To study the structure of State Income by Examining Sectoral Distribution

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1. Introduction

The most important indicator for assessing the performance of the economy is the pattern of income growth reflecting the relative contribution of the sectors that are driving the economy. Thus, an assessment of the growth potential of the state economy would help in establishing the basis for formulating sector-specific development strategies and policies. Net Domestic Product and Per Capita Income are the prime indicators to measure growth of an economy. These indicators are prevalent from years together. The Gross Domestic Product (GDP) of a country/state highlights the structural composition of the different sectors of the economy with their contribution to the state domestic product. While GSDP is a measure in monetary terms of all the goods and services produced (without duplication) within the boundaries of any geographical area during a given period of time (generally an year), NSDP is obtained by subtracting consumption of fixed capital from respective gross domestic product and per capita income is derived from by dividing net products of state by midyear population. However, measuring the change and growth in various sectors by gross domestic products or gross capita income would lead to misleading results since some part of it is absorbed as fixed capital. Hence a correct way to measure actual performance would be to analyze the changes with Net figures that too with constant prices. Since Net figures at current prices would have an effect of inflation in it and hence would not be a correct measure. Hence for analysis for most of the time, net state domestic product at constant prices are used for analysis, wherever there were data issues regarding other units of data is used and acknowledged.

2. Statement of Problem

The sectoral composition of Gujarat's economy has undergone structural changes over the years. This change is best exemplified with changing shares of agricultural, industrial and services sector in the GSDP and NSDP. From a primarily agro-based economy during the 1960s, the Gujarat's economy has emerged predominant in the services sector during the 1990s. This shift in the composition has resulted in substantial changes in the production and demand linkages among various sectors and in turn, had substantial implications for growth and development process in the economy of Gujarat.

3. Reviews of releted Litreture

Daniel Bell (1973) in his book, The Coming of Post-Industrial Society: A Venture in Social Forecasting, outlined a new kind of society - the post-industrial society. He argued that post-industrialism would be information-led and service-oriented. Bell also argued that the post-industrial society would replace the industrial society as the dominant system.

Paul Romer, in his 1986 paper, "Increasing Returns and Long-Run Growth", essentially set the foundations for the endogenous growth theory. In that paper, he proposed a mode lwhere economic growth is driven by the accumulation of knowledge, which is the really inmportant form of capital (Romer 1990). Romer essentially tried to discard the neoclassical hypothesis of diminishing marginal

returns in capital investments, permitting for increasing returns in aggregate production and focusing on the role of externalities (specifically knowledge spillover effects) in determining the rate of return on capital investments (Todaro and Smith 2009). According to Romer, investment in knowledge leads to increasing returns in marginal products, since technological innovation can lead to the deployment of new technologies, which can reduce the cost of production and put one company ahead of its competitor. Romer's last point in his 1986 paper was that knowledge has what he described as a "natural externality", since it cannot be perfectly patented or kept secret. Hence, new knowledge has a spill over on the production possibilities of other firms as well.

Brinkman, R. (1995) in his paper tries to explore the distinction between economic growth and economic development. The author corroborates the fact that for a substantially long period of time, theories of economic growth were assumed to mean theories of economic development because of being considered as conceptual equivalents. This delusionary outlook carried with it the implied meaning that a country with higher growth will also be experiencing development. He further notes that Myrdal's idea of including social system in the ambit of development by accounting for 'health and education, class stratification, distribution of power, institution and attitudes' was a modem concept of economic growth. He also mentions that growth is replication of more and more of the same structure which actually does not lead to development citing the example of a tepee which cannot become a skyscraper simply by growing whereas

Flammang R.A. (1979) underscores the fine thread that holds the intricate balance between interrelatedness and dissimilarity between growth and development. He has very exquisitely presented how the concepts of growth and development evolved with time and also criticized how fallacy steeped into these definitions. The idea that both development and growth are competitors contesting for limited resources is very fascinating when resources for development would employ resources for innovation, new technology and new input-output mixes; growth will concentrate in improving the productivity of the existing factor-input or output mixes. He sees growth without development and development without growth as a possibility. Development is quintessential a normative concept with a much wider base than economic growth.

Michael P. Todaro and Stephen C. Smith (2004) found that the enormous gap in per capita incomes between the rich and poor nations, is not only the manifestation of the widening economic disparities between the world's rich and poor, but also to appreciate the breadth and depth of poverty in developing countries, it is necessary to look at the growing gap between the rich and poor, within individual less developed countries. There is no obvious relationship or correlation between the levels of per capita income and degree of income inequality. Kenya, with the same per capita income as India, has a much wider income disparity between the top 20% and bottom 40% of the population. Similarly, Kuwait, with almost the same high per capita income as Belgium, has much lower percentage of its income distributed to the bottom 40% of its population. This phenomenon underlies the important point that economic development cannot be measured solely in terms of the level and growth of overall income or income per capita, one must also look at how that income is distributed among the population - at who benefits from the development and why.

