94	53.4	27.2	44.6	94.7
	1998-99	53.3	28.2	44.4	95.7
	2003-04	60.3	28.4	48.3	95.8
	2006-07	62.1	28.8	50.2	95.1
Net Indirect Taxes	1973-74	3.5	2.7	3.3	3.7
	1978-79	4.5	3.2	4.1	3.8
	1983-84	4.0	2.4	3.6	4.0
	1989-90	4.8	2.3	4.1	4.0
	1993-94	1.8	2.7	2.1	5.3
	1998-99	2.1	2.5	2.3	4.3
	2003-04	2.2	1.5	1.9	4.2
	2006-07	2.2	1.4	1.9	4.9
GVA	1973-74	55.1	71.5	59.1	
	1978-79	47.8	67.2	53.5	
	1983-84	46.3	67.9	52.4	
	1989-90	41.9	69.2	49.8	
	1993-94	44.8	70.1	53.3	
	1998-99	44.6	69.4	53.3	
	2003-04	37.5	70.1	49.7	
	2006-07	35.8	69.7	47.9	
Total Output	1973-74	100	100	100	100
	1978-79	100	100	100	100
	1983-84	100	100	100	100
	1989-90	100	100	100	100
	1993-94	100	100	100	100
	1998-99	100	100	100	100
	2003-04	100	100	100	100
	2006-07	100	100	100	100

Source: *Input Output Transaction Tables*, various years

Thus the service sector has very high value added component as compared to the commodities. Further, the service sector has backward multiplier effect on the service sector and in the long run it hampers the growth of commodity sector.

Inter-Industry Transactions

Table (4.11) shows inter industry transactions for different sectors. During the year 2006-07, the consumption of sectors' own output is, 21.4 in the case of primary sectors and 76 per cent in the case of secondary sectors. The corresponding figures for the years 1973-74, 1978-79, 1983-84, 1989-90, 1993-94, 1998-99 and 2003-04, were 44 per cent and 69 per cent; 43 per cent and 72 per cent; 39 per cent and 70 per cent and 34 per cent and 74 per cent, 32 per cent and 70.5 per cent and 24 per cent and 71 per cent and 29.0 percent and 72.2 percent respectively. In the intermediate use of primary sector, other than what has been used by the primary sector, has been shared by the secondary sector (70 percent) and, 'transport, communication and trade sector' (7.9 percent) and the 'other services sector' (0.02 per cent). The use of secondary sector product by 'primary', 'transport, communication and trade' and 'other services' sector in the year 2006-07, has been 5.7 per cent, 16.7 per cent and 1.6 per cent respectively. Intermediate supply of 'transport communication and trade' and 'other services' sector has been largely to secondary sector, which is of the order of 61 per cent and 41 per cent respectively. The output of 'other services' has been used by primary, 'transport, communication and trade' and self; having the shares of total intermediate as 2.7 per cent, 22 per cent and 33 per cent, respectively.

