

Trend of Growth of Nagaland Economy: An Exploratory Study

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Abstract

Nagaland is known for her range of flora and fauna. The recent NITI Aayog's first North East Region (NER) Sustainable Development Goals (SDG) Index ranked Nagaland 19th position under 'performer' category. According to this index, Nagaland needs improvement in areas of poverty, good health, clean energy, sustainable cities, innovation and infrastructure and had a mixed performance in quality education, reducing inequalities, addressing climate change, maintaining peace, justice, and strong institutions. The economy of Nagaland is marked by challenges such as underdeveloped infrastructure, underutilization of natural resources, high unemployment, over reliance on agriculture, limited industrialization and difficult terrain, which have hindered its development. Thus, the present research attempts to scale the growth of Nagaland economy by exploring the trend of rate of growth of GSDP. Besides these, the rate of growth of sectors of the economy that contribute to GSDP of the state is considered for the study. The secondary data have been collected from Nagaland Economic Survey for the year 2021-22, Nagaland Vision Document 2030, NEDFI databank and official state portals of Government of Nagaland. It has been found that GSDP of Nagaland has grown positively from 5.68% in 2012-13 to 6.86% in 2021-22 with an average rate of growth of 4.5%. The per capita income of the people has increased from Rs.53,010 in the year 2011 into Rs,1,30,221 in the year 2021-22. But, the average rate of growth of PCI is declined during the same period. It is further observed that the percentage of contribution of service sector to GSDP is higher than other sectors and is grown faster. The contribution of agricultural and industrial sector to GSDP falls under second and third position respectively with declining contribution. Hence, the Government needs to take requires measures with sprit in letter to develop the state.

Keywords: Gross State Domestic Product, Economic Growth, Per capita Income

Introduction

Nagaland, the 16th State of India, achieved statehood status on December 1, 1963. Known for its diverse and abundant flora and fauna, Nagaland is situated at 93°20' E and 95°15' E Longitude, and 25°6' and 27°4' degrees N Latitude. Covering an area of 16,529 square kilometers, the state has a population of 1,980,602 as per the 2011 census of India. Nagaland shares its borders with the states of Arunachal Pradesh, Assam, and Manipur, as well as an international border with Myanmar. The state comprises a total of 1355 villages, with only one being uninhabited. Among these villages, 1272 have Village Development Boards, 1203 have government schools, 558 have government health centers, 1106 have water provided by PHE, 1321 have access to electricity, while 34 villages still lack this essential service. Despite the connectivity of villages to main cities, the roads connecting these villages are in need of improvement. Efforts are ongoing to enhance the infrastructure and connectivity within the state.

Gross State Domestic Product (GSDP)

Gross State Domestic Product (GSDP) measures the total value of goods and services produced within a state during a given year. The growth of the GSDP estimated at current prices stand for real growth of the economy where as GSDP estimated at current prices indicates nominal growth of the economy of the state. Generally, economy of any state is divided into Agricultural, Industrial and Service Sector. The estimate of GSDP identifies sector that really contributes to GSDP of the state.

Agricultural Sector

The entire population of Nagaland relies on agriculture and allied activities such as crops, livestock, fishing, aquaculture, forestry and logging as well as mining & quarrying.

Approximately 65% of the total work force is employed by it, which contributes significantly to the GSDP of the State. Despite the improvement and growth in production, there are a lot of gaps to fill in order to become self-sufficient and improve productivity to become economically and commercially viable. The vision document developed by the agriculture department is aimed to achieve "Food for All" by 2025. The objectives of the Vision 2025 document are: to increase production and productivity in a sustainable way, generate employment by establishing agro-based food product and industries, attract educated youth toward agricultural activities by utilizing the potential for earning through value addition both for domestic and export markets, protect existing forest cover to counter Global Warming by means of awareness generation programmes, and cultivate fast growing species of trees to meet the requirement of fuel and fodder.

