Chapter - II

Review of Literature
CHAPTER – II
THEORIES AND REVIEW OF LITERATURE

This chapter records the findings of the research studies conducted previously on the sectoral performances in various parts of world. Section I provides the findings on composition of GDP in different sectors in India. Section II deals with the sectoral real growth rate in GDP. Section III brings out growth trend in employment in agriculture, industry and service sector. Section IV find out major constraints faced by the sectors. The last section furnishes the findings on growth trend of employment rate in various sectors.

2.1. REVIEW OF LITERATURE RELATED ON COMPOSITION OF GDP IN DIFFERENT SECTORS

Development theory usually identifies three stages of development, the First stage when the agricultural sector is the dominant sector in GDP, the second stage in which industrial sector is dominant and the third stage in which the services sector is dominant and is identified with countries in an advanced stage of development. India’s growth experience does not seem to follow this theory of stages as the high growth and high share of services sector, which is a feature of a developed economy, has been attained by India even before reaching a developed stage. It is important to realize that the constraints in the industrial and agricultural sectors and the natural advantage of India in services sector has led to services led growth of the economy.
Amal Krishnan Dey (1975)\(^1\) in his paper takes a fresh look at the discussion on the rates of growth of agriculture and industry in the light of the data which has become available up to the end of the fourth plan. The findings of the study are that, the so-called Green Revolution notwithstanding, there has been a tendency towards a slowing down of the growth rate in agriculture, though a constant rate of agricultural growth seems equally well suggested. In industry however, there has been a diminishing rate of growth between 1951 and 1974.

Malcom S. Adishiah (1987)\(^2\), in his paper tryies to assess the development and progress of the economy over the last 40 years. The result of the progress in the agricultural, industrial and service sectors has been that over the 40 years, the rate of growth of the economy has been steady 3.5 per cent till 1980, inching further forward thereafter.

Bhattachary and Mitra (1989)\(^3\) in their study observe that annual exponential growth rate of income of agriculture, forestry, fishing and livestock was 1.89 per cent, registered manufacturing 4.81, transport, storage, communication, etc., 6.42, banking and insurance 7.67 and other services 2.86 per cent. To quote them, “green revolution being mostly confined to a few pockets, it was less likely that the post-green revolution period could witness a strong demand linkage if it did not exist earlier”.

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\(^2\) Dr. Malcom S. Adishiah (1987), Indian Economy in four decade, Yojana, August Special, Vol.31, No.14, Pp13-16

A.D.N. Bajpai and S.K. Mishra (1991)\textsuperscript{4} observe that the maximum elasticity of gross domestic product with respect to various sectors is found in primary sector (0.4326). The study is based on conversion of GDP data into log form. Similarly, the elasticity calculated with the help of data based on annual growth variations also shows that maximum contribution made by agriculture that is 0.4495. This means that through the percentage share of primary sector has decreased substantially between 1950-1951 and 1988-89, this sector still contributes maximum to the variations in GDP. Therefore, a rapid growth with stability in the economy warrants adequate physical facilities as well as psychological motivations to keep up and boost up yield in agriculture.

R.K. Sharma and A. Jayakumar (1995)\textsuperscript{5}, find that the secondary sector was higher than the tertiary sector’s between the period 1950-51 and 1992-93. However during first period i.e. 1950-51 to 1965-66 the average annual growth rate of secondary sector was significantly higher than the tertiary sector. Whereas in the second period i.e. 1966-67 to 1992-93 the average annual growth rate of the tertiary sector was higher than the secondary sector’s. Thus one can conclude that in the recent years it is because of the stagnation or deceleration of industrial sector.

\textsuperscript{4} A.D.N. Bajpai and S.K. Mishra (1991) Analysis of Inter Sector Variations in GDP of Indian Economy” an unpublished paper submitted to 6\textsuperscript{th} International Conference on CAD/CAM, Robotics and Factories of the Future held form 19\textsuperscript{th} to 22\textsuperscript{nd} August 1991 at South Bank Politechnic London.

Prabhat Patnik and C.P. Chandrasekhar (1995)\textsuperscript{6}, India's transition in 1991 to a regime of ‘structural adjustment’ therefore is an event of great historical significance, but which is shrouded in a great deal of misconception, some of it nurtured for ideological reasons precisely because of the significance of the event itself. The first such misconception is that 'structural adjustment' became inevitable because the earlier regime had brought the economy to a point of ‘collapse’ in the real sectors of the economy; secondly, it cannot even be contended that the genesis of speculation, even if unrelated to the immediate performance of the real economy, could be located in some long term tendency towards stagnation or collapse of the economy; on the contrary, the second quinquennium of the 1980s saw the most pronounced industrial boom ever witnessed in the history of the Indian economy; and thirdly, the vulnerability of the economy to speculative forces was itself in part a result of its gradual 'liberalization'.

Shankar Acharya (2001)\textsuperscript{7} says that the average growth performance in the four most recent years, overall GDP growth drops to 5.8 per cent. Much more disquieting is the collapse of agricultural growth to 1.4 per cent (from over three times the rate in the Eighth Plan period) and the significant fall in industrial growth down to 4.9 per cent. Indeed, the drop in GDP growth in these four years would have been much steeper but for the extraordinary


\textsuperscript{7} Shankar Acharya (2001), India’s Macroeconomic performance in the Nineties, SANEI Distinguished Lecture was in Colombo, SriLanka on 9th November 2001.
buoyancy of services which averaged growth of 8.8 per cent. Thus growth in services was much faster than industry.

Dr. Rakesh Mohan (2002)\(^8\) in his lecture says that, it is widely believed that the Indian economy witnessed near stagnation in real GDP growth till late 1970s. A closer review of the performance of the Indian economy, however, suggests a continuing increase in real GDP growth over each decade since Independence, interspersed with an interregnum during the 1970s. Interestingly, growth of manufacturing production, in terms of decadal averages, was roughly constant at around 5.6 to 5.9 per cent in the first five decades after Independence, except for the 1970s. There are two other features of our growth history that are notable. First, agricultural growth has been subject to large variation over the decades. The 1970s interregnum is particularly marked by the severe deceleration in agricultural growth, followed by a marked recovery in the 1980s, and a slowdown thereafter. Second, until the 1990s, little note had been taken of growth in the services sector.

Azmat Gani, Michael D. Clemes (2002)\(^9\) say, that ASEAN economies have shown remarkable economic performance, measured in terms of growth of gross domestic product (GDP).

Increasing sectoral specialization and competitive advantage in many ASEAN economies perhaps contribute to these ASEAN economies’


phenomenal GDP growth rate. The growth and development of manufacturing industries and the presence of global corporations are thought to be facilitating the emergence of a service-dominated economy. It is noted that with increased globalization of economic activities and extensive overseas networks and connections by global corporations, many leading service-related firms have penetrated the Asia-Pacific region since the 1980s. The expansion of the service sector seems to play a crucial role in the economic development of the ASEAN economies, as services in general bind the other sectors of the economy such as manufacturing.

**R.B. Singh, P. Kumar, T. Woodhead (2002)** say that since 1950, share of agriculture GDP declined substantially; but there was minimal decrease in the number of persons dependent on agriculture. Consequently, agriculture contributes only 26 per cent of national GDP, but employs 60 per cent of the workforce. Since, it has been agriculture - led broad-based economic growth that lessened poverty - particularly rural poverty - recent (and undesirable) trends in agricultural growth and in associated rural developments raise great concerns.

**Renuka Mahadevan (2003)** say that in the early 1950s, half of India’s GDP came from the agricultural sector. By 1995, that contribution was halved again to about 25 per cent. As would be expected of virtually all countries in

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11 Renuka Mahadevan (2003), School of Economic,University of Queensland, Australia-Productivity Growth in Indian
the process of development, India’s agricultural sector’s share has declined consistently. The agricultural sector’s output growth decreased to 2.9 percent during 1992-93 and 1998-1999.

The reasons for the slowdown are that there was no major breakthrough in developing new high-yielding varieties during the 1990s and there is a decline in the environmental quality of land, which reduced the marginal productivity of the modern inputs.

Jim Gordon and Poonam Gupta (2003)\textsuperscript{12}, in their studies observed the trend in other countries. India’s growth experience has been characterized by a decline in the share of agriculture in GDP and an increase in the shares of industry and services. Between 1951 and 2000, the share of agriculture in GDP fell from 58 to 25 percent, while the share of industry and the share of services increased from 15 to 27 percent and from 27 to 48 percent, respectively. In the 1990s however, the share of services in India’s GDP climbed by about 8 percentage points, compared to a cumulative increase of 13 percentage points during 1951-1990. The share of the industrial sector, on the other hand has been stagnant since the 1990s. As result, the sectoral composition of output in India has come to resemble that of a middle income country, even though its per capita income remains that of low income country.

\textsuperscript{12} Jim Gordon and Poonam Gupta (2003), Understanding India’s Services Revolution, Paper prepared for the IMF-NCAER Conference, A Tale if Two Giants: India’s and China’s Experience with Reform.
Shri Sanjay K. Hansda (2003)\textsuperscript{13} in his working paper finds that the services sector has been the mainstay of Indian growth process in 1990s. While the share of services has been ruling high ever since independence, it has received a major fillip only in the 1990s. Indeed, contribution of the services sector to the overall GDP growth peaked an all time high of 65.1 per cent in the 1990s up from 43.6 per cent in the 1980s. As a result, the services share in GDP went up by a spectacular 7.9 per cent in a single decade of the 1990s touching the mark of 48.5 per cent in 2000-01 while the sector took about four decades to improve its share by 12.6 per cent to 40.6 per cent in 1990-91 from 28.0 per cent in 1950-51.

The ascendancy of services has had a stabilizing effect on the growth process itself. The service sector stands out as more growth inducing than industry or agriculture.

D.V.S. Sastry, Balwant Singh, Kaushik Bhattacharya, N.K. Unnikrishnan (2003)\textsuperscript{14}, in their paper examine the linkage of growth among agriculture, industry and services sector of the economy. They find that there is a substantial increase in the share of the services sector in GDP over years. It highlights the sustainability of a relatively high GDP growth in recent years driven by growth of service sector.


Rashmi Banga and Bishwanath Goldar (2004)\textsuperscript{15} in their working paper they says that the service sector in India has during the last 55 years always grown faster than the industrial and agricultural sector. Part of this is due to the traditionally slower growth of the Agriculture sector that underlies the conventionally expected structural transformation from agriculture to manufacturing. In the eighties, however, the rate of growth of services accelerated above that of manufacturing and the growth rate gap has widened in the nineties.