The study of Yujiro Hay ami and Yoshihisa Godo (2005) found that it was through the process of economic development over a 200-year period since the Industrial Revolution that the majority of people in developed countries in the West were emancipated from poverty. The process was shortened to less than 100 years in Japan and to less than 40 years in Newly Industrialized Economies (NIEs) in Asia, such as Korea, Taiwan, Hong Kong and Singapore. Starting in the early Post-World War -II period with per capita income levels not much different from those of low-income countries today, these NIEs have now joined the ranks of high- income economies.

The study of Michele Alessandrini and Tullio Buccellato (2005) came out with the different patterns of growth of China, India and Russia by exploring and comparing the processes of reforms that have generated and accompanied their high and sustained rates of growth. Focusing on the sector transformations involved in the three economies, they show that the growth strategies implemented present specific characteristics in terms of gradualism and policy choices. They have analyzed the effects of economic growth on regional income disparities and to what extent the recent increase in prosperity has been homogeneously distributed within the three giants. Making use of Their s x statistics and transition probability matrices, their findings reveal that income disparities within the Indian states and Chinese provinces have increased and, more in particular, landlocked and rural areas are in general still far from reducing the income gap from coastal and the richest regions.

Prof. Colin Clerk in his research work assigns two reasons for the shifts of labour force firstly with the increasing real income; less is spent on consumption because of low-income elasticity of demand for primary product. Secondly output in the secondary sector.

Prof. A.G.B. Fisher and Prof. J. Faurosite have also maintained that the shift to the secondary and then to the tertiary is the inescapable reflection of economic progress. Prof. Faurosite has organic that apart from the higher income elasticity of demand to tertiary products as compared to that for the secondary produce apart comes in the process of economic growth when the industrial sector will be saturated and so people will be shifted to the tertiary sector where the goods and services contribute to be in high demand.

4. Research Questions
1. Examine the structure of state income by examining sectoral distribution
2. Examine the sectoral real growth rates in NSDP and Per Capita Income at current and constant prices for the state of Gujarat.
3. Examine the changing population dynamics from census data for the state of Gujarat.
4. Examine the structural change of sectors of economy in Gujarat.
5. Examine the changes in Human development Index for Gujarat.

5. Hypotheses
1. The share of secondary sector in terms of output is reasonable.
2. The share of tertiary sector has grown faster than the other sector

6. Relevance of the study
This study is important because of growing importance for development of Gujarat's economy. No state can develop without passing through various phases of structural changes. Structural changes and economic development are strongly connected. Hence for structural changes to occur the economic development is a pre-requisite. From this point of view the relevance of the study can be noted down as:

7. Objectives of the study
This research work to be undertaken is aimed at the following main objectives:
1. To study the structure of state income by examining sectoral distribution
2. To understand and examine the level of growth (Growth rate) of Gujarat more particularly structural changes in different sectors in the face of reform period.
3. To study the structural changes and pattern of economic growth in Gujarat over a period of 29 years (1991 to 2019) in order to find out from the different sectors of the economy of Gujarat.
4. To study the structure of state income by examining sectoral distribution.
5. To study pattern of changes in growth rate through sectoral composition of NSDP and PCI.

8. Scope and Limitation
Scope of the study
1. Geographical scope of study is confined to state of Gujarat.
2. Only selected indicators are chosen as part of study.
3. Study is purely based on available authenticate secondary data.
4. Sectoral composition, population parameters, occupational structure, current status of infrastructure and human development index has been selected by the researcher.
5. Study pertains to structural changes. Hence, theoretical scope covers various theories on structural changes, economic growth and economic development of various economies of world, India and other states and policies adopted so far.

9. Limitations of the study
1. Study is limited to the state of Gujarat only.
2. The study doesn't include any comparison with other state, nation, economy or policies adopted by them.
3. Data is collected from various authenticate secondary data available.
4. Period of study is from the year 1991-92 to 2018-2019.

10. Research Methodology
The present study has been undertaken by the researcher after conducting literature survey in different sectors of the economy. The study has been scientifically conducted based on secondary data of agricultural and allied sector (Primary Sector), industrial and manufacturing sector (Secondary Sector) and service sector (Tertiary Sector) respectively. Being an economic study, the researcher has conducted literature survey based on the objectives of the present study. To have scientific inferences the researcher employed secondary data of 29 years. The data pertaining to population growth, area of production yield of food grains, gross irrigated area, contribution of primary sector to NSDP at current and constant prices, contribution of secondary sectors real to NSDP at current and constant prices and contribution of tertiary sector to NSDP at current and constant prices, status of infrastructure, Human development index have been analyzed with the help of empirical data.

11. Sources of Data
The study is based on secondary data. For analyzing the objectives of this research study the data can be collected from various sources. Use of existing literature has been made to support the factual data. The data collected from Central Statistical Organization, National Sample Survey Organization, Gujarat Economic and Statistic Department, RBI Bulletins, various issues of Economic Surveys of Gujarat, reports from Ministry of Planning Commission, reports from Ministry of Agriculture, Ministry of Industries, Ministry of Tourism, Economic Appraisal, Mid-Year Reviews, Census Reports, Statistical Hand Book, various reports, research surveys, periodical magazines, Department of Statistics and other government's organizational journals and articles, electronic sources.