Industrial Sector

The Industrial Sector encompasses all production units involved in the conversion of raw materials into finished goods. It includes:

1. Manufacturing:
 - i. Registered
 - ii. Unregistered
2. Construction
3. Electricity, Water Supply, and Gas

The key industries in Nagaland include Bamboo, Horticulture, Sericulture, Minerals and Mining, Handloom and Handicrafts, and Tourism. Nagaland's New Industrial Policy was announced on December 20, 2000, with the aim of promoting sustainable industrial growth in the state. This policy provides support for investments, creates investor-friendly environments,

improves infrastructure and institutional support, and offers attractive subsidies. The people of Nagaland are encouraged to seize emerging market opportunities to generate significant income and employment prospects.

Service Sector

The service sector comprises all production units engaged in providing services. This sector includes transportation, storage, communication, trade, hotels, restaurants, banking, insurance, real estate, ownership of dwellings, business and legal services, public administration, and other services. Over time, Nagaland's service sector has emerged as the most robust contributor to the Gross State Domestic Product.

Review of Literature

Numerous research studies have been conducted by economists on the topic of economic growth. The primary determinant considered by these researchers for measuring economic growth is the Gross Domestic Product (GDP) or Gross National Product (GNP) of a country. Several studies (Shahbaz and Rahman, 2010; Omri and Kahouli, 2014; Pelinescu, 2015; Busse and Koeniger, 2015; Rahman and Mamun, 2016; Rahman et al., 2017; Rahman et al., 2019; Diebolt and Hippe, 2019) have identified various factors such as per capita income, incomes of agricultural, industrial, and service sectors as key determinants of growth. There have also been studies specifically focusing on the economic growth of the North Eastern Region. Deshamukhya et al (2017) studied the growth of the economy of North East India, considering factors such as per capita income, incomes of agricultural, industrial, and service sectors as determinants of Gross State Domestic Product (GSDP). However, when it comes to the economy of Nagaland, there is a lack of research. The existing studies do not directly address the components considered for

measuring the GSDP of the state; instead, they concentrate on the development of specific sub-sectors of the economy of Nagaland. Ezung et al. (2018) examined infrastructural disparities between Kohima and Longleng Districts alone, without considering the entire state of Nagaland. Similarly, Rajani Das (2018) highlighted infrastructure development in terms of power, road, transport, and communication in Nagaland, which are sub-sectors of the service sector but do not fully represent the overall development of Nagaland. Goswami et al (2005) in their research focused on interstate disparities in economic development of North Eastern States; economic development of Nagaland is mentioned by the trend of economic development is not studied in detail. In the same line, Dikshit et al (2014) in their research, studied land, people and economy of North East India in general but not Nagaland economy is missed out. Tiatemsu et al (2017) in their empirical study, discussed about agro-based industries of Nagaland. The research conducted by Vero (2012) highlighted the significant contributions of various sectors in Nagaland to the Net State Domestic Product (NSDP) at Factor Cost at Constant Prices over the period of 1981-2006, aiming to assess the economic growth and human development in Nagaland. The current study serves as an extension of the previous work, encompassing data until 2012.

Literature Gap

Numerous studies have been conducted on the Indian economy, the North East Region Economy, and Look East Policy. However, there is a noticeable lack of research on the economy of Nagaland. The existing literature on the Nagaland economy has emphasized the importance of women entrepreneurship, Jhum cultivation, and the diverse cultures of Nagaland. Despite this, there is a significant gap in research regarding the Gross State Domestic Product (GSDP) growth of Nagaland. This study aims to analyze the trajectory of Nagaland's economic growth by

examining the contributions of the Agricultural Sector, Industrial Sector, and Service Sector, and their impact on the GSDP of Nagaland. To address this gap in research, an exploratory study titled 'Trend of Growth of Nagaland Economy: An Exploratory Study' is proposed.