The acceleration in the growth of services sector in the Indian economy in 1990s, ahead of industry and agriculture, has raised the question of sustainability of India’s overall growth rate. There is a view that due to slow growth rate of industry, the services sector might not be able to sustain its pace of growth as it will come to face constraints emerging from slow growth in domestic demand. However, the findings of the paper suggest that the use of services is growing rapidly in the industrial sector and the increased use of services is contributing to both output and productivity growth in the industrial sector. This point to the possibility that the Indian services sector might not only succeed in sustaining its own growth but might also help in improving the growth rate of industrial sector in the near future.

The contribution of services to growth of manufacturing output went up considerably, from about one per cent in the 1980s to about 25 per cent in the

1990s. The trade liberalization undertaken in the 1990s, which increased competition in the domestic market, were found to be responsible to a certain extent for the increase in the intensity of use of services in the manufacturing sector.

**Rudrani Bhattacharya (2004)**\(^{16}\) says that agricultural productivity uproots industrialization in a small open economy while it may not promote industrialization in a closed economy. It also finds that in the presence of agro-industry, a small primary-exporting country can develop comparative advantage in manufacturing through agricultural productivity increase. These are more empirically plausible results for developing countries, which are indeed small open economies.

**Rashmi Banga (2005)**\(^{17}\) in his paper says that there is an assessment of performance of services at the aggregate as well as the disaggregated level undertaken in terms of their shares in GDP, employment, trade and FDI and accordingly different services have been categorized in order to identify crucial constraints on their growth.

He says that the emergence of India as one of the fastest growing economies in the world in 1990s can be attributed, to a large extent, on the rapid growth of its service sector. The growth of output in the service sector in the 1990s has been much higher than the growth of output in agriculture or industry. It now contributes around 51 per cent of GDP.

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\(^{16}\) Rudrani Bhattacharya (2004), Planning Unit, Indian Statistical Institute, Agro-industry, Inequality and Sectoral growth.

Kishore G. Kulkarni (2005)\textsuperscript{18}, in his paper says that a new participant in the globalization wave, India went through several structural and policy changes only in early 1990s, even if the awareness of need for opening up country’s borders was started in late 1980s, when Mr. Rajiv Gandhi was at the helm of policy design. With almost 20 percent devaluation of the Indian rupee in 1991, the process began that for a while slowed down a little but rarely anyone was in doubt about its existence. The recent reports show that Indian economy grew at the record breaking and astonishing pace of 8 percent growth in real GDP in 2003-2004. In early 1980s the monsoon god was nice to India. While agricultural sector that was in desperate need to prosper, received a big boost, the industrial sector invented few new technological advances and grew much more rapidly than before. India also realized that she can do much better in service sector. All in all, the economy started prospering at a slow rate but definitely much better than in 1970s. The need for opening up the economy was felt more keenly by Rajiv Gandhi’s government and some reductions in tariff rates were activated in early 1980s. But the real support for globalization, liberalization and reduction in protectionism came in late 1980s. India’s economic growth has received a strong impetus in post 1991 era. This increased economic growth is mainly and directly is a result of country’s better monsoons and the free trade movement that started in that year. Clearly the lethargic economic development was associated with greater protectionism and

\textsuperscript{18} Kishore G. Kulkarni (2005), Effect of Globalization on India’s Economic Growth, Draft Paper presented in the Oxford Conference.
policy makers seemed to have learned an important lesson from 1950 to 1990 era. The future economic growth therefore depends heavily on the speed of privatization and globalization.

T.S. Papola (2005)\textsuperscript{19} says that Economic development in India over a period of half a century seems to have followed the same pattern of structural changes that the developed economies of today underwent over a period ranging between 150 to 100 years. The share of agriculture in GDP declined from around 60 per cent in 1950-51 to 24 percent in 2003-04. That of industry increased from 13 to 25 per cent and of services from 28 to 51 per cent. This pattern of shifts has been continuous throughout the period of over half a century, but the speed of the shift has been faster since 1990-91. The first forty years saw a decline in the share of agriculture from 59 per cent to 35 per cent, the next 13 years from 35 to 24 per cent. Share of services increased from 28 to 40 per cent in the first 40 years and from 40 to 51 per cent in the next 13 years. Share of industry has grown slowly but has stagnated since 1990-91. The most striking feature of the structural change in the Indian economy in recent decades has been the pre-eminence of services sector as the major contributor to growth, raising its share rather sharply in the national output. Industry, particularly manufacturing, has been observed Top of Form

\textsuperscript{19} T.S. Papola (2005), EMERGING STRUCTURE OF INDIAN ECONOMY Implications of Growing Inter-sectoral Imbalances, Director, Institute for Studies in Industrial Development, New Delhi, Presidential Address 88\textsuperscript{th} Conference of The Indian Economic Association, Andhra University, Vishakhapatnam December 27-29, 2005.
Philippe Aghion, Stephen Redding, Robin Burgess and Fabrizio Zilibotti (2005) find that the effects of liberalization may be unequal—some firms may benefit whilst others suffer, leading to growing within industry inequality in industrial performance.

They used simple Schumpeterian growth model to understand how firms respond to the entry threat imposed by liberalization. The model emphasizes that firm responses, even within the same industrial sector, are likely to increase industry inequality.

J. Sivaram (2005), estimates Karnataka state income. He says that the sectoral estimates of income are used for the policy formation in given sectors. The GSDP of Karnataka state is divided into three sectors viz. Primary, Secondary and Tertiary sectors. The primary sectors have lost permanent position with their share of GSDP at constant prices coming down from 36.3 per cent in 1993-94 to 24.5 per cent in 2002-03. The share of secondary sector in total GSDP in Karnataka increased almost steadily from 25.4 per cent in 1993-94 to 29.4 percent in 1999-2000, though it declined to 24.9 per cent in 2000-01 but stood constantly at 25.6 percent in 2001-02 and 2002-03 respectively. The service sector has shown the most remarkable results increasing its share from 38.3 percent in 1993-94 to 49.9 percent in 2002-03.
Seema Bathla (2006)\textsuperscript{22} says the temporal behavior of the share of economic activities, clubbed under primary, secondary and tertiary sectors in the national income from 1950-51 to 2000-01. Over a period of five decades, the share of real income of agriculture has declined from 58.73 percent to 27.69 percent in 2000. In contrast, share of manufacturing has accelerated from 13.29 percent to 22 percent in 1982 and subsequently became constant and reached 25 percent in 2000. Tertiary has witnessed a continuous expansion with a share in total national income rising from 27.98 percent to 47.6 percent over time.

Suffice to say that a skewed pattern of economic growth has been observed where the relative share of agriculture is declining, industry nearly constant and services rising in the gross domestic product.

Subir Gokarn and Gunjan Gulati (2006)\textsuperscript{23}, say that the agricultural growth volatility has remained high; its contribution to the gross state domestic product has been continuously declining. Share of agriculture fell from 42 per cent during 1970s to 35 per cent and then to 29 per cent during 1980s and 1990s respectively. The share has further reduced to about 21.7 per cent of the total domestic product during 2000-05. While the industrial growth has remained strong, its share has remained stable around 26 per cent. Services sector on the other hand, now accounting for more than half of the GDP has

\textsuperscript{22} Seema Bathila (2006), Inter-sectoral Growth Linkages: Implication for Policy and Liberalized Reforms, Institute of Economic Growth, University of Delhi Enclave, Delhi.
exhibited continued and significant growth acceleration. During the last decade while the industrial growth has been led by the manufacturing sector, the services sector has registered robust performance on account of growth acceleration of sub sectors like communication, hotels and restaurants and banking and insurance.

Mahajan, Dhanashri (2006)\textsuperscript{24} in their book find that, globalization has emerged as the new challenge of the twenty-first century. Globalization today is quite like what industrialization was in the 18th Century. However there is once again an opportunity for India to industrialize by using the process of globalization for enslaving capital. It is time for the industrial sector to grow. The services sector has already registered impressive growth while the agricultural sector has its own limits to growth. It is time to adapt to the fast changing policy environment and it is time to clearly understand the political economy of these changes both at the national as well as the international level.

Sruabhi Mittal (2007)\textsuperscript{25} in his working paper finds that strengthening of agriculture will help in upliftment of the farmers but also benefit the larger section of the rural poor who are directly engaged in agriculture or indirectly linked with agriculture as consumers.

Efficient way of production, stabilized prices, higher income from agriculture would create a more conjugative environment in the country for the


\textsuperscript{25} Sruabhi Mittal (2007), Paper presentation at the Seminar on “US-India Agricultural Knowledge Initiative” organized by ICRIER and Ministry of External Affairs, Government of India on 30, April 2007 held at India Habitat Center, New Delhi.
development of the economy as a whole and of rural population in particular. One of the most important components of the much needed reforms is not only implementation of the policy in time but also in simultaneous review and evaluation of the impact of the policies and taking immediate steps to rectify the negative impacts if caused by any of the policies. Inter sectoral linkages and organization of the agricultural sector needs to be taken up.

Rajnish Mehra (2007)\textsuperscript{26} in his thought provoking paper, raises several interesting issues regarding the empirics of growth in India. The paper is an exercise in Growth Accounting -- a task that is challenging to undertake in India due to a large informal sector, major statistical revisions and lack of systematic annual surveys. The paper brings quantitative rigor to bear upon assertions that have heretofore been part of the conventional wisdom. Its basic conclusions are:

a. India’s success has not been based on strong growth in the manufacturing sector.

b. It is a result of a rapid expansion in service producing industries.

Kaushik Basu and Annemie Maertens (2007)\textsuperscript{27} say that, given the predominance of the services in the Indian economy, namely 52 percent of the GDP in 2005-06, the authors have concluded that this sector is driving the current growth India witnesses.

\textsuperscript{26} Rajnish Mehra (2007), University of California Santa Barbara, National Bureau of Economic Research, Discussion of Sources in the Indian Economy, January.

\textsuperscript{27} Kaushik Basu and Annemie Maertens (2007), The Pattern sector and Causes of Economic Growth in India, BRED working paper No.149, April 5, 2005.
P. Jegadish Gandhi and P. Ganesan (2007) in their book critically analyzed papers on the performances, problems and perspectives of services sector in the Indian economy. They say that the global economy shows significant structural changes with a swing of services sector’s contribution. In the process of economic development, a simultaneous growth of primary, secondary and tertiary sectors in historical, but the high growth of services sector is phenomenal in recent decades. This is directly due to the development of sophistication in the information technology. Since 1980s the share of services sector in the real GDP in India has also surpassed that of agriculture and industry. No doubt, the dynamics of the services sector infuses new growth impulses stimulating investment, income, consumption and employment.

Manoj S.Kamat, Sanjay N. Tupe and Masavi M.Kamat (2007) finds that the Indian agriculture sector had witnessed the diminishing return to scale phase in the decades of seventies, eighties and nineties. Before and after the introduction of the New Economic Policy (NEP), Indian agriculture sector is in the Decreasing returns to scales phase. Their finding proves that input availability was under strain during that period, hence there is urgent need to increase the flow of agro-inputs to meet the global challenge of food security, poverty reduction and unemployment.