Table 4.11: Percentage Distribution of Inter-Industry Transactions

Item	Year	Primary Sector	Secondary Sector	Transport, Communication And Trade Sector	Other Services Sector	Total Output
1	2	3	4	5	6	7
Primary Sector	1973-74	44.4	47.6	7.9	0.1	100
	1978-79	43.1	50.3	6.3	0.3	100
	1983-84	39.2	54.8	5.6	0.4	100
	1989-90	34.3	60.0	5.1	0.6	100
	1993-94	32.1	61.4	6.0	0.5	100
	1998-99	24.3	69.8	5.6	0.3	100
	2003-04	29.0	64.4	6.6	0.02	100
	2006-07	21.4	70.7	7.9	0.02	100
Secondary Sector	1973-74	12.4	69.0	9.6	9.0	100
	1978-79	10.9	71.8	11.7	5.6	100
	1983-84	11.0	70.4	11.8	6.8	100
	1989-90	9.9	74.0	10.9	5.0	100
	1993-94	9.3	70.5	10.2	5.1	100
	1998-99	7.6	71.9	13.6	6.9	100
	2003-04	6.7	72.2	19.5	1.6	100
	2006-07	5.7	76.0	16.7	1.6	100
Transport, Communication And Trade Sector	1973-74	9.4	59.9	24.2	6.5	100
	1978-79	10.9	52.3	32.6	4.2	100
	1983-84	12.4	57.1	26.0	4.5	100
	1989-90	11.0	63.0	21.5	4.5	100
	1993-94	13.2	67.7	15.0	4.0	100
	1998-99	10.6	65.4	16.5	7.5	100
	2003-04	9.2	59.3	29.0	2.6	100
	2006-07	8.0	61.3	27.9	2.7	100
Other Services Sector	1973-74	8.9	60.7	20.2	10.2	100
	1978-79	5.5	45.6	33.0	15.9	100
	1983-84	6.5	48.5	33.3	11.7	100
	1989-90	6.3	51.9	28.4	13.5	100
	1993-94	4.8	41.3	40.5	13.3	100
	1998-99	3.1	44.6	25.8	26.5	100
	2003-04	3.0	35.8	22.0	39.2	100
	2006-07	2.7	41.7	22.2	33.4	100
Total Output	1973-74	24.2	58.9	11.7	5.2	100
	1978-79	19.3	60.3	15.9	4.5	100
	1983-84	18.6	62.1	14.3	5.0	100
	1989-90	15.4	66.8	13.1	4.7	100
	1993-94	14.7	65.0	15.6	4.7	100
	1998-99	11.0	66.7	14.1	8.2	100
	2003-04	11.9	66.0	19.4	2.7	100
	2006-07	9.1	70.3	18.1	2.5	100

Source: *Input Output Transaction Tables*, various years

Thus, in case of primary sectors, own output consumption as intermediate input is continuously falling over time. On the other hand, own output consumption is improving in case of secondary sectors. Hence primary sector is gradually getting integrated with other sectors of the economy but the secondary sector is integrating within itself.

Table 4.12, depicts the distribution of inputs in different sectors. The input requirement of primary sector have gone down from 34 per cent in 2003-04 to 32 per cent in 2006-07 mainly due to the decrease in the consumption of products of primary and secondary sectors. In the year 2006-07, the GVA in primary sector has been 72.0 per cent of the total output, which is higher than the corresponding figure of 70.5 per cent, in 2003-04. The corresponding figures in 1983-84, 1978-79 and 1973-74 are 71.5 per cent, 71.7 per cent, 76.2 per cent respectively. The GVA-output ratio, in the sectors of primary, secondary and other services have gone up, in comparison to 2003-04 from 70.9 per cent to 72 per cent, 25 per cent to 25 per cent and 81.7 per cent to 81.7 per cent respectively, while that of 'transport, communication and trade' has gone down, while that of other services have gone down from 67 per cent to 66 per cent. The intermediate input of 'transport, communication and trade' sector for 2006-07 (31 percent) has gone down from that of 36.7 per cent during 1993-94, which has been 39.2, 37.8 and 30.7 percent in the years 1983-84, 1978-79 and 1973-74, respectively. So we can conclude that the input requirement is the minimum in other services sector and is the maximum in secondary sector.