Statement of the Problem

In NITI Aayog's first North East Region (NER) Sustainable Development Goals (SDG) Index, ranked Nagaland 19th out of 35 states, fall under 'performer' category. According to the index, Nagaland is achieved inadequately in six areas: poverty, good health, clean energy, sustainable cities, innovation and infrastructure, and affordable and clean energy. In addition, the report indicated that the state has a mixed performance when it comes to quality education, reducing inequalities, addressing climate change, and maintaining peace, justice, and strong institutions, etc. The main reasons for this slow growth of economy were due to poor infrastructure, underutilization of natural resources, unemployment, over dependency on agricultural, poor industrialization, hilly terrain and unstable political condition. Beside these, the COVID-19 had a negative impact on GSDP which made the state to suffer economically. As part of state government efforts to boost the economy, infrastructure and setting up new industries are expected to rise in the near future.

Objective of the Study:

Given the survey of literature and scope, based on the available data, following objectives are established to elucidate the study:

- [1] To analysis the trend of annual growth of GSDP of Nagaland
- [2] To identify highest contributes sector to GSDP of Nagaland and
- [3] To analysis the trend of growth of Per Capita Income of Nagaland.

The present study attempts to explore whether the annual growth of GSDP and the State Per Capita Income is moving upward towards positive direction or not.

Research Methodology:

The present study considers 10 years of GSDP growth rate of Nagaland. Data in respect of GSDP, Sectoral contribution to GSDP and Per Capita Income of the state has been collected from Nagaland Economic Survey of 2021-22, Statistical Handbook of Nagaland and various Government records. The present study uses a version of linear regression technique and trend projection method to analysis the data. The data are analysis with the help of Excel and SPSS.

Results and Discussion

The world witnessed unprecedented mayhem due to COVID-19 pandemic. The pandemic triggered both supply and demand side shocks, resulting in decreased production of goods and services. The resultant restriction of the pandemic adversely affected economic growth of India; the same have been experienced by other states of Indian as well. The rate of growth GDP of India during 2020-21 was -2.10%¹ where as Nagaland has experienced the growth rate of -7.25%². This present study shed some light on SGDP, sectoral contribution to SGDP and state per capita income to scale the trend of growth of Nagaland economy.

1. Trend of Growth of GSDP of Nagaland

Nagaland is one of the fast growing States of North East India. The growth of the economy of the State will be known by GSDP. It has been observed that GSDP is growing at the average

¹ Nagaland Economic Survey 2020-21.

² World Bank National Accounts Data and OECD National Accounts Data, 2020

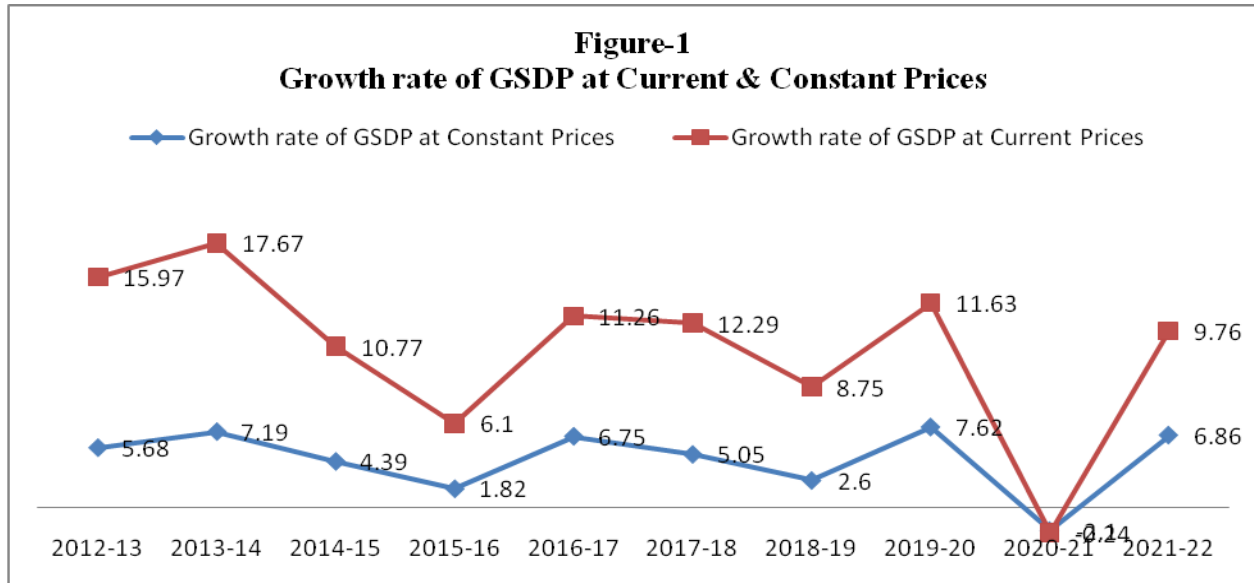
rate of 4.5% since 2012. Hence, this paper attempts to explore the trend of the growth rate of GSDP since 2012. The Annual Trends of growth rate of GSDP of Nagaland is presented below