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They employ the Cobb Douglas Production Function using OLS specification to investigate the determinants of agricultural gross domestic product during pre and post economic reforms to document the impact of policy change and India’s membership of the WTO.

Geoffrey N. Keim and Beth Anne Wilson (2007)\textsuperscript{30}, say that from around 1980 to 2005, the share of the services sector in output has risen from 38 percent to 54 percent, while the share of agriculture has halved, to 20 percent. Only the share of India’s industry sector, at around 25 percent, has changed little. Compared to other developing countries, India’s manufacturing sector is only a bit smaller and its service sector only slightly larger than would be predicted by fundamentals such as GDP per capita and the size of the economy.

Shankar Acharya (2007)\textsuperscript{31} analyzed in his paper presentation in Global Development conference, that since 1996-97 the growth of agriculture has dropped to barely 2 percent compared to earlier trend rate ranging between 2.5-3.0 percent. The reasons are many and include declining public investment by cash-strapped states, grossly inadequate maintenance of irrigation assets, falling water tables, inadequate rural road networks, unresponsive research and extension services, soil damage from excessive urea use (encouraged by high subsidies), weak credit delivery and a distorted incentive structure which

\textsuperscript{30} Geoffrey N. Keim and Beth Anne Wilson, India’s Future: It’s About Jobs, Board of Governors of the Federal Reserve System, International Finance Discussion Papers, Number 913, November 2007.

impedes diversification away from food grains. Tackling these problems and revitalizing agriculture will take time, money, understanding and political will. The share of agriculture in GDP has declined to hardly 20 percent. But agriculture is still the principal occupation of nearly 60 percent of the labour force.

Thus better performance of this sector is essential for poverty alleviation and containment of rising regional and income inequalities.

**Tushar Poddar and Eva Yi (2007)**, sub-divided growth into the key sectors of agriculture, industry and services. Industry is increasingly becoming an important growth driver; contrary to conventional wisdom that growth in India is only services-led. A quarter of services are directly linked to industry, in sectors such as trade, transport, electricity and construction. Recent increases in productivity are in part due to a turnaround in industry productivity, which has rebounded from negative to positive. Services productivity has remained strong over the past few decades. Labour has moved into industry from agriculture, while capital has moved to services since 2002.

**Shri C.P. Mohan (2007)** in his overview says that, the health of the Indian economy is closely linked to that of the agricultural sector. Agriculture constitutes about 22% of the GDP of the country and hence a drop in agriculture production by 4.5% will necessarily translate as 1 percentage point drop in GDP.

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33 Shri C.P.Mohan (2007), Member of Faculty college of Agricultural Banking, Reserve Bank of India, Overview of the Agriculture and Rural Section, Aug. 2007.
But the impact does not stop there. There are several demand and supply side linkages that are affected by the changes in agricultural production. Since 70% of the population is directly or indirectly dependent on agriculture, their purchasing power is determined by the performance of the sector. Thus increase in agricultural production will mean increased rural income that will then result in greater demand for the goods and services produced by the secondary and tertiary sector of food which shall have increased disposable income to spend on non-agricultural products.

In addition to such inter sectoral linkages, agriculture also provides raw materials to several industries like sugar, jute, cotton textiles, oil, milk products, fruit and vegetable based industries etc. Abundant availability of raw material at lower costs will result in higher production in the secondary and tertiary sectors.

**Ramesh Chand, S.S. Raju and L.M. Pandey (2007)** say that the sharp deceleration in the growth of the agricultural sector against the background of an impressive growth of the larger economy is widening disparities between the income of workers in non-agricultural and agricultural activities. It also adversely affects the welfare of the majority of the population, which depended on agriculture. This paper examines the trend in agricultural growth and factor underlying the slowdown. The growth rate of agriculture in most of the low productivity states was much higher than the

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national average between 1984-85 and 1995-96. However, after 1995-96, their growth rates not only declined, but also turned out to be much lower than the national average.

The main reasons for deceleration and stagnation in agricultural output after 1995-96 are a slowdown in growth of fertilizer use, irrigation, and energy income cases stagnation or even decline of other cases. Crop intensity and area under cultivation have also shown either a poor growth or a decline.

**Simi T.B. (2008)**\(^{35}\) India’s share in the global export market for services has increased rapidly booming from just about 0.5 percent in 1990 to over 2.5 percent in 2006, overtaking all the major emerging market economies with the exception of China.

This Policy Brief examines the prospects of India’s services sector vis-à-vis global economy. It explains India’s market access commitments under General Agreement on Trade in Services (GATS), focusing on the country, especially those issues that are applicable to specific service sectors.

**Pulapre Balakrishnanan, Ramesh Golait, Pankaj Kumar, (2008)**\(^{36}\) in their study address the observed slow growth of the agricultural sector since 1991. The method is to document the movement during this period of the factors that have been recognized as determining agricultural growth with a view to identifying the proximate causes of the slowdown. It is meant to provide a 'macro', as in sector-wide, perspective of this development. Though

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\(^{35}\) Simi T.B., 2008, Briefing Paper, Integrating India’s Service Sector with the Global Economy.

Indian agriculture constitutes an area of activity with major differences between crops and across regions. This study maintained the approach as there are many instances when a sectoral perspective is precisely what is needed, such as when identifying a growth strategy for the economy? Moreover, the method adopted here can serve effectively as a framework for the study of Indian agriculture even at a disaggregated level.

K.R. Shanmugam and Vidhya Soundararajan’s (2008)\(^\text{37}\), in their paper attempt to decompose the agricultural output growth state for the period 1994-95 to 2003-04. They used the random coefficients frontier production function model. Result of the study indicates that efficiency has declined over time for all the states and the average technical efficiency is only 72 percent. It indicates a scope for raising output without additional resources through proper use of existing input resources and technology. Since technological progress and technical efficiency are the two key sources of agricultural growth and they declined in recent periods, more attention should be paid to promote their growth.

Y.V. Reddy (2008)\(^\text{38}\) in his address says that the share of agriculture in the total gross capital formation in real terms has been declining in recent years mainly on account of steady erosion in the share of public investment. The inadequacy of private investment in fulfilling the capital requirements of


agriculture has raised concerns about the state of the rural infrastructure, which could turn into a binding constraint on growth.

M. Govinda Rao (2008)\textsuperscript{39}, in 2006, the primary sector’s contribution to GDP was just about 17 per cent, secondary sector contributed 28 per cent and the contribution of the service sector is 55 per cent. Therefore, the low growth rate of agriculture has not pulled down the aggregate growth rate markedly. Since 2001-02, over 70 per cent of the growth has been contributed by services, manufacturing contributed 25 percent and the contribution of the primary sector was just about 5 percent. Given that the volatility in agricultural sector has been high, the steady decline in the contribution of the sector has resulted in the lowering of the fluctuations in the growth performance.

A. Munian (2008)\textsuperscript{40}, in his paper says that the Indian economy has been growing at an average growth rate of 8.8 per cent in the last four fiscal years 2003-04 to 2006-07, with the 2006-07 growth rate of 9.6 per cent being the highest in the last 18 years. Significantly, the industrial and service sectors have been contributing a major part of this growth, suggesting the structural transformation underway in the Indian economy. Industrial and services sectors have logged in a 10.63 and 11.18 per cent growth rate in 2006-07.


respectively, against 8.02 and 11.01 per cent in 2005-06. Similarly, manufacturing grew by 8.98 per cent and 12 per cent in 2005-06 and 2006-07.

**Rakesh Mohan (2008)**\(^{41}\), in his working paper says that, GDP growth over time since Independence, was interspersed with an interregnum during the 1965-1981 period. Interestingly, growth of manufacturing production, in terms of period averages, was actually high at around 6 to 7 per cent in the first four decades after Independence, except for this period (1965-1980). The real acceleration took place in the 1950s. There are two other features of our growth history that are notable. First, agricultural growth has been subject to large variation over the decades. The 1965-81 interregnums is particularly marked by the severe deceleration in agricultural growth, followed by a marked recovery in the 1980s, and a slowdown thereafter. Second, until the 1990s, little note had been taken of growth in the services sector. A glance at the growth record suggests that it is the continuing and consistent acceleration in growth in services over the decades, that had earlier been ignored, that really accounts for the continuous acceleration in overall GDP growth, once again, except for the 1970s interregnum.

**S. Revathy (2008)**\(^{42}\) says that, in the first place, policymakers must make efforts to convert agriculture into a profitable enterprise by making

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adjustments in the minimum support price of various crops in consonance with
the cost of doubling the flow of institutional credit to the agricultural sector in
the next three years may not accelerate the growth of agriculture and remove
the present agrarian impasse. Remuneration from crop cultivation is the key
problem.

Moody (2008)\textsuperscript{43} said that, India’s industrial sector is likely to witness a
slowdown and will remain in single digit throughout this year, as the country
faces various headwinds like appreciating rupee, poor infrastructure and rising
borrowing costs, global credit rating agency.

Subhnail Chowdhury (2008)\textsuperscript{44} find that all categories of industries
witnessed decline in their growth rates in October 2008 compared to October
2007. The most noteworthy aspect is the fact that there has been a drastic
decline in the growth rate of capital goods industries, which declined from a
very high figure of 20.9 percent in October 2007 to a low figure of 3.1 percent
in October 2008.

S.N. Yogish (2008)\textsuperscript{45} says that “If India can use more technology and its
strong domestic agricultural base for improving its exports, it might actually
give India grater global influence than any nuclear arsenal”.

\textsuperscript{43}Moody, India’s Industrial sector to slow down, Febuary13, 2008.
\textsuperscript{44}Subhanil Chowdhury( 2008), Industrial Growth in India: Where are we heading?
\textsuperscript{45}S.N. Yogish (2008), Information Technology and Agriculture, Southern Economist December 15,
2008, Pp9-
M. Ramachandra Gowda and E.A. Parameshwara Gupta and M.V. Krishna Murthy (2008)\textsuperscript{46}, made an attempt to discuss the growth rate of Indian economy. The growth rate of Indian economy has no doubt accelerated after the introduction of economic reforms. The Indian economy registered a high growth momentum during 2007-08 for the fifth year in succession. The rate of growth in the Indian economy accelerated from moderate 5.7 per cent form 1990-91 to 1999-2001. Period wise analysis brings out firstly, that the economy recorded a growth of 7.3 per cent per annum during post independence period 1990-91 to 1999-2001 compared to 9.0 per cent during 2006-07.

The industrial growth declined during 2007-08 from the performance during the previous year 2006-07 at 9.6 per cent. Rapid growth in the agricultural sector is seen in the 2005-06 and there exists a decline in the trend during the year 2006-07. The service sector continued to be the ministry of the economy contributing 62.9 per cent overall growth.