12. Techniques of Analysis of Data
The data collected is systematically presented, analyzed and classified to draw meaningful conclusions. The gathered data was keyed in excel and was analyzed using simple and logical statistical techniques like average, growth rates, percentages, ratios.

13. Testing of Hypotheses
13.1 Hypothesis 1
The share of secondary sector in terms of output is reasonable.
According to table-4.5.1 & 4.5.2 it is observed that contribution of secondary sector to the NSDP at current and constant prices has stagnated in terms of output. The contribution of secondary sector to the NSDP at current and constant prices increased by 9.87% and 17.26% respectively, during the

period of 1990-91 to 2018-19. On the onset of reforms, the total contribution in rupees went on increasing in same way contribution to total NSDP also increased in percentage. Hence this Hypothesis positively proved.

13.2 Hypothesis 2
The share of tertiary sector has grown faster than the other sector.
According to table-4.5.1 & 4.5.2 it is observed that contribution of tertiary sector to the NSDP at current and constant prices has been rising in terms of output. The contribution of tertiary sector to the NSDP at current and constant prices increased by 1.33% and 20.766% respectively while contribution of primary sector is negative, during the period of 1990-91 to 2018-19. On the onset of reforms, the progressive contribution of the Tertiary Sector improved every year along with the total contribution in rupees went on increasing, contribution to total NSDP of Tertiary Sector continuous upward situation in terms of percentage also. Hence the Hypothesis is positively proved.

14. Achievement of Objectives
Objective No 1: To study the structure of state income by examining sectoral distribution
To highlight the **growth characteristics** of the state economy - particularly during and after the reform period by analysing NSDP and PCI.

The said objective was achieved through studying the trends in net state domestic product for the state of Gujarat during post reforms period.

Objective No 2: To understand and examine the **level of growth** (Growth rate) of Gujarat more particularly structural changes in different sectors in the face of reform period.

The said objective was achieved with the availability of data on various reports that highlighted the growth rate for the state of Gujarat over the period 1990 to 2019.

Objective No 3: To study the **structural changes** and **pattern of economic growth** in Gujarat over a period of 29 years (1991 to 2019) in order to find out from the different sectors of the economy of Gujarat.

The said objective was achieved through studying the trends in sectoral composition of NSDP for the state of Gujarat during post reforms period with availability of data from various reports.

Objective No 4: To study the **structure** of state income by examining **sectoral distribution**.

The said objective was achieved, studying the pattern of changes in sectoral contribution in the net state domestic product.

Objective No 5: To study **pattern of changes** in growth rate through **sectoral composition** of NSDP and PCI.

The said objective was achieved, studying the pattern of changes in sectoral contribution in the net state domestic product and per capita.

15. Conclusions
On the onset of reforms at centre, the falling contribution of the Primary Sector at current and constant price could not be controlled, though the total contribution in rupees went on increasing. The contribution decreased from 31.82%, to 20.62% in three decades registering with fall of 11.2% while the average contribution of primary sector at current prices to NSDP stands at 24.47%. In same way at

constant price, the contribution was decreased from 57.42%, to 19.42% in entire period with of fall of 38% while the average contribution of primary sector at constant price to NSDP stands at 34.97%. The contribution of Secondary Sector in the NSDP shows a slight fluctuating but overall contribution considering importance of the sector is progressive, the total contribution in rupees went on increasing in same way contribution to total NSDP also increased in percentage. The contribution of secondary sector at current price increased from 32.62% to 42.49% registering with rise of 9.87% in three decade and the average contribution stands at 37.01% for the entire period. In same way at constant price, the contribution was increased from 26.60% to 43.86% with total rise of 17.26% in the entire period and the average contribution of primary sector at current prices to NSDP stands at 33.72% for the entire period 1990-91 to 2018-19. The fluctuating contribution of the Tertiary Sector could not be controlled, though the total contribution in rupees went on increasing while percentage of contribution shown volatile. The contribution of tertiary sector at current price increased from 35.56% to 36.89% registering with rise of 1.33% in three decade and the average contribution stands at 38.52% for the entire period. In same way at constant price, the contribution was increased from 15.96% to 36.72% with total rise of 20.76% in the entire period and the average contribution of primary sector at current prices to NSDP stands at 31.31% for the entire period 1990-91 to 2018-19.

The economy of Gujarat observed a growth pattern in which the share of tertiary sector in NSDP has moved faster and far ahead as that of primary and secondary sector. The emerging structure of Gujarat's economy is characterized by tertiary sector led growth with continuously shrinking share of primary sector and nearly stagnant share of secondary sector. In response to new policy regime and series of reforms, different sectors of the economy depict a differential behaviour pattern. The impact of reforms on different sectors is not uniform on all the sectors. The tertiary sector has responded positively with largest share in NSDP and with a high growth rate. But the primary sector has responded adversely to the process of economic reforms of the nineties. The declining share in NSDP and damped growth rate of primary sector is a self-speaking fact. The secondary sector, with signs of indifference, is still in its transitional phase of making adjustments among different factors.

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