Table 1: Growth Rate of GSDP of Nagaland

Item	Growth rate of GSDP at Constant Prices	Growth rate of GSDP at Current Prices
2012-13	5.68	15.97
2013-14	7.19	17.67
2014-15	4.39	10.77
2015-16	1.82	6.1
2016-17	6.75	11.26
2017-18	5.05	12.29
2018-19	2.6	8.75
2019-20 (P)	7.62	11.63
2020-21(Q.E)	-2.1	-0.24
2021-22(AE)	6.86	9.76

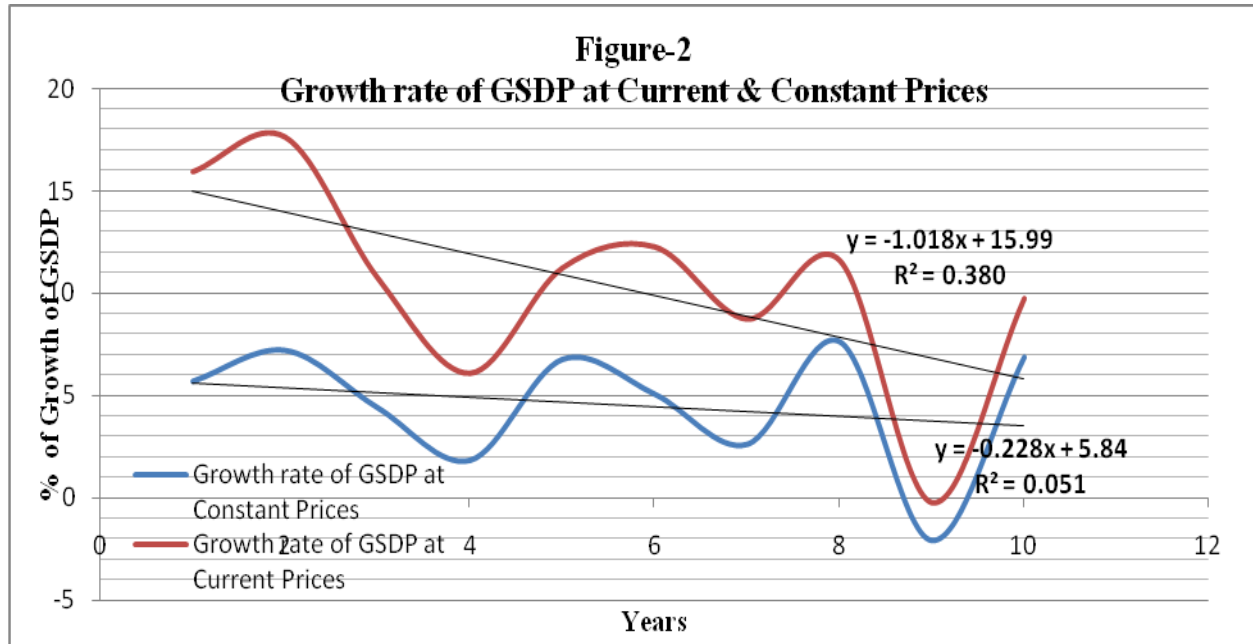
Sources: Nagaland Economic Survey 2021-22, P= Provisional, QE= Quick Estimates, AE= Advance Estimates