Ganti Subrahmanyam and R. Venkateswarlu (2008)\textsuperscript{47}, in their paper investigate using the empirical version of Capital Asset Pricing Model (CAPM) the sectoral growth relation of the major sectors to the national GDP growth of the Indian economy. The portfolio model is described to explain the sectoral


growth of national output. The equation applied to the sectoral growth is as follows:

$$\vartheta_{it} = \alpha_i + \beta_i \vartheta_{it} + e_{it}$$

where $\vartheta_{it}$ = rate of output growth of sector $i$

$\alpha_i$ = natural growth rate of sector $i$, $\vartheta$, if $\beta_i = 1$, otherwise $\vartheta_i (1-\beta_i)$

$\vartheta_{it}$ = growth rate of national output

and $e_{it}$ = residual output of national output.

Which is a random variable with zero mean and constant variance ($\sigma^2$). If all sectors follow the same business cycle, we estimate $\beta_i = 1$ in the above equation. The test of whether or not $\beta_i = 1$, then $\alpha_i = 0$, which implies that sectoral growth rate equals the national growth rate given by contemporaneous growth rate of real GDP. Using the empirical version of the CAPM, this study examined for major sectors, the sectoral growth relation to the national GDP growth of the Indian economy effects of macro policies to the national economy. The results of the study emphasize the importance of sectoral structure for economic policy purposes.

**IBN Live (2008)** says that, India's industrial growth is showing signs of a slowdown. Figures for December slipped to 7.6 per cent from 13.4 per cent last year, while November's growth was revised to 5.1 per cent. Though the figures are in line with expectations, the slowdown is seen due to slower growth in the manufacturing sector. The sector de-accelerated to 8.4 per cent.

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48 IBNLive2008, India’s industrial growth shows signs of slowdown.
from 14.5 per cent last year. Mining and electricity sectors too performed poorly during the month, recording growth rates of 3 per cent and 3.8 per cent respectively. The cumulative industrial growth for the period between April to December last year declined to 9 per cent as against 11.2 per cent a year ago.

**M. Nageswara Rao and S. Srinvas Rao (2009)**⁴⁹ find that agriculture holds a prominent place in Indian Policy not only due to the contribution to GDP but also due to the dependence of large population of this sector for its livelihood. Indian agriculture sector has made huge strides in developing its potential because of the Green Revolution.

**Dr. Ketharaj and V. Alwarnayaki (2009)**⁵⁰ in their article say that, the rise in global temperature owing to climate change will affect agriculture in strikingly different ways in the lower and higher latitudes. The dry lands have been bypassed by the green revolution, but significant investments in improved water management and technological innovations including the efficient use of nutrients, along with appropriate policy and institutional innovations can have a positive impact of increasing agricultural productivity in the era of climate change.

India should start investing for the long-term sustainability of the farming sector particularly in dry land agriculture. By doing this, India will enable its farmers to win the gamble with the monsoons for good.

⁵⁰ Dr. Ketharaj and V. Alwarnayaki (2009), Agriculture in the era of climate change, Kisan World, November 2009, Vol-36 No.11, Pp.33to34.
R. Nagaraj (2009)\textsuperscript{51} in his working paper says Industrial growth of 6.6 percent p.a. during 17 years. Consumer durable grew fastest at 8.1 percent p.a., followed by capital goods at 7.4\% p.a. By 2-digit industry groups, beverages grew the fastest at 11 percent p.a. Growth rates are after the reforms roughly the same as in the 1980’s.

Dr. S. Maheskumar (2009)\textsuperscript{52} in his article says that agriculture in India is one of the most important sector of its economy. It is the means of livelihood of almost two thirds of the work force in the country. About 43 percent of India’s geographical area is used for agricultural activity. Though the share of Indian agriculture in the GDP has steadily declined, it is still the single largest contributor to the GDP and plays a vital role in the overall socio-economic development of India. He suggests that there is an urgent need for second green revolution in Indian agriculture and taking it to a higher trajectory of 4 per cent annual growth.

Barry Eichengreen and Poonam Gupta (2009)\textsuperscript{53}, have provided new evidence and analysis of the share of services in GDP in the course of economic development. They identify two waves of service sector growth, a first wave in countries with relatively low levels of per capita GDP and a second wave in countries with higher per capita incomes. The first wave appears to be made up

\textsuperscript{51} R.Nagaraj, (2009), Dec.10, India’s Industrial performance, 1991-2008, working paper
primarily of traditional services, the second wave of modern (financial, communication, computer, technical, legal, advertising and business) services that are receptive to the application of new information technology and increasingly tradable across borders. There is evidence of an increase in the share of services in GDP at all levels of income after 1970 and, in addition, of a further increase in the share of services in countries with relatively high per capita incomes – in other words, of the second wave occurring at lower income levels than before.

Nitya Nanda (2009)\(^\text{54}\) analyzed his working paper, India embarked on a high growth path right in the early 1950s. However, due to some internal and external shocks, the economy slowed down from the mid-1960s until about 1980. Moreover, throughout the period, industry and services grew at higher rates compared to agriculture whose share in GDP was almost 60 per cent in 1950. Thus, the increasing trend in the overall growth rate is the reflection of the increasing share of the high growing sectors in the GDP. It is also suggested that mere growth is not sufficient to reduce poverty, while poverty reduction may also impact growth positively.

Dr. Haremder Raj Gautam (2010)\(^\text{55}\) says that Indian agriculture has taken a big leap in the last 60 years. Agriculture, which had the responsibility to feed 350 million in 1947, has now 1,100 million people to feed, which is a


huge responsibility. The compound growth rate in agricultural production is 2.7 percent per annum since independence. During the financial year 2006-07, the agriculture and allied sector’s growth slowed down to 2.7 percent as against six per cent in the previous year.

Jogender Sharma (2010)\(^{56}\) says that India has traditionally been an agrarian economy. Agriculture contributed more than 50 percent of GDP in the 60s, while almost two third of the population was dependent on agriculture. But use of traditional methods of cultivation, marginal landholdings and greater dependence on monsoon had put the agriculture in a distressed situation, thereby adding to economic woes of the rural mass dependent on it. However, those days have passed. Now most of the companies belonging to various sectors like telecom, automobiles, banking and financial services have explored the rural marker and want to increase their exposure to this sector.

A. Arumugam and Dr. Kmaruthamuthu (2010)\(^{57}\) find that the performance of the agricultural sector influences the growth of the Indian economy. Agriculture accounted for 17.8 per cent of the Gross Domestic Product in 2007-08 compared to 21.7 per cent in 2003-04. Notwithstanding the fact that share of this sector in GDP has been declining over the years, its role remains critical as it accounts for about 52 per cent of the employment in the country.

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Dr. N. Mahalingam (2010)\textsuperscript{58} says that India had remained one of the highest contributors to the GDP of the world till 18\textsuperscript{th} century, contributing between 24.4 percent and 29.9 percent. During the alien rule, exports of the products were discouraged and India was made a market for the products from abroad. The country, during the freedom struggle, could not invest and participate in the Industrial revolution witnessed after the World war. Consequently, India’s share had shrunk to 4.2 percent when the country got independence. Further resettlement of displaced people form Pakistan consequent on partition of the country has taken a large share of the resources, and consequently the country’s share of GDP of the World had dropped to 1.52 percent. However, her contribution has started climbing up to 1.69 percent during 2004. In such a scenario, the government has to plan to re-emerge to the pre-eminent position in the years ahead.

Dr. S. Kumaresan (2010)\textsuperscript{59} says that agriculture growth has direct impact on the economy. Good crops implying increase in the purchase power with farmers, which lead to the greater demand for manufactures. Likewise bad crops lead to a depression in business. Since 2003-04 Indian agricultural sector is almost going through a crisis with huge food grains surplus wiped out, large imports of food grains being planned and farmers committing suicide all over the country.

\textsuperscript{58} Dr. N. Mahalingam (2009), Electricity For Speeder Growth of Economy, Kisan World, January 2010-Vol-37, No.1, Pp 3.4.
2.2. REVIEW OF LITERATURE RELATED ON SECTORAL REAL GROWTH RATE IN GDP

Lewis (1955)\textsuperscript{60} says, that there is acute shortage of agricultural products, and inflation of their prices, which drive all other prices in spiral movement. Thus agriculture acts as a price stabilizer in developing economics.

Bawer and Yamey’s (1957)\textsuperscript{61} view; “the leading industrialized countries of today were once predominantly agricultural and economic historians have traced the curious ways in which a prosperous and expanding agriculture formed the basis for the concurrent or subsequent establishment and expansion of manufacturing” holds enough water and sounds more balanced.

G.S. Kainth (1980)\textsuperscript{62}, his study endeavors to analyze changes in income distribution between two sectors namely, Agricultural and non-agricultural sectors. He finds that there is a shift from agricultural to non-agricultural sector. It has been seen that a substantial amount of income has shifted from non-agricultural sector to the agricultural sector due to the improvement of agricultural terms of trade. On the other hand, the real value of the tax yielded form agriculture has declined.

K.P.C. Rao (1986)\textsuperscript{63}, study the inter-sectoral relationship in Andhra Pradesh Economy. The increases in the incomes of primary, secondary and

\textsuperscript{60} W.A.Lewis, The Theory of Economic Growth, Homewood III, 1955, Pp.277.
\textsuperscript{61} P.Y. Bawer and B.S. Yaney (1957), The economics of underdeveloped countries, Chicago, 1957, Pp.235.
tertiary sectors were Rs.332 crores, Rs.253 crores and Rs.470 crores respectively. The share of primary sector in the state’s income fell from 62 percent to 52 percent.

The share of secondary and tertiary sectors, stood at 1 and 27 percent respectively. The per capita income from the tertiary sector went up universally in all the districts. Thus, the losses in the primary sector are made good by the gains from the secondary and tertiary sectors.

Sebastian Dominic (1988)\(^\text{64}\) says that, an inflation rate touching 8.51 percent and the slowdown in industrial growth are the major challenges for the Indian government. The continued slowdown in industrial growth will affect the government's fiscal projections. Collection of excise and customs duties will suffer on account of a slowdown in the industry. With a 10 per cent industrial growth and seven per cent inflation, excise collection growth should have been 17 per cent. With industrial growth slowing down to about 3.6 per cent in the first six months of the fiscal, excise collections are bound to suffer, officials said. Excise was budgeted to grow from Rs.47,700 crore in 1997-98 to Rs.57,690 crore in 1998-99.

Clive Lee (1996)\(^\text{65}\), in his article says that the substantial growth of service in the twentieth century, and especially in recent decades, has focused attention on the effect this has upon the growth of the economy particularly through productivity. The recent attention paid to the service sector has been

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due largely to structural changes, which have taken place in the economy since the downturn of growth in the 1970s. Manufacturing has fallen sharply as a share of output since 1979, and services have expanded in lieu.

Miles and Boden (2000) describe services as the ‘Cinderella sector’, largely ignored by economists, industrial relations researchers and students of innovation.

