Chapter - I

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India’s accelerated growth rate with higher productivity and improved living standards, it is a universally acknowledged fact that now India is on the path of growth. The pace of economic growth is usually regarded as the primary indicator of a country’s macroeconomic health. India’s growth performance and economic prospects have been transformed over the past fifteen years.

Growth has been one of the most fascinating research problem. Economic growth of India after 1990s is impressive and it is often cited as success of good economic policies. India is considered one of the best players in the world economy in the past decades. Indian economy in recent years has been consistently performing with flying colours, escalating to 9.2 percent in 2006-07 and 9.6 percent in 2005-06. India is a vast country, so the sectors (Agriculture, Industry and Services) contributing to the country's GDP is also big in numbers. The GDP (Gross Domestic Product) is the primary indicator used to gauge the health of a country's economy.

Growth it refers to increase in the country’s capacity to produce of goods and services within the country. It implies either a larger stock of productive capital, or a larger size of supporting services like transport and banking, or an increase in the efficiency of productive capital and services. A
good indicator of economic growth, in the language of economics, is steady increase in the Gross Domestic Product (GDP).

**Gross Domestic Product**

The GDP of a country tries to capture all final goods and services that are produced within the political and geographical frontier of the country, thereby assuring that the final monetary value of everything that is created in a country is represented in the GDP. GDP is calculated for a specific period of time, usually a year or a quarter of a year. By calculating GDP the performance of the Indian economy can be determined. It is the yardstick of measuring the functioning of the economy. The results would help the country to forecast the economic progress, determine the demand and supply, understand the buying power of the people, the per capita income, the position of the economy in the global arena.

The GDP of a country is derived from the different sectors of the economy, namely the agricultural sector, the industrial sector and the service sector. The contribution made by each of these sectors makes up the **structural composition** of the economy.

From 1950 to 1980, Indian real gross domestic product (GDP) grew at an annual average rate of 3.6 per cent (1.5 per cent in per capita terms). From 1990 to 2007 the growth rate averaged 6.4 per cent (4.1 per cent in per capita terms). The shift to a higher growth path during the course of the 1980s is referred to as the Indian growth turnaround. Fast growth in India since the early
1980s has placed it amongst the top nine rapidly growing economies in the world (Ahmed and Varshney 2009).¹

The upward shift in India’s growth path during the 1980s is significant for two reasons: the turnaround happened well before the BOP crisis of 1991 and the large-scale macroeconomic reforms that ensued.

The second puzzling aspect about India’s growth turnaround is that it was not driven by manufactured exports and, therefore, has little in common with the East Asian economic miracle. In particular, there was no industrial policy targeted towards developing specific industries.

It was the service sector that led the increase in the overall growth rate in the early 1980s. Since many components of services are income related (such as financial services, business services, and hotels and restaurants) and begin to increase only after a certain stage in development, the fact that India’s service sector created the impulse for the growth turnaround is puzzling.

Balakrishnan and Parameswaran (2007)² use the multiple structural break test approach of Bai and Perron (1998)³ to look at breaks in sectoral growth rates since 1950. They find that agriculture growth increases (permanently) during the mid-1960s. This is followed by a take-off in the service sector in the mid-1970s. Finally, manufacturing output growth breaks in

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1982–83, after the break in overall growth, which they place as early as 1979. Based on the timing of these recursive sectoral breaks, they suggest that the manufacturing sector is not responsible for a shift to a higher growth path, rather it is has been led by growth shifts in other sectors.

The major structural shifts in output and employment always accompany a sustained and rapid growth of per capita output of a country. It has been an established truism since the original studies of economic growth by Fisher, Clark and Kuznets. Such structural shifts have been seen as mechanisms influencing the pace of growth as well as being the result of growth.

Either of the two tripartite divisions of the economy closely resembling each other — agriculture – industry - services divisions — have been used to describe the typical pattern of structural change associated with what Kuznets called modern economic growth.