This Table 1 clearly indicates the trend of growth of GSDP at constant and current prices. The growth of the Gross State Domestic Product (GSDP) shows fluctuations over the period of time. In the years 2020-21, state has experienced negative growth of -2.1% due COVID-19. In spite of these, the growth has picked up from 2021-22. The average real rate of growth during this period is estimated to be 4.58%. The trend of growth of GSDP presented in Figure 1 for current prices (Nominal growth) estimates and constant prices (Real growth) estimates shows positive movement.



Source: Compiled from analysis of data

The GSDP curves moves upward and downward directions due to fluctuation in the rate of growth of the state economy.



Source: Compiled from analysis of data

But the linear curves presented in this Figure 2 for current prices (Nominal growth) and constant prices (Real growth) declines. Though GSDP in the table appears increasing, the linear curves presented here decline. This indicates that the Real Gross State Domestic Product of Nagaland is declining and it declines further. If require measures are taken at appropriate time this trend may be restricted. This is condition is further checked with state income which is presented in the Table 2.

2. Trend of Growth of GSDP of Nagaland (Rs. in Crores)

State income can be measured by income method. According to income method, GSDP means total money value of all the goods and services produced in the state during a year. The total

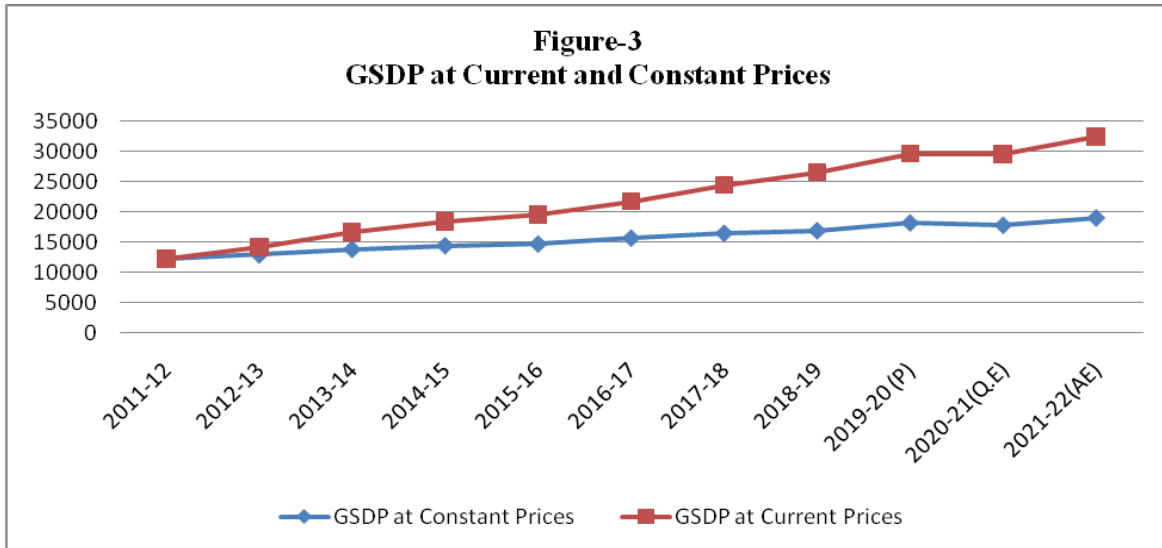
money value of goods and services produced by the state of Nagaland for a period of 10 years is presented in the Table 2 in current prices as well as constant prices.