They argue, however that as the share of services in national economies continues to grow and the linkages between services and other sectors of the economy extended, the tendency to overlook services becomes less tenable.

Rakesh Mohan (2002) in his Lecture explained industrial growth. He says that Indian Industry has coped extremely well with all changes ushering in new competition after having been sheltered in a closed and protected economy for more than 50 years. A great deal of re-engineering has taken place, new challenges have been met at a rapid pace, and quality is being upgraded all round. However, the record of industrial production over the last 5 years provides significant cause for worry, with industrial growth rate slowing down to an annual average of less than 5 per cent, a level not seen since the late 1970s. In view of the increasing complexity of agricultural production much greater care will be needed most and which achieve the highest returns. For this to happen, a great degree of decentralization is needed in decision making, along with better availability of relevant information.

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Jim Gordon and Poonam Gupta (2003)\(^6\) say that a striking feature of India’s growth performance over the past decade has been the strength of the services sector. The emergence of services as the most dynamic sector in the Indian economy has in many ways been a revolution. The service sector in India has grown faster than agriculture and industry. As a result, the share of services in GDP has increased over time. In the 1990s, services growth was particularly strong, and this has led to the services share in output being relatively large compared to other countries at similar levels of development.

This paper explores the factors behind the dynamism of the service sector in India. The empirical evidence presented in the paper shows that splintering and high-income elasticity of demand for services have served to stimulate services growth in India.

Triplett and Bosworth (2004)\(^7\) argue that, “We find that the bulk of the post-1995 acceleration of productivity growth was within the services producing industries. In the period after 1995, labor productivity in the goods producing industries improved, but not nearly so much as it did in the services producing industries. Multifactor productivity, moreover, accelerated strongly in services producing industries but hardly at all in the goods producing sector”.


Kunal Kumar Kundu (2004)\textsuperscript{70} Agriculture was the major contributor to India's GDP growth during the 50s. Thereafter, the service sector took center stage with increasingly improving contribution every passing decade. The growth of the economy over the years has been marked by a) continuous decline in the contribution of agriculture, and b) virtual stagnation in the contribution of industry.

Rashmi Banga (2005)\textsuperscript{71} in his paper identifies and discuss critical issues with respect to growth of India’s service sector and provides policy insights thereof. In his paper he finds that the service sector in India witnessed a phenomenal growth in the decade of 1990s.

During 1980s, its output grew at the rate of 6.6 per cent per annum, while during 1990s the growth rate increased to 7.5 per cent per annum. In the last ten years (1994-2004), the service sector has grown on an average 7.9 percent per annum, ahead of agriculture with the growth of 3 per cent per annum and manufacturing sector with growth of 5.2 per cent per annum. However, though the growth of service sector in India is in line with global trends, there is a unique characteristic of India’s service sector growth. First, the entire decline in the share of agriculture sector in GDP from 32 percent in 1990 to 22 per cent in 2003 has picked up by the service sector while manufacturing sector’s share has remained more or less the same.

\textsuperscript{70} Kunal Kumar Kundu (2004), India's under performing industrial sector- Asia Times Online Ltd.
Deepita Chakravarty (2005)\textsuperscript{72} says that the Service sector has in recent decades been performing much better than agricultural and industry in India and many other developing countries as well. This study is an inter-sectoral analysis of state domestic product data to determine of the services sector growth in India during recent years. It finds that state’s own industry turns out to be the most important determinant of the services sector growth, the commodity-producing sector of the country outside the state does not play a significant role as well in determining the services sector performances under constraints conditions that basically relate to the supply side. The study essentially is an explorative analysis and has not attempted at making precise econometric estimation. Incidentally, except for the services sector hardly any significant change can be identified in the growth performances in the other two sectors in the post reform period, including industry, when compared to early reform era of the eighties. This is true for the output elastic ties of the services output as well.

Jim Spohrer and Paul Maglio (2005)\textsuperscript{73} say that the Government need to make service innovation a priority because GDP growth depends on it.

N. Ramakrishnan (2005)\textsuperscript{74} says, that one reason for the growth in the services sector in India is the liberalization in the regulatory framework that gave rise to innovation and higher exports from the services sector. Ultimately, improvements in the services sector will drive changes in the manufacturing sector.

\textsuperscript{72} Deepita Chakravarty (2005), Growing Services in India – An Inter-sectoral Analysis Based on State-Level Data, Working Paper No.64 Center for Economic and Social Studies, Begumpet, Hyderabad 2005.

\textsuperscript{73} Jim Spohrer and Paul Maglio (2005), Director, Almaden Services Research IBM Research, Sep. 8, 2005.

\textsuperscript{74} N.Ramakrishnan (2005), Growth in services will drive manufacturing sector, The Hindu, Business Lline, Financial daily from THE HINDU group of publications, Sunday, March, 06, Interner Edition
Dipo T. Busari (2006), in his paper seeks to examine the growth process of the service in selected countries in the ECOWAS (Economic Community of West Africa States) sub region and evaluates its potentials for contributing to growth in line with what is happening in other parts of the globe. The economic reform embarked upon by many countries in the West African sub region since the early 1980s has led to significant deregulation in the services sector leading to the introduction of new products and services. In his study he proceeds from well-known Chenery and Syrquin’s model. He says that for the most developed countries of Europe, North America, Japan, and so-called ‘Asian Tigers’, there are three distinct phases of development that could be identified. The first was dominance of agriculture in economic activity. The second being the emergence of the goods –producing or manufacturing sector which clearly emerged as a result of the industrial revolution, while the third and of course current phase is the emergence of the service producing sector as a dominant player in terms of contribution to economic activity. The revolution in information and communication technology since 1980s clearly was responsible for this.

Labour productivity has increased significantly in the service-producing sector and in most of the advanced economies; the growth of the service-producing sector is above national average.

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Aki Fukuchi (2006), says that India has continued strong growth against expanding domestic demand in recent years. The mechanisms of India’s economic Growth pointed out that while the service sector has been a driver to the country’s growth, the relative presence of the industrial sector has not been as great within the economy; and strengthening the industrial sector was essential to the country’s long-term stable growth. The agricultural sector’s decline and growth of the service sector and the industrial sector’s share in GDP have barely changed.

Deba Prasad Rath and Raj Rajesh (2006) say that due to growing terrorization of several economies, several sectors has emerged as the largest and fastest-growing sector in the global economy. They say that the higher growth in service sector has added a dimension of stability to India’s growth process. Growing complementarities between the industrial and services sectors augur well for the medium-term growth performance of the Indian economy. In the aftermath of nearly one and a half decades of sustained growth, services sector has led to widening of not only the tax base but also the buoyancy of taxes. With regard to inflationary impact of services sector expansion, the paper finds that growing service sector share in GDP has coexisted with low and stable inflation on account of inflation moderating

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forces operating, inter alia through the synergy between the two growth drivers. To test the hypotheses they used ordinary lease square (OLS) method.

Seema Bathla (2006)\textsuperscript{78} analyses that Indian economy has undergone a structural shift particularly form the early nineties when India embarked upon structural adjustment programme. He says that several reforms and other sector specific liberal measures have been initiated since 1991. These measures have fuelled up economic growth through technological advancement and external trade in many industrial goods, food and non-food commodities. Of particular interest is the expansion of service sector that has taken place over the years. A higher growth is observed in the primary secondary and tertiary sectors over a period of five decades. Inter sectoral relationship investigated using Granger causality test from 1950-2000 to verify the theoretically recognized causality relationship between agriculture and tertiary and industry and tertiary. However, causation runs from primary and secondary sectors only specialized and professional services like storage, transport, trade and communication, the reverse holds true only between secondary and specialized services.

Mnoj Edward and Moli P Koshy (2007)\textsuperscript{79}, in their paper attempt to study Kerala’s tourism development initiatives in the area of planning and product development. They find that tourism industry in Kerala witnessed considerable growth during the nineties and beyond and is expected to grow

\textsuperscript{78} Seema Bathila (2006), Inter-sectoral Growth Linkages: Implication for Policy and Liberalized Reforms, Institute of Economic Growth, University of Delhi Enclave, Delhi.

further in future. This growth particularly occurred in the backdrop of the opening up of the Indian economy and the general global trend of increasing tourism activity seen across the counties in the Asian region. In the year 2003, the impact of travel and tourism demand on the state GDP increased at 12.2 percent which is higher than the growth figures for India and for the world.

Jose Antonio Ocampo, Jomo K.S. and Tob Vos (2007) say that, fast growth has been linked to strong expansions of both the industrial and services sector and rapid decline in the importance of agriculture.

Kaushik Basu and Annemie Maertens (2007), in their paper found the current erratic and low growth pattern of agriculture sector raising the inequality between states, between rural – urban areas, and within urban and rural areas mainly since the 1990s.

Shri Kamal Nath (2007) Union Minister of commerce & Industry, has said that India’s manufacturing has the highest growth rate in over a decade and crosses 14 percent in March 2007, FDI equity inflow is the highest since inception of economic reforms.

India’s manufacturing sector, which has a near 80 percent weight age in the country’s industrial production, has shown an impressive performance with a record growth of 14.1 percent in March 2007 compared to a growth of 10.1

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percent in March 2006, which is the highest manufacturing growth in over a
decade. The manufacturing growth rate has also doubled in 5 years – from 6
percent in 2002-03 to a record 12.3 percent in 2006-07. “This augurs well for
the 11th Plan, which envisages a growth of 12 percent for the manufacturing
sector”.

Ravindra H Dholakia (2007)\(^{83}\) in his discussion he says that the tertiary
sector in all states, except Arunachal Pradesh and Haryana experienced trend-
break during the period. As many as 14 states experienced acceleration from
1972-73 to 1984-85. Thus acceleration in the tertiary sector is the most
widespread in the country.

Chandrasekaran (2007)\(^{84}\) in his paper finds that Trade liberalization
and reforms have has a positive impact on services. In particular, revolution in
CIT sectors has imparted tradability to services, which were hitherto
considered untradeable. The boom in the Indian Services sector is mostly
caused by CIT. Services sector has both forward and backward linkages with
other sectors more particularly with industry.

P. Bheemaraj (2008)\(^{85}\), in his study has undertaken the contribution of
tourism to the regional economic development. Tourism is India’s second
largest foreign exchange earner.

\(^{83}\) Ravindra H. Dholakia (2007), Understanding Indian Economic Growth: Some observations,
\(^{84}\) A. Chandrasekaran (2007), Agriculture to Services Sector – Led Growth, Southern Economist,
\(^{85}\) P. Bheemaraj (2008), Importance of Tourism in Economic Development: A Micro Study, Southern
Income from foreign tourism in the form of foreign exchange earnings adds to the national income. In India, 50 lakh people are employed either directly or indirectly in the tourism industry. To generate further employment the government should pay attention to the provision of enhanced facilities to the tourists.