This typical pattern involves initially a shift from an agricultural to an industrial economy through industrialization — an increase in the share of the industrial sector in output and employment combined with a declining importance of the agriculture sector. The subsequent post industrialization or de-industrialization stage is one whose chief feature is the rising importance of the services sector, even at the expense of industry, or the transition to a service economy.

A variety of factors have been highlighted in attempts to explain the observed association between growth and structural shifts in output and
employment. On the demand side, the operation of Engel’s Law leading to shifts in the pattern of demand as incomes rise has been one such factor. On the supply side, inherently differential productivities and productivity growth of the three sectors has been advanced as an important source of this association. The growing demand of firms for services and increasing outsourcing of these have also have been highlighted as important in explaining at least the eventual shift towards services

Fisher (1939), Clark (1940), Kuznets (1955) and Syrquin (1975) and many others have emphasized on a relative declining share of agriculture in value added, an examination of structural relationships in the growth process has continued to occupy the interest of researcher and policy makers. Whether agriculture is more important for acceleration in the rate of growth of the economy or industry should be considered as the engine of growth and how tertiary is linked up with the two sectors have been debatable issues in the development literature. In India, robust evidence of interdependence between agriculture and industry has been documented in the post independence period. A weakening of agriculture-industry relationship during the eighties and a concomitant increasing trend in the relative share of services in the national income have given rise to several controversial issues. The issues are related primarily to growth patterns in income that divulge a continuous fall in the share of agriculture compared to manufacturing and services and uneven growth in employment and poverty across the sectors in rural and urban areas.
Economic reforms initiated from the mid-eighties and their execution from the early nineties have also rejuvenated interest in studying sectoral performances and their implications for overall economic growth, employment and income distribution. With this backdrop, an attempt has been made in this research problem to examine overall growth performance of different sectors in India. Since developments in the liberalization of agriculture, industry and services are understood to have brought a structural shift, an investigation of sectoral growth performance is essential to divulge meaningful directions for prioritization of reforms across the sectors.

1.1. MOTIVATION OF THE STUDY

Economic growth and development is the key expression in the developing countries especially in recent decades. The economic growth at a faster rate is the main feature of this economic rationality. The degree of development of a country is often judged by the relative shares of the agriculture, industry and services sector's total income. Historically, economic growth has been associated with a progressive decline in the share of agricultural sector and a corresponding increase in the shares of industry and service sectors.

The worsening of the economic position of those dependent on agriculture and other primary sectors has constrained the demand for the products and services of secondary and tertiary sectors. As a result, both the
economic growth and the changes in the structures of income are taking place rather slowly.

The economic liberalization initiated since early 1990s demanded a serious attention of economists overall the world. Now, there is consensus among economists that higher economic growth leads to economic development and economic welfare. India has experienced a very consistent higher economic growth rate after 1991. An uneven pattern of growth in agriculture, industry and service incomes along developments in the reforms and liberalization process have triggered a renewed interest in studying sectoral performance. The main motivation of this research problem is to examine the performances of agriculture, industry and services sectors. The main aim of this research is to analyze and understand the contribution of forces that have determined the growth performance in each sector in the GDP and find the impact of sectoral growth in India. This study has been motivated by these considerations and aims to develop analytical framework of agriculture, industry and service sectors in the economic growth.

1.2. NEED FOR THE STUDY

India’s economy has been one of the stars of global economy in recent years. Agriculture makes the highest contribution to India's GDP. It has been seen in the last few years that the input of the agriculture sector has been declining, but it is still the biggest contributor. This decline in growth has been largely attributed to the irregular climatic condition. Contributions from the
The manufacturing sector in the country's GDP have been largely along expected lines, though it was slightly down. The reasons attributed for this are the global economic recession, changing pattern of consumer consumption and a stringent liquidity policy. The service and the industrial sector perform much better compared to the contribution from the agricultural sectors.