Table 2: Gross State Domestic Product (GSDP) of Nagaland (Rs. in Crores) as on February 2022

Item	GSDP at Constant Prices	GSDP at Current Prices
2011-12	12177	12177
2012-13	12868	14121
2013-14	13793	16612
2014-15	14399	18401
2015-16	14660	19524
2016-17	15650	21722
2017-18	16440	24393
2018-19	16868	26527
2019-20 (P)	18154	29612
2020-21(Q.E)	17772	29541
2021-22(AE)	18992	32424

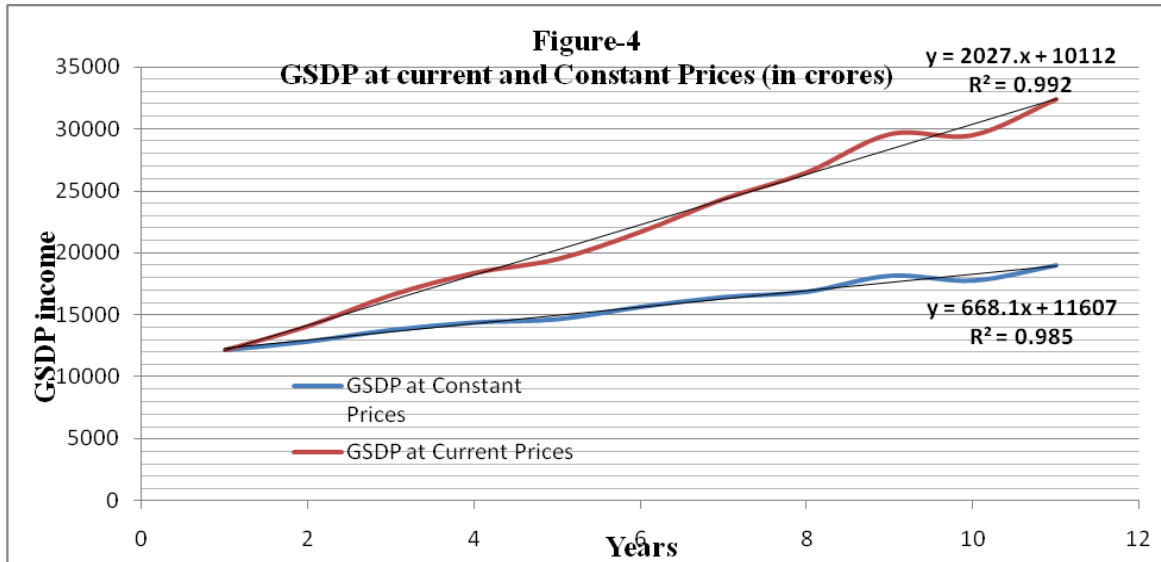
Sources: Nagaland Economic Survey 2021-22, P= Provisional, QE= Quick Estimates, AE= Advance Estimates

The Gross State Domestic Product (GSDP) of Nagaland at constant prices (Real growth) has seen an increase from 12,177 crores in 2011-12 to 18,992 crores in 2021-22. The average annual increase in state income over this period has been 681.5 crores, representing a growth rate of 4.5%. This trend of growth is presented in the following figure-3.



Source: Compiled from analysis of data

The graph presented in the Figure 3 shows the trend of growth of GSDP at current and constant prices. The curve moves upward direction indicating state income increases for every year. Hence, it is understood that Gross State Domestic Product (GSDP) of Nagaland (Rs.in Crores) is increased since 2012. In order to get better exposure the trend of linear curve need to be studied. Hence the trend of linear curve is presented in Figure -4 which moves upward direction.



Source: Compiled from analysis of data

The linear curve of GSDP present in the Figure-4 shows the trend growth of GSDP at current and constant prices, which moves upward direction. R^2 for current prices is 0.992 and for constant prices is 0.985. Hence, it has been concluded that GSDP of Nagaland at current and constant prices (in crores) increased at the rate of 4.3%.

3. Sectoral Contribution to GSDP

As the state income increases, the main contributor needs to be identified. Under product method, the calculation of GSDP for the state is done by the value added by Agricultural, Industrial and Service sectors. The contribution of agricultural, industrial and service sectors to state GSDP for the year 2012- 22 is presented in the Table 3.