Simi T.B. (2008)\textsuperscript{86} says that India’s share in the global export market for services has increased rapidly booming from just about 0.5 percent in 1990 to over 2.5 percent in 2006, overtaking all the major emerging market economies with the exception of China. This Policy Brief examines the prospects of India’s services sector vis-à-vis global economy. It explains India’s market access commitments under General Agreement on Trade in Services, focusing on the country, especially those issues that are applicable to specific service sectors. Also, it provides a discussion on policy implications.

Pulpre Balakrishnan (2008)\textsuperscript{87}, in his paper provides an overview of the principal developments in the agricultural sector since 1991, i.e., since the economic reforms. He finds himself in agreement with the view that not a great deal may be expected to emerge in agricultural sector post reforms. He is aware that it would be wrong to ignore that the managers of the reforms had based their actions upon a model of how these would affect, may encourage agricultural production. It does effectively signal that non-price factors are very likely to be important determinants of profitability in agriculture. It is

\textsuperscript{86} Simi T.B., 2008, Briefing Paper, Integrating India’s Service Sector with the Global Economy.
easy to identify these which extend from water, power, infrastructure, research and development to the agricultural extension services essential to the spread of new technology, long identified area where market failure is likely.

J.A Andharia (2008)\textsuperscript{88} says that during last two five-year plans, in spite of growth and development in industry and services sector, agricultural sector has suffered heavily. There is an urgent need to achieve a growth rate of 4 percent in the agricultural sector. Increased investment in the field of agriculture is essential.

A. Vijaya Kumar (2008)\textsuperscript{89} in his publication says that, since the early 1990s, the growth process in India has been marked by a remarkable performance by the services sector. The experience of developed countries suggests that growth in the services sector followed the growth of the industrial sector. However, India’s experience in this regard is somewhat different. The sectoral shift in favor of the services sector over the last two decades has taken place in the face of an almost stagnant share of industry and a reduced share of agriculture in GDP. In fact, it was the growth performance of the services sector during the 1990s, which sustained the overall growth of the Indian economy, particularly in times of adverse agricultural shocks and industrial slowdown.

\textsuperscript{88} J.A. Andharia (2008) October 1, Agricultural Production and Problems of Agriculture in India, Southern Economist, 47th year of publication, Volume No.47, No.11, P.P7-9.

\textsuperscript{89} S.K. Nanda, D. Ramaraao, K. Vizayakumar (2008), Human Resource Development for Agricultural Sector in India, A Dynamic Analysis.
A. Munian (2008)\textsuperscript{90} in his article finds that growth in agriculture does not suggest the type of resilience evident in other sectors of economy. In fact, the rates of growth in agricultural production and productivity are decelerating. Careful analysis by scholars has shown that the seventies and the eighties could not be sustained in the last decade. The process of deceleration in the growth of agriculture had started in the nineties, when agricultural growth rate came down to less than 2.4 percent, from 3.8 per cent per annum in the previous decade. In his paper he suggests public investment in rural infrastructure and revamping of the supportive institutions in credit and marketing to be critical for imparting dynamism in agricultural activity, as also the removal of some legal hurdles, such as ban on leasing of land. However, economic policies have an important role, and if used judiciously can supplement and support technological and institutional developments. Reforms are urgently needed in three major areas.

Rubina Verma (2008)\textsuperscript{91} in his empirical analysis of contemporary developed and some developing nations, says that for most industrialized nations, historical data reveal that at low level of per capita income, the agricultural sector dominated the composition of output and employment. As these nations embarked on a path of rapid and sustained economic growth, resources were transferred form the agricultural sector to the manufacturing


sector. Once the economy matured and reached the status of a high-income nation, contribution of the service sector became more pronounced. In his paper he analyzed that, during the period 1980-2003, the average annual growth rate of the total output of the Indian economy was 5.6 per cent while that of the service sector exceeded it at 7.2 percent. Specifically, the service sector accounted for about 38 percent of Indian output and 20 percent of Indian employment in 1980, and its share increased to account for 52 percent of total output and 28 percent of total employment.

This paper examines the relation between aggregate and sectoral growth by differentiating with respect to time the definition of total output, \( V = E_{\text{v}}i \). Following the economic liberalization in India, the service sector has gained prominence in the economy as it accounts for the largest share of GDP and, also the significant trends in the service sector following liberalization in 1991: growth in service sector productivity and growth in services’ trade.

Sudipto Mundel (2008) ADB’s India Chief Economist “India is entering the upswing of a business cycle, implying an expected growth rate of around seven per cent or more during the next few years”, told a news conference. He said the Indian economy is poised to grow at 6.3 to 6.4 per cent in 2004-05, the slight deceleration in the growth being on account of the high growth in agriculture projected for this fiscal. He said the spurt in India's growth was led by the services sector, which accounts for over half of India's

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GDP. The fastest growing components of this sector include trade, tourism, communications and financial and business services. Investment and rising productivity are the key supply side factors underlying India's growth. Dr Mundel commended the Indian government's announcement of directing reforms at the agricultural sector in the coming Budget and plans to launch the Second Green Revolution.

Stephen Broadberry and Bishnupriya Gupta (2008)\(^{93}\) say that, the first message to take away from this research is that India’s service-led development may be a strength rather than a weakness. India’s recent spectacular rate of economic growth, combined with the sheer size of its population, means that it is beginning to take its place as one of the key players in the global economy.

One way in which India stands out from other Asian economies is in the better performance of its service sector. Whereas other emerging Asian economies, such as China, have experienced growth led by dynamic manufacturing performance, India’s growth has been led by sectors such as business services.

Dr. Rakesh Mohan (2008)\(^{94}\) says on the sectoral phase, a key issue is that of agricultural growth. In fact, the historical review suggests strongly that the periods of slow overall growth have invariably been characterized by slow

\(^{93}\) Stephen Broadberry and Bishnupriya Gupta (2008), 9 May, Research Paper, The historical roots of India’s booming service economy.

agricultural growth, even in recent years when the weight of agriculture in GDP has reduced considerably.

The 11th five-year plan projects the sectoral growth rates at around 4 per cent for agriculture, 10 per cent for the services sector and 10.5 percent for industry. While the targets for industry and services sectors are achievable, sustaining agricultural growth at around 4 per cent for achieving the growth target of 9 per cent during the 11th plan would be a major challenge, because this sector is constrained by several structural bottlenecks.

Prabir De and Ajitava Raychaudhuri (2008) in their paper reflect that the trade in services in India has been growing rapidly since the beginning of the last decade, following significant domestic liberalization on one hand, and access to a growing overseas market for services, on the other hand. By not only growing more rapidly than the country’s merchandise exports, India’s services export grew much faster than that recorded by the world during the past decade and a half. India’s services trade currently constitutes about 32 per cent of the country’s total trade. The growing share of services in gross domestic product (GDP) and the rising services trade also reflect the dynamism of the Indian economy, where an efficient services sector is not only crucial to the country’s economic growth but also crucial to its competitiveness in the current era of globalization.

Nagaraj (2008)\textsuperscript{96}, in his paper examines industrial performance since 2002-03, and service sector over a longer period at a disaggregated level. He finds that the Indian economy turned around after 2002-03, clocking a growth rate of 8.7 per cent per annum, based on an industrial recovery, a sustained growth in services and growing exports during a boom in world trade. In the end of 2006-07, India’s domestic output grew annually at 8.7 per cent, making it the world’s second fastest growing economy after China. This includes an 8.8 per cent annual growth rate of manufacturing during the five years between 2002-03 and 2006-07, and a sustained growth in services at 9 per cent annually during six years since 2001-02.

M. Ramachandra Gowda and E.A. Parameshwara Gupta and M.V. Krishna Murthy (2008)\textsuperscript{97}, made an attempt to discuss the impact of globalization of economic growth, poverty reduction, and F.D.I. The growth rate of Indian economy has no doubt accelerated after the introduction of economic reforms. The Indian economy registered a high growth momentum during 2007-08 for the fifth year in succession. The rate of growth of Indian economy accelerated from moderate 5.7 per cent from 1990-91 to 1999-2001. Period wise analysis brings out firstly, that the economy recorded a growth of 7.3 per cent per annum during post independence period `1990-91 to 1999-2001 compared to 9.0 per cent during 2006-07. The industrial growth declined


during 2007-08 from the performance during the previous year 2006-07 at 9.6 per cent. Rapid growth in the agricultural sector is seen in 2005-06 and there exists a decline in the trend during the year 2006-07. The service sector continued to be the mainstay of the economy contributing 62.9 per cent overall growth.

**Vijayakumar A. (2008)** in his book says that, since the early 1990s, the growth process in India has been marked by a remarkable performance by the services sector. The experience of developed countries suggests that growth in the services sector followed the growth of the industrial sector. However, India's experience in this regard is somewhat different. The sectoral shift in favor of the services sector over the last two decades has taken place in the face of an almost stagnant share of industry and a reduced share of agriculture in GDP. In fact, it was the growth performance of the services sector during the 1990s, which sustained the overall growth of the Indian economy, particularly in times of adverse agricultural shocks and industrial slowdown.

**Anne O. Krueger (2009)** in his working paper finds that, in the most recent period, however, the growth of services has accelerated markedly while that of the manufacturing sector has slowed from its 1980-81-1991-92 pace. With more rapid overall growth, one would have expected an acceleration of growth within the industrial sector, but instead it has lagged well behind what might have been expected. To confound matters further, the agricultural growth may have decelerated.

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2.3. REVIEW OF LITERATURE RELATED ON GROWTH TREND IN EMPLOYMENT IN AGRICULTURE, INDUSTRY AND SERVICES SECTOR

Bhattacharya and Mitra (1977)\textsuperscript{100}, have observed that many services, particularly in the context of economic reforms are significantly associated with the commodity-producing sector and positively influenced employment generation. This suggests that not all tertiary sector activities can be considered redundant and may have strong growth linkage with other economic sectors.

The evidence can also be taken to imply strengthening of envisaged one-way linkage towards income generation form services to manufacturing and development of reverse linkage from manufacturing to services. This again has strong implications for intersectoral linkages towards higher growth and employment generation.

R.K. Sharma and A. Jayakumar (1995)\textsuperscript{101}, in their paper say that, it is evident that the share of income contributed by the primary sector was lower than that of the proportion of workforce employed in that sector whereas the tertiary and secondary sectors contributed more than their workforce share to the income. This resulted in lower than average relative product in the primary sector and more than average in the tertiary and secondary sectors. The intersectoral inequalities have risen over the years due to the fact that the


sectoral income share has changed more sharply than the workforce share. The services sector has emerged as the dominant sector of the Indian economy

Seema Bathla (2006)\(^{102}\), in his working paper finds that the division of labour and specialization, new employment opportunities have emerged and many activities have shifted from manufacturing to service towards value addition in the ongoing liberalized regime. A downfall in the relative share of agriculture subsumes a decline in the relative share of labour force in total employment.