Performance of the Indian service sector has been significant. A striking feature of India’s growth performance over the past decade has been the strength of its services sector. Services grew more slowly than industry between 1951 and 1990. Growth of services picked up in the 1980s, and further accelerated in the 1990s, when it averaged 7.5 percent a year, thus providing a valuable prop to industry and agriculture, which grew on average by 5.8 percent and 3.1 percent respectively. Growth in the services sector has also been less cyclical and more stable than growth in industry and agriculture. Service sector Growth in India’s GDP has been registering steady growth over the past few years. The performance of service sector has been particularly significant. This has given major boost to study the pattern of sectoral growth in Indian Economy’s GDP and its overall performance.

1.3. SCOPE OF THE STUDY

The rate of growth of the economy is the most commonly used overall performance. India’s recent growth performance and current growth prospects appear much better. The New Economic Policy of July, 1991 heralded a new era for India by introducing comprehensive reforms in industrial sectors as well as in services sector.
Indian Economic Development change away from India’s traditional industrial policy in 1991 towards liberalization, deregulation, and market orientation has been hailed as ushering in a new era of freedom from government controls which promises greater prosperity of the Indian Economy. And the structural shift occurs particularly in the nineties after several reforms and liberal measures have been initiated.

The theme and scope explored in this study is that India had indeed experienced a permanent acceleration in growth, accompanied by an increase in its underlying growth potential. A degree of structural maturity has been achieved in agriculture, industry and service sectors. It is impossible to study India’s growth pattern in broad manner in a single study. Hence the researcher is constrained to delimit the scope of the study to a few aspects Indian economic growth pattern. Obviously it was thought to limit the study about India’s some major sectors.

The main focus of the study will be on sectoral performance, major sectors contribution to GDP, structural shifts among the major sector in Indian economy during First Plan to Tenth Plan Period. During this period major constraints in basic sectors are identified and the measures are suggested for future sustained economic growth. This study helps to identify the growth pattern in the major sector of Indian economy.
1.4. RESEARCH GAP

There were number of literature have been focused general growth of the Indian economy. Number of studies specifically focused on agricultural sectoral growth performance over the periods. Some of the research articles highlighted the significant contribution of industrial growth for the economic development. Some other literatures emphasized on service sector. But very few studies were conducted structural changes, sectoral performance in the Indian economy for the part few decades. Studies like Amal Krishnan Dey (1975), Malcom S.Adishiah (1987), Rakesh Mohan (2002), Azmat Sam Michari D. Clemes (2002), Jim Gorden and Purnam Gupta (2003), D.S. Puffaloe and others have find out different dimension of results regarding the sectoral growth performance. Based on these the researcher found out research gap of sectoral changes and sectoral performances. And also the researcher wish to conduct a separate study of the same research problem hence the present study has been undertaken to fulfill the research gap.

1.5. STATEMENT OF THE PROBLEM

The sectoral composition of Indian economy has undergone a structural shift over the years. The shift is perhaps best exemplified in terms of the changes in the share of agricultural, industrial and services sector in the GDP. From a primarily agro-based economy during the 1970s, the Indian economy has emerged predominant in the services sector during the 1990s. The shift in the composition is likely to cause substantial changes in the production and
demand linkages among various sectors and in turn, could have significant ramifications for the growth and development process in Indian economy. Experiences of the developed economies in this regard show that the growth process, in general, is highly not balanced among sectors. Therefore, by concentrating investment on appropriate sectors, the process of economic development can be accelerated. The key sectors would stimulate greater economic activity in other sectors and thus have a larger multiplier effect on growth and development. In the Indian context, currently this issue has serious short- and long-term implications. While proper understanding of the sectoral performances in view of the recent of the economy is an immediate priority, the issue assumes importance in designing appropriate long-run strategies to achieve an inclusive growth envisaged in the Eleventh Five-Year Plan.