Table 4.12: Percentage Sectoral Distribution of Inputs

Item	Year	Primary	Secondary	Tertiary	Total Output
1	2	3	4	5	7
Primary	1973-74	16.5	19.4	8.1	0.2
	1978-79	16.7	14.2	4.1	0.4
	1983-84	16.7	15.4	4.2	0.4
	1989-90	15.4	13.6	3.3	0.7
	1993-94	13.5	14.0	3.1	0.3
	1998-99	10.9	14.5	2.9	0.2
	2003-04	17.6	14.4	2.2	0.0
	2006-07	13.8	13.3	2.5	0.0
Secondary	1973-74	4.8	29.5	10.3	17.6
	1978-79	7.1	34.1	12.8	12.1
	1983-84	8.0	33.9	15.2	11.1
	1989-90	9.5	36.0	15.0	12.7
	1993-94	8.4	36.5	16.2	7.5
	1998-99	7.9	34.6	16.1	10.7
	2003-04	9.5	37.9	15.5	5.5
	2006-07	10.5	40.8	15.5	6.0
Tertiary	1973-74	1.5	10.1	10.2	5.0
	1978-79	3.2	11.0	15.7	4.1
	1983-84	3.4	10.4	12.7	2.8
	1989-90	3.7	10.8	10.4	4.0
	1993-94	5.2	14.4	7.2	2.6
	1998-99	4.2	11.9	7.4	4.3
	2003-04	6.9	16.5	12.1	4.5
	2006-07	7.0	15.5	12.3	4.9
Other	1973-74	0.3	2.5	2.1	1.9
	1978-79	0.5	3.1	5.2	4.9
	1983-84	0.8	3.9	7.1	3.2
	1989-90	1.2	4.8	7.5	6.6
	1993-94	0.9	4.2	9.4	4.1
	1998-99	0.9	5.9	8.4	11.2
	2003-04	0.3	1.1	1.1	7.9
	2006-07	0.3	1.2	1.1	7.1
Total Input	1973-74	23.1	61.5	30.7	24.7
	1978-79	27.5	62.4	37.8	21.5
	1983-84	28.9	63.6	39.2	17.5
	1989-90	29.7	65.2	36.1	24.0
	1993-94	27.9	67.2	36.7	14.6
	1998-99	23.9	66.9	34.8	26.4
	2003-04	34.3	69.9	30.9	17.9
	2006-07	31.6	70.9	31.5	18.0
GVA	1973-74	76.2	31.9	65.6	73.5
	1978-79	71.7	30.5	57.6	77.0
	1983-84	71.9	29.2	57.6	81.1
	1989-90	71.5	27.2	60.6	74.7
	1993-94	71.0	28.4	59.2	84.7
	1998-99	77.9	29.1	61.7	72.1
	2003-04	70.9	25.3	67.3	81.7
	2006-07	72.0	25.2	66.9	81.7
Total Output	1973-74	100	100	100	100
	1978-79	100	100	100	100
	1983-84	100	100	100	100
	1989-90	100	100	100	100
	1993-94	100	100	100	100
	1998-99	100	100	100	100
	2003-04	100	100	100	100
	2006-07	100	100	100	100

Source: *Input Output Transaction Tables*, various years

Distribution of Output in Final Demand Categories

Following table (table 4.13) shows the distribution of various components in total output. The intermediate demand of industries accounts for nearly 50 per cent of domestic output in 2006-07, whereas it has been 48, 44, 45, 46, 44, 42 and 38 per cent in the years 2003-04, 1998-99, 1993-94, 1989-90, 1983-84, 1978-79 and 1973-74, respectively of the total output. The contribution of PFCE has come down to 29 per cent, as compared to 46 percent in 1973-74, that of GFCF has increased from 10 per cent in 1973-74 to 16 per cent in 2006-07. The contribution of GFCE has been nearly 5 per cent in 2006-07 and remained more or less at the same level of 6 per cent, since 1973-74. Net foreign trade forms a negligible proportion of (-1) percent in total output.

Table 4.13: Distribution of Various Components in Total Output

Year	Intermediate Demand	PFCE	GFCE	GFCF	Net Exports
1973-74	38.0	46.0	6.0	10.0	Neg.
1978-79	42.0	41.0	6.0	11.0	Neg.
1983-84	44.0	40.0	6.0	10.0	Neg.
1989-90	46.0	35.0	7.0	12.0	Neg.
1993-94	45.0	37.0	6.0	12.0	Neg.
1998-99	44.0	38.0	7.0	12.0	Neg.
2003-04	48.0	34.0	5.0	13.0	Neg.
2006-07	50.0	29.0	5.0	16.0	Neg.

Source: *Input Output Transaction Tables*, various years

The broad conclusion, which emerges from the above, is that the income from services has grown faster than commodity sector in pre and post green revolution periods. It appears that in general, the growth rate of service income is independent of the growth rate of commodity sector income. So gap between the growth rates of services and commodity sector has widened in the eighties as compared to the seventies.

Demand Decomposition Analysis

The demand side decomposition of output growth (table 4.14), analyses the changes in the output induced by changes in domestic demand, exports, imports and intermediate input use, i.e., input-output coefficients. Demand side decomposition is important, as it helps in identifying the effects of government policies on growth of output of an industry and structural changes, as the individual components of demand reflect economic policies. Such an analysis is particularly important, as demand pattern for different industries change with the passage of time due to changes in economy.