The relative share of working force in the primary as well as secondary sectors has declined from 12.28 percent and 36.7 percent in 1963 to 8.65 percent and 31.7 percent respectively. Against expectations, it is the tertiary sector that has captured a lion’s share in total employment generation with its share in total employment rising from 51.03 percent to almost 60 percent during the last four decades. However, it is alarming to find a decline in the rate of growth of employment in all the three sectors over time.

S.K. Nanda, D. Ramarao, K. Vizayakumar (2008)\(^{103}\) describes a system dynamics model developed for dynamic analysis of human resource for the agricultural sector in different sources of employment, in government, Human resources constitute the most critical inputs relying on the use of science and technology for development. Agriculture being the backbone of


\(^{103}\) S.K. Nanda, D. Ramarao, K. Vizayakumar (2008), Human Resource Development for Agricultural Sector in India, A Dynamic Analysis.
Indian economy, the human resource needs to meet various activities related to agricultural development which is critical to attain the country’s goals towards rural development, employment generation and host of related activities leading to sustainable growth and development. The growth achieved in Indian agricultural sector has been attributed to the concerted efforts of available skilled human resource. But over the years the scenario has changed. The growth in agriculture sector and the job opportunities slowed down.

**M. Ramachandra Gowda and E.A. Parameshwara Gupta and M.V. Krishna Murthy (2008)**, Discuss the growth of employment, which is most important now a days. It has also accelerated in response to a higher growth of the economy. The employment at the national level has picked up in the period 1999-2000 to 2004-05, with manufacturing, construction and services creating substantial number of jobs. The fact to be observed is the constancy in the growth rate of aggregate employment in the 1980s. 2.1. During the period 1992-93 to 2004-05, it was 1.9 percent. The rate of employment in the manufacturing sector in the recent period i.e., 1999-2000 to 2004-05 has gone up. The acceleration in the growth rate can be during 1994-2005. There is higher rate of employment trend in the three-service sectors, viz., trade and hotels, transport and communications and other services that include banking and business services. It can be observed that there is a greater

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degree of change in employment shares to total employment in the post reform period compared to the pre-reform period.

T.V. Ramana and K. Amareswara Rao (2009) The historical roots of India’s booming service economy show that the service has high potential. Till now, we have been focusing mainly of software. We have many such niche sectors in services. The recent growth in export of professional services is an example of the potential of other services. While the recent rise in share in employment growth in manufacturing sector is a positive development, the importance of services in employment creation needs to be noted, particularly when India is competitive in many labor-intensive and skill-intensive services and there is a huge market including outsourcing to India, need to be tapped further.

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2.4. REVIEW OF LITERATURE RELATED ON MAJOR CONSTRAINTS FACED BY THE SECTORS

Acharya, Shankar (2007)\textsuperscript{106}, in his paper finds that the slowdown in agriculture is due to the following reasons, declining public investment in agriculture, the operation and maintenance of irrigation systems, problem of road linkage to market, unmotivated agricultural research and development, unfavorable terms of trade affect the agricultural sector.

G.W. Meijerink & T.J. Achterbosch (2009)\textsuperscript{107}, say low level of commercialization of agriculture, low productivity, weak market orientation, preponderance of small and marginal uneconomical operational landholdings, lack of infrastructure, dependence on monsoon, susceptibility to natural calamities, and dependence of a very large percentage of population on agriculture for their livelihood etc. makes agricultural sector harm.

Jim Gordon and Poonam Gupta (2003)\textsuperscript{108}, says that industrial sector has not experienced the sustained high level of growth that the services sector has experienced. This could be because industrial growth is more dependent on infrastructure development such as roads and ports, which have acted as a bottleneck to growth. Labour restrictions and small-scale reservations may also have disadvantaged industry more than services.

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\textsuperscript{107} G.W. Meijerink & T.J. Achterbosch India’s position in agricultural trade liberalization Markets, Trade, and sustainable Rural Development, Strategy & Policy Brief #14, December 2009
\textsuperscript{108} Jim Gordon and Poonam Gupta (2003), Understanding India’s Services Revolution, Paper prepared for the IMF-NCAER Conference, A Tale if Two Giants: India’s and China’s Experience with Reform.2003
\end{flushleft}
Mishra, SK, (2006)\textsuperscript{109} in his paper finds that a number of factors have combined to result in the low productivity in industry, including, protection in various forms, inappropriate choices of scale and technology, rates of capacity utilization, mismatches between capacity and demand, and recurrent episodes of severe infrastructural constraints, especially with respect to power.

Dr. H.A.C. Prasad, R. Sathish (2010)\textsuperscript{110}, in their working paper say that one of the important issues in the services sector as domestic regulations and policies in India’s major services markets deny market access for India’s services exports. Market access barriers can be due to domestic regulations, subsidies and other barriers.

Dr Seema Joshi (2008)\textsuperscript{111}, says that the services sector faces some challenges in the form of lack of social infrastructure, physical infrastructure; IT infrastructure. The problem gets further compounded because of the entry of new species of services and lack of development of concepts.

Barry Eichengreen and Poonam Gupta (2010)\textsuperscript{112} say that the growth of services is concentrated in the informal sector, personal services, and public administration, activities with little scope for productivity improvement and with limited spillover.


\textsuperscript{110} Dr. H.A.C. Prasad, R. Sathish (2010), Policy for India’s Services Sector, Working Paper No.1/2010-DEA, Department of Economic Affairs, Ministry of Finance, Government of India.

\textsuperscript{111} Dr. Seema Joshi (2008), Services sector in India’s Economy: Performance, Problems and Prospects, Asian Productivity Organization Project No. 08-RP-38-GE-STM-B: Study Meeting on Expansion and Development of the Service Industry in Asia.

2.5. REVIEW OF LITERATURE RELATED ON REFORMS AND PERFORMANCES IN THREE SECTORS

Dr. Seema Joshi (2008)\textsuperscript{113} in his paper says that a consequence of the adoption of the New Economic Policy of 1991, the growth rate of the Indian economy which stood at 3.5 per cent per annum during 1951-79, 5.0 percent per annum during 1980-91, in fact accelerated to 6.1 per cent per annum during 1992-2000. India emerged as one of the fastest growing economies of the world during the 1990s. The remarkable performance of India’s economy is attributable in significant part to the spectacular dynamism shown by the services sector. There is a huge potential for growth in the services sector because of increase in disposable income, increasing urbanization, growing middle class, a population “bulge” in the working age groups providing ‘demographic window of opportunity,’ and emergence of a wide array of new services like IT, ITES, new financial services and tourism services etc.

The sectoral distribution of workforce in India during the period 1983 to 2004-05 reveals that the structural changes in terms of employment have been slow in India as the primary sector continued to absorb 56.67\% of the total workforce even in 2004-05, followed by tertiary and industrial sectors (24.62\% and 18.70\%) respectively. There has been disproportionate growth of tertiary sector, as its share in employment has been far less when compared to its contribution to GDP.

\textsuperscript{113} Dr. Seema Joshi (2008), Service Sector in India’s Economy; Performance, Problems and prospects, Project No. 08-RP-38-Ge-STM-B-Country Paper.
Eckhard Siggel and Pradeep Agrawal (2009)\textsuperscript{114}, in their paper examine how the reforms were perceived and coped with by manufacturing enterprises, economic reforms of 1991 were helpful to most industries by increasing access to foreign technology and cheaper capital goods & raw materials. Most firms felt that improvement in infrastructure and more flexible labour laws will further aid the growth of India’s manufacturing sector.

Vittorio Valli and Donatella Saccone (2009)\textsuperscript{115}, in their paper they says that, China since 1978 and India since 1992 have passed through a phase of very rapid economic growth accompanied by very important structural changes in the productive systems and severe and largely unresolved social problems. Since 1978 in India the industrialization process was less rapid and widespread than in China, but the services sector, which in 1978 was already relatively larger than in China, increased relatively faster than in China in terms of value added, but not as regards employment. It must be stressed that in both countries the labour productivity of industry and of services was much higher than the labour productivity of agriculture. Therefore the transfer of many employees from agriculture to industry and services has contributed to the pace of economic growth. The rise in industrial activities was anticipated in time, becoming more intense and wider in scope in China than in India.


\textsuperscript{115} Vittorio Valli and Donatella Saccone (2009), Structural Changes and Economic Development in China and India, The European Journal of Comparative Economics, Vol.6 No.1 Pp101-129.
S.K. Mishra (2009)\textsuperscript{116}, in his study investigates to the structural changes in the manufacturing sector of India brought about by liberalization and globalization of the economy. This paper assesses structural changes in terms of employment of labour and capital indicated by replacement of the former by the latter. It also assesses it in terms of returns to scale. It is well known that different states in India are at different levels of Industrialization. This paper assess the impacts of the new industrial policies on regional distribution of indicators of industrialization such as the labour-capital ratio, returns to scale and productivity to analyze the structure of manufacturing sector at the national level. This paper clearly indicated that the rise in industrial output is accountable to substitution of capital for labour in almost all states. Elasticity of substitution has declined in most of the industrialized states. In the pre-globalization period the industries experienced increasing returns to scale. Although Bruno-ZR production function indicates persistence of increasing returns. It is more likely that globalization has given way to diminishing returns to scale. Along with a rise in industrial output, globalization has possibly led to a decline in regional disparities in terms of population-deflated indices of employment of manpower and capital, and the resultant output

Gunjeet Kaur, Sanjib Bordoli and Raj Rajesh (2009)\textsuperscript{117}, in their paper they investigate the structural relationships among the sectors become


important from the policy perspective. It helps one understand not only the
evolution and progression of such relationships but also the inter-sectoral
adjustments over time. A clear perspective on the inter-sectoral dynamics could
be useful in devising a conducive and appropriate development strategy. The
analysis of I-O tables from the production side reveals that input demand of the
services sector is industry intensive rather than being farm agriculture
intensive. Further, that the farm sector is significantly reliant on industry for
inputs. The demand linkage examination amply demonstrates that the
agricultural sector exhibits strong association with the industrial sector, while
the converse connection in terms of demand linkages of industry with the
agricultural sector have weakened in the last two decades or so. Demand
linkages of the services sector were observed to have strengthened the
industrial sector overtime.

Dhanamanjini Sathe (2009), in his paper examine the sources of
structural change in the Indian economy for the period 1951-52 to 1983-84. An
analysis of sources of growth in the total output can be carried out from the
demand side and from the supply side. The supply side considers the changes
in output due to changes in the productivity of the factors of production. On the
other hand, the demand side considers the changes in output as a result of
changes in the demand for goods and services. The whole idea behind planning
in India was to bring about a ‘Structural Change’ in the economy so that the
‘unnecessary rigours’ of an industrial transition are avoided.