Investigation of performances among the sectors becomes important from the policy perspective. It helps to understand not only the evolution and progression adjustments over time. A clear perspective of the sectoral dynamics could be useful in devising a conducive and appropriate development strategy. Further, sharp divergences in growth rates of different sectors are found to have serious implications for income distribution, inflation and current account deficit of an economy. A proper comprehension of the characteristics and trend of sectoral performances also assumes importance in designing effective government policies. The study of sectoral performances is all the more important for a developing country like India so that positive growth
stimuli among sectors could be identified and fostered to sustain the economic growth momentum. This would go a long way in redressing various socio-economic problems such as poverty, unemployment and inequality.

In view of the economic reforms that started during the late 1980s and accelerated during the 1990s, the issue has acquired a new dimension. The economic reforms have led to a substantial increase in the degree of openness in the Indian economy. However it is witnessing remarkably high and stable growth during 1990s. Against this backdrop, this research attempts to analyze some issues by re-examining growth performance of the agriculture, industry and services sectors of the economy under alternate framework under entitled “A study of Structural changes and sectoral performances in Indian economy”.

1.6. RESEARCH QUESTIONS

1. Explain the composition of GDP from 1951-52 to 2006-07 in different sectors (Agriculture, Industry and Service Sectors)

2. Examine the significant sectoral real growth rate in GDP in factor cost.

3. To find out the significant relationship between sectors and its growth performance.

4. To find out the growth of employment rate in various sectors

5. What are the constraints experienced by the sectors?
1.7. OBJECTIVES OF THE STUDY

The following specific objectives have been framed.

- To study the composition of GDP from 1951-52 to 2006-07 in different sectors (Agriculture, Industry and Service sectors).
- To examine the significant sectoral real growth rate in GDP at factor cost.
- To study the significant relationship between sectors and its growth performance.
- To find out the growth trend of employment rate in various sectors.
- To identify the constraints experienced by the sectors.
- To offer suitable suggestion for policy making.

1.8. HYPOTHESES OF THE STUDY

Hypotheses have been formulated based on the above well-defined objectives. The following hypotheses are framed to analyze the sectoral performance of the economic growth.

1. The composition of GDP is more significant in Service sector than in other sectors (Agriculture and Industry).

2. The real growth rate in GDP at factor cost is less significant one.

3. Employment growth rate is closely associated with sectoral growth rate and it is on the positive side
1.9. THEORETICAL FRAMEWORK FOR THE STUDY

Economic development has historically been associated with structural changes in the national economies. It has, in fact, most often, been defined as a process combining economic growth with changing share of different sectors in the national product and labour force. The most common structural changes that have been observed historically have followed a sequence of shift from agriculture to industry and then to services. Thus, a predominant share of agriculture characterizes an underdeveloped economy; with development the share of industry increases and that of agriculture declines, and subsequently after reaching a reasonably high level of development, the services sector increases in importance, becoming a major component of the economy. This pattern has not only been observed historically, but also holds across the countries with different levels of development.

Structural changes do not only characterize economic development, they are also necessary for sustaining economic growth. Income elasticity of demand for agricultural product is low; those industrial particularly manufacturing goods are high; and for services, it is still higher. As a result, with rising levels of income, the demand for agricultural products relatively declines and that for industrial goods increases and, after reaching a reasonably high level of income demand for services increased sharply. Accordingly the changes in demand determine the share of different sectors in the national product.
Classicalist like Fisher and Clark, basing their arguments on Engel’s Law, thought that shift from agriculture to industry takes place as a result of low-income elasticity of demand for agricultural products and high-income elasticity of demand for manufactured goods. They, however, seem to lay different emphasis on the demand and supply side factors in respect of shift from manufacturing to services. Fisher (1939, 1946) emphasized saturation of demand for manufactured goods and high-income elasticity of demand for services. Basing his argument on the so-called “hierarchy of needs”, Clark agreed that final demand would increasingly shift to services, but shift of labour force takes place, according to him, due to high productivity of manufactured goods and low productivity of services. Kuznets (1971) saw income elasticity of demand as the primary reason for changes in economic structure, but recognized that other factors, technological and institutional, also play an important role in accelerating these changes. Emphasizing primarily the supply side, Kaldor (1966, 1967) considered manufacturing the engine of growth: agriculture being subject to diminishing returns is not able to sustain an increasing level of production and income, and, therefore, manufacturing, without such limitations on expansion of production, is the key to sustained economic growth. Kaldor explains the key role of manufacturing in growth through his three famous laws, emphasizing strong causal relation between growth of manufacturing and growth of GDP, between growth of manufacturing output and growth of productivity in manufacturing and
between rate of growth of manufacturing and growth of productivity in other sectors. Growth of services, according to him, was induced both by requirements of expanding industrial sector and rising levels of income.