Percentage change in the four components: domestic final demand expansion, export expansion, import substitution and intermediate demand expansion in the aggregate output of the Indian economy has been analyzed for three sectors: primary, secondary, and tertiary. Among the four components of aggregate output, the components which contribute the maximum have been considered to be the dominant component. Indian economy is said to domestic final demand driven, if the contribution of domestic final demand expansion is the maximum and export driven if the contribution of export expansion has been the maximum and so on.

As per table, in primary sector the dominating component of output growth is change in import substitution followed by change in domestic final demand. In primary sector, the import substitution component has contributed 96.10 percent to output growth, followed by domestic final demand contributing 22.75 percent. The export component and intermediate demand component have rather depicted shrinkage over time. Export component of output growth has contributed a fall of -5.05 percent and intermediate demand, the fall of -13.80 percent. In the decade under consideration, the primary sector output growth has been import substitution and domestic demand driven. Technological change driven component and export driven component of output growth in primary sector have been rather on the negative side, i.e., the retarding factors. In the new global regime, when the exports and new technology had to be the edge, Indian economy has been missed both; and the primary sector has been domestic import substitution and demand driven sector. Primary sector has not been able to benefit from the globalized regime opportunities because of lack of technology and quality production for exports.

Secondary sector output growth is primarily an import substitution driven. In secondary sector, the dominating component of output growth is again import substitution contributing 776.31 percent followed by export expansion contributing -43.31 percent, final demand contributing -152.31 percent, intermediate demand contributing -480.69 per cent. Negative contribution of domestic demand in the output growth is a sign of domestic slowdown of demand at home and negative contribution of intermediate demand signifies the non-availability of required technologies to harness the benefits of opening up of the economy. Thus during the new regime, the domestic demand and technology have been the bottlenecks in the growth of secondary sector.

The tertiary sector results are quite different from primary and secondary sector. Percentage contribution of domestic final demand, in tertiary sector, to total output growth have been 272.24 percent followed by exports contributing 32.45 percent, intermediate demand contributing -5.57 per cent, import substitution contributing -199.12 percent. So, the tertiary sector output growth, basically a domestic demand driven, has also got a boost from export growth contribution. On the domestic front, with the natural growth mechanism, many of the services that earlier used to be luxuries or comforts have become necessities now, due to easy availability and enhanced affordability of the masses. Further, many of the services that were a part and parcel of secondary sector have been outsourced to independent tertiary sub-sectors. On the export component of demand, the internationalization and business process outsourcing has also played a catalytic role in this regard. Import substitution component of output growth has remained subdued and major technological breakthrough is not visible in the system as far as the tertiary sector growth is concerned. It is the domestic and the international demand that has led the output growth of tertiary sector in India.

Table 4.14: Sector-wise Percentage Contribution of Components to Output in India during 1993-94 to 2006-07

Sr. No.	Sector	Percentage Change in Final Demand	Percentage Change in Export Expansion	Percentage Change in Import Substitution	Percentage Change in Intermediate Demand
1	Primary	22.75	-5.05	96.1	-13.8
2	Secondary	-152.31	-43.31	776.31	-480.69
3	Tertiary	272.24	32.45	-199.12	-5.57
	India	-172.11	-43.33	624.21	-308.77

Source: Calculated.

A comparative analysis of the three sectors underscores the fact that 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 emerging economic structure of India, characterized by excessive tertiarization, is basically driven by import substitution demand coming from primary and secondary sectors and domestic demand coming from primary and tertiary sectors. Export demand has played a significant role in tertiary sector but the other two sectors have lagged behind in this regard. Much needed change in the intermediate input demand component, that signifies technological change, is altogether missing in the system. In such a situation, the very viability of over grown tertiary sector also comes under scanner.

Conclusion

The broad conclusions that emerge from above analysis are as follows. *First,* the GDP share in agriculture has declined sharply in India. *Secondly,* share of industry has increased significantly. *Thirdly,* the share of services has increased. *Fourthly,* the services sector has become the most important sector; services have emerged as the dominant sector, industry being contributing only about one-fourth of GDP. *Fifthly,* the shift of labour force from agriculture has been slower than that in GDP share. *Sixthly,* the services sector is the major economic sector but a minor contributor to employment. It is because the tertiary sector has contributed to GDP by productivity growth and its employment generating potential has been very low. This contradicts the view held by some economists that services sector growth is primarily a result of its low productivity.