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118 Dhanamanjini Sathe (2009), Structural Changes in the Indian Economy: Some evidence from the
in their paper said that by the end of the 1970’s, India had acquired a reputation as one of the most protected and heavily regulated economies in the world. Starting in the mid-1970s and then later on in the 1980s, a few tentative steps were taken to liberalize the regulatory regime. In 1991, more extensive reforms followed. Since then there have been further policy changes in diverse sectors all aimed at opening up the economy to greater private sector entrepreneurship as well as to foreign trade and investment. Moreover, the growth in the post-reform period has also been stable. Technology transfers in the 1980s and early 1990s took place mostly through easier and cheaper access to imported machinery that was made possible by trade liberalization. The sustained growth that has seen since the mid 1990’s would clearly not have been possible without the liberalizing reforms of 1991. The importance of liberalization measures can be appreciated by imagining the counterfactual that India had stayed in its pre-reform state of constraints on entrepreneurial freedoms to invest and import. New technologies would not have diffused at such a speed and growth would have been much slower. At the same time, it should be acknowledged that some aspects of the earlier economic regime played a positive role in the pattern of development later.

In India one of the educated managers and engineers who have been able to take advantage of the opportunities made available through

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globalization and the other – a huge mass of undereducated mass of people who are making a living in low productivity jobs in the informal sector – the largest of which is still ‘agriculture’. The most direct impact on the second India could only come about through improvements in agricultural productivity. But unfortunately, agriculture is dependent on well functioning rural institutions. In general, the productivity improvements in the informal sector depend crucially on access to credit, knowhow and skills and therefore on the quality of institutions. India’s future will depend a great deal on how these institutional improvements shape up.

**Barry Eichengreen and Ponnam Gupta (2010)**\(^{120}\), in their paper said that among fast growing developing countries, India is distinctive for the role of the service sector. Where earlier developers grew on the basis of exports of labor-intensive manufactures, India has concentrated on services. Although there are other emerging markets where the share of services in GDP exceeds the share of manufacturing, India stands out for the size and dynamism of its service sector. We find that the growth of services in India has been broad-based, although it has been unusually rapid in modern services like communications, business services and financial services. In practice, services that are tradable internationally have grown fastest. We conclude that sustaining economic growth and rising living standards will require shifting labour out of agriculture into both manufacturing and services and not just into one or the other.

\(^{120}\) Barry Eichengreen and Ponnam Gupta (2010), The Service Sector as India’s Road to Economic Growth? Working Paper No.249.
Surajit Mazumdar (2010)\textsuperscript{121}, in his paper suggests that three turning points located respectively in the mid1960s, 1980, and the mid1990s separate the entire period after independence into four sequential phases of growth and structural change. The period before 1980 was characterized by a relatively slower pace of aggregate growth than the one after, but at the same time it was the period in which the industrial sector played a prominent role in driving the process of growth and structural change in output. This was, however, a more pronounced feature of the phase from independence to the mid 1960s, after which the tendency lost steam. The period of accelerated growth after 1980 was accompanied by the replacement of industry by services as the sector playing the most prominent role. Initially, however, it was the expansion of the public sector which chiefly underlay this increased importance of services in the process of growth and structural change. From the mid 1990s the services oriented trajectory was reinforced with the private organized sector decisively replacing the public sector as the driving force behind it. State economic policy was unimportant or irrelevant to the Indian story of economic change. They do, however, remind us that economic contexts with which are associated definite tendencies cannot be defined or distinguished merely or primarily by whether the prevailing policy regime has an interventionist or a liberal essence. Neither kind of policy succeeded in ensuring India’s full-fledged industrialization, but

\textsuperscript{121} Surajit Mazumdar (2010), Industry and Services in Growth and Structural Changes In India: Some Unexplored Features,ISID Working Paper No.2010/02.
both appear to have played a role in fuelling or facilitating the exceptional expansion of services.

Saikia and Dilip (2010)\textsuperscript{122} in their working finds that the “agriculture – industry” linkages has been deteriorating over the years, it still plays important role in determining the overall growth of the economy. The only is that the dimension of linkages between the two sectors has changed. Both the production and demand linkages were primarily from the industry to agriculture sector in the pre-reform period, which changed to from agriculture to industry in the post-reform period. Further, while the linkage was primarily through the production channel in the 1960s through 1980s, it translates primarily through the demand channel since 1990s. The contribution of agriculture sector in generating demand for the other sectors, especially the industrial sector, has become more pronounced in recent years. Further, in view of the structural shift from food grain production to commercial crops, fruits and vegetables, flowers and horticulture etc., and the increasing consumption preferences for differentiated food products, combined with the development of contract farming and vertical linkages in agri-food supply chains can predict the possibility of improving the “agriculture-industry” inter-dependence in recent years.

\textsuperscript{122} Saikia Dilip (2010), Trends in agriculture-industry interlinkages in India: pre and post-reform scenario, MPRA Paper No. 31204.
The RBI report (2010)\textsuperscript{123}, indicate that there is a weakening of inter-sectoral linkages in the post-reform period in India. Major dilution in the strength of the relationship has occurred in the case of linkages between: industry and services sector and industry and agriculture sector. As per the latest input-output matrices, the share of agro inputs in manufacturing has declined from 20 per cent in 1993-94 to 5 per cent in 2006-07. At the same time, the services sector linkages have increased relatively more with the rest of the world than the domestic economy as evident from an increase in the proportion of services exported to total output of the services sector by nearly four-fold from about 3.2 per cent in 1990-91 to more than 12.0 per cent in 2009-10.

L.G. Burange (2011)\textsuperscript{124}, in his working paper finds that when India’s industrial policy chronicle is reviewed, it is found that the country has mainly followed three regimes after independence. These are the planned or controlled period till the end of the 1970s, the limited liberalization period of the 1980s and the post-reform period beginning in early 1990s. It is seen that the performance of the industrial sector as a whole coupled with the manufacturing sector has witnessed substantial growth in terms of output after the 1980s, which further stabilized in the 1990s. In 1991, initiated by a balance of payments crisis and macroeconomic instability, the process of full-fledged

\textsuperscript{123} The Annual Report on the working of the Reserve Bank of India, For the Year July 1, 2009 to June 30, 2010. Indian Economy Review and Prospects.

liberalization of the economy began. Trade barriers were slashed, foreign investment was welcomed, the license raj was dismantled and privatization began. Consequently, the economy started to boom at around 7 to 8 percent. When the industrial sector is examined, it is found that in terms of production, prices, investment and trade; it has made huge gains after the economy started opening up in the 1980s, although with cyclical fluctuations. However, employment has not shown any significant improvement in the more than five decades of independence. The growth of small-scale industries is satisfactory. Therefore it may be that the industrial sector of India has grown after independence, the rate is below expectations, especially after liberalization.

Margaret McMillan and Dani Rodrik (2011), Developing countries have become more integrated with the world economy since the early 1990s. Industrial tariffs are lower than they ever have been and foreign direct investment flows have reached new heights. Clearly, globalization has facilitated technology transfer and contributed to efficiencies in production. Yet the very diverse outcomes observe among developing countries suggest that the consequences of globalization depend on the manner in which countries integrate into the global economy. In several cases – most notably China, India, and some other Asian countries – globalization’s promise has been fulfilled. High-productivity employment opportunities have expanded and structural change has contributed to overall growth. But in many other cases – in Latin

America and Sub-Saharan Africa – globalization appears not to have fostered the desirable kind of structural change. Labor has moved in the wrong direction, from more productive to less productive activities, including, most notably, informality.

A.H. Saoudagar and Y.B. Chavan (2011), in their paper says that the government of India has announced a new economic policy in 1991 which has totally different form the earlier economic polices. This policy is based three pillars viz. liberalization, privatization and globalization. Liberalization means making an Indian economy free from bureaucratic controls. Privatization means expanding the role private sectors by providing various facilities and via disinvestment. Globalization means integrating Indian economy in to a world economy. For this purpose the government has made changes in the present industrial acts and policies. For liberalization the government has abolished licensing raj system and modified many existing industrial acts like MRTP. Disinvestment in accepted as a way of privatization. For globalization the government is trying to go towards free trade by minimizing restrictions on foreign trade and foreign direct investment. This policy has been making structural changes in Indian economy. It has changed occupation structure of Indian economy.

In India previously that is before 1990 agriculture was predominant sector followed by the industrial and services sectors. But during post -1991

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the situation has changed. Now Indian economy is dominated by service sectors followed by industrial and agriculture sectors.

The study reveals that the new economic policy affected positively on services sector. The sector has depicted a rapid and healthy growth during post-1991. The growth rate of this sector increased during planning period the share of service sector in GDP and its contribution to GDP growth also increased. The new economic policy benefited mostly trade, transport and communication, banking, business services and community services. They acquired a lions share in the services sectors’ contribution to GDP.

**Sectoral share of GDP in Percent**

(form in percent, at constant 1999-2000 prices)

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<tbody>
<tr>
<td>Agriculture</td>
<td>55.3</td>
<td>50.8</td>
<td>44.3</td>
<td>37.9</td>
<td>31.9</td>
<td>23.9</td>
<td>23.9</td>
<td>17.0</td>
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<tr>
<td>Industry</td>
<td>15.1</td>
<td>18.8</td>
<td>22.1</td>
<td>24.1</td>
<td>24.1</td>
<td>25.9</td>
<td>25.8</td>
<td>25.8</td>
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<tr>
<td>Services</td>
<td>29.6</td>
<td>30.4</td>
<td>33.6</td>
<td>38.0</td>
<td>38.0</td>
<td>42.7</td>
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The share of agriculture has declined due to rapid increased in the share of services sector from 29.6 percent in 1950-51 to 57.3 percent in 2008-09. The share of industrial sector increased slowly between 1950-51 to 1990-91. During 1990-91 it was 25.9 percent. But during post 1990-91 it was almost stable inspite of the measures undertaken by government to boost industrialization.
K.G. Sahadevan, (2011), in his paper says that the striking macrolevel outcomes of economic reforms which started in 1991 have been the emergence of a vibrant services economy. The reform has not only accelerated the growth of service sector but also transformed India to a service sector dominated economy. The decade average growth rate of services has always surpassed GDP growth during the post-independence period in India. However, it is important to note that while industrial output grew faster than GDP and services output during the pre-reform decades, its average growth rate lagged behind that of services during subsequent decades. The service sector witnessed a dramatic turnaround during the post-reform period in terms of its share in GDP and growth rates. While the share of industry increased marginally from 18.7 % during 1980s to 19.8 % during the post-reform period, the service sector has absorbed almost the entire decline in share of agriculture from 35 to 24.3 % between the corresponding periods. The services share moved up from 46 to 56 % during this period. It reveals that the positive linkage between services and industry is not strong enough to maintain the prosperity achieved mainly through the former. While industry and rural agriculture sector provide sufficient demand that pushes services growth.

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