Kuznets (1953) concluded that the share of services in national product did not vary significantly with per capita income. Chenery (1960), when regressing the share of services on per capita income, found an insignificant coefficient, concluding that the relationship between services and per capita income is not uniform across countries. Chenery and Syrquin (1975) regressed the service-sector share of output on per capita income and per capita income squared, concluding that the relationship was concave to the origin – which it raised with per capita incomes but at a decelerating rate. Kongsamut, Rebelo and Xie (1999) found, in contrast, the share of services in output to be linear in per capita income.

The sectoral growth literature builds mainly on the dual economy model originating from Lewis (1954) and Hirschmann (1958). This model seeks to explain economic growth by emphasizing the roles of agriculture and industry and the interplay between them. The dual economy model views the agricultural sector as merely the basis of an emerging economy, a generator of the capital necessary for take-off toward the second stage of economic development, industrialization. Under this view, once industrialization has taken place, the agricultural sector more or less becomes redundant.
In Smith’s view, technical improvement in agriculture increases surplus, which boosts up the process of development on other sectors of the economy. Later Nurkse (1954) and Lewis (1955) elaborated and strengthened the same view while recognizing the importance of agriculture as supplier of ‘wage goods’ to industrial workers.

Glasmeier and Howland (1993) point out that there exist two opposing schools of thought on the relationship between the service producing sector and economic growth. On the one hand there is the view that the service producing sector can aid economic growth while on the other hand there is the view that the service producing sector should not be seen as independent of, nor is it a replacement for, the traditional goods producing sector such as agriculture, mining, and manufacturing.

David Ricardo (1817) the first modern economist, through his theory shows the importance of capital accumulation through development in agriculture. This will lead to increase in source of saving and profit rate. For economic growth he stressed on the development of agriculture as development of industries depended on agriculture. Output growth requires growth of factor inputs, but, unlike labor, land is "variable in quality and fixed in supply". This means that as growth proceeds, more land must be taken into cultivation, but land cannot be "created".

According to Thomas Robert Malthus (1820), the size of potential gross national product depends upon land, labour capital and organization.
When these four factors are employed in right proportions, they maximize production in the two major sectors of the economy viz., agricultural and the industrial sector. It is the accumulation of capital, the fertility of the soil and technological progress that lead to increase in both agricultural and industrial production. Therefore, state should emphasize technical progress, equitable distribution of wealth and land expansion of internal and foreign trade, increase in consumption of consumer goods and in employment opportunities through public works schemes.

1.9.1. Classical Growth Theory

In the days of classical economists such as Adam Smith, Ricardo and Marx it was believed that capital and technological progress contributed to the way an economy grew. Smith, for example, believed that improved technology would lead to increase labour productivity. Ricardo and Malthus, thought that in the long term, increased population would outpace the productivity of labour, which would lead to what is known as the law of diminishing return. Based on the law of diminishing returns, it was thought that there could not logically be infinite growth, and that growth would diminish at some point.

1.9.2. Neo-Classical Growth Theory

Nobel Prize winning Economist Robert Solow first devised the “neo-classical” model of growth over 40 years ago. Robert M. Solow (1956) built long-run growth model. Solow considers the case of dual economy. The
economy comprises of two sectors, capital or industrial sector and labour or agricultural sector. In a capital sector, the rate of capital accumulation exceeds the rate of labour absorption. More employment opportunities are possible in this sector with variable technical co-efficient. In an underdeveloped economy agricultural sector is marked by the existence of disguised unemployment and shortage of skilled labour. Under such conditions the steady growth is possible if the capital-labour ratio is substantially higher.

Robert Solow developed one very influential, and more specific, model of economic growth in 1957. In his model, he assumed that an economy-wise production function could be written in the simple form:

\[ Y = A K^{0.3} L^{0.7} \]

where \( Y \) is aggregate output, \( A \) is a number based on the current state of technology as described below, \( K \) is a quantitative measure of the size of the stock of manufactured capital, and \( L \) the quantity of labour used during the period of time. \( K \) and \( L \) are the only factors of production explicitly included in the model. Both capital and labour are needed for the production of output, with the exponents in the equation reflecting their relative contributions. After some mathematical manipulations, the production function above can be converted to an equation for the growth rate of output per worker as a function of “total factor productivity” and the growth rate of manufactured capital per worker:
Growth rate of output per worker = growth rate of total factor productivity + 0.3 (growth rate of manufactured capital per worker)

For example, if “total factor productivity” grows at 1% per year and capital per worker grows at 2% per year, this equation says that output per worker will grow at 1.6% per year (1% + (0.3) 2% = 1.6%). This became known as the “growth accounting” equation.

1.9.3. New Growth Theory

Growth theory was advanced by Paul Romer in the late 1980’s and early 1990’s. The endogenous growth theory includes a mathematical explanation of technological advancement. This model also incorporated a new concept of human capital, the skills and knowledge that make workers productive. Unlike physical capital, human capital has increasing rates of return. Therefore, overall there are constant returns to capital, and economies never reach a steady state. Growth does not slow as capital accumulates, but the rate of growth depends on the types of capital a country invests in.

According to this theory economic growth originates from within the system, usually a nation-state, and technological progress is regarded as an endogenous factor. Endogenous growth theory focuses on education, on-the-job training, and development of new technologies for the world market, as major factors, which determine the rate of growth of a nation-state.
1.9.4. The neo-classical growth theory - Ramsey growth model

Endogenous growth theory or new growth theory was developed in the 1980s. The neoclassical model makes three important predictions. First, increasing capital relative to labour creates economic growth, since people can be more productive given more capital. Second, poor countries with less capital per person will grow faster because each investment in capital will produce a higher return than rich countries with ample capital. Third, because of diminishing returns to capital, economies will eventually reach a point at which no new increase in capital will create economic growth.

1.10. LIMITATION OF THE STUDY

This study undertakes and analyzes the major three sectors agricultural, industry and services and performances of these sectors. The researcher has identified major performances of the agricultural, industry and services sector only and not included its sub sectors, which contributes to the economic growth. Using the secondary source only has restricted the data. In order to analyze the data, this study takes First Five Year Plan to Tenth (1950-51-2006-07) five year plans only and did not concentrate 11th Five Year Plan.

The researcher has given regression between various sectors and GDP. Regarding structural performances and changes introduced in 1984 and 1991 have been incorporated in the literature review section. The researcher has constituted only the overall performances of these three sectors and based on that suggestion have been given.
1.11. PLAN OF THE STUDY

The thesis is divided into seven chapters. The detail of each chapter in the present research problem is structured as follows:

The first chapter includes introductory aspects of motivation of the study, need for the study, scope of the study, research gap, statement of the problem, research questions, objectives, hypotheses, theoretical framework for the study, limitations of the study and plan of the study. The second chapter deals with review of literature. The third chapter brings out methods and materials. Fourth chapter is devoted to the analysis and discussion. The fifth chapter brings out the sectoral growth performance and employment trend. The sixth section records recent trend in Indian Economy. The last chapter furnishes of summary and conclusions.