Table 3: Sectoral Contribution to GSDP in percentage

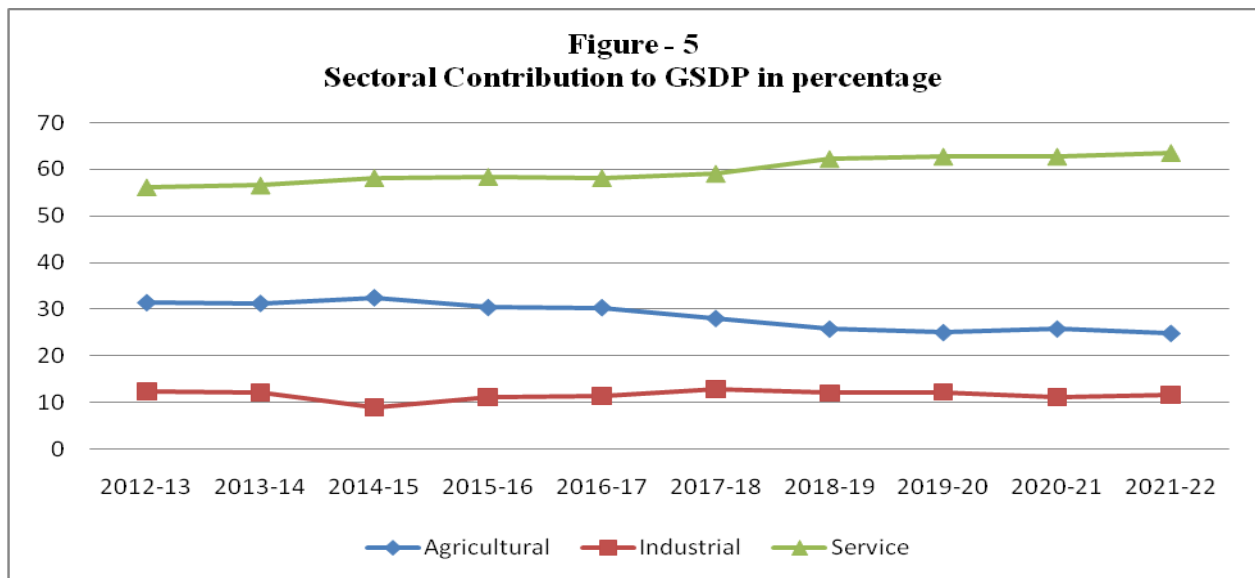
Item	Agricultural	Industrial	Service
2012-13	31.41	12.41	56.17
2013-14	31.25	12.07	56.58
2014-15	32.46	8.98	58.16
2015-16	30.38	11.22	58.4
2016-17	30.35	11.49	58.16
2017-18	28.05	12.9	59.06
2018-19	25.78	12.05	62.17
2019-20 (P)	25.05	12.27	62.68
2020-21(Q.E)	25.8	11.22	62.68
2021-22(AE)	24.86	11.66	63.48

Sources: Nagaland Economic Survey 2021-22, P= Provisional, QE= Quick Estimates, AE= Advance Estimates

The percentage contribution of agricultural sector to GSDP in the year 2012-13 was 31.41% which has decreased into 25.8% in the year 2021-22 as per quick estimate. This data shows, the contribution of agriculture to GSDP has been declined. The percentage of contribution of industrial sector to GSDP in the year 2012-13 was 12.07% which has been declined into 11.66% in the year 2021-22. This data shows, the contribution of industrial sector to GSDP has declined but is very small. The percentage contribution of service sector to GSDP in the year 2012-13 was 56.17% which has increased into 63.48% in the year 2021-22. Hence, Nagaland GSDP receives maximum contribution from service sector.

The analysis of the data clearly suggests that there has been insufficient agricultural development in the state over the past decade, leading to a reliance on other states for food grains. Both the land and the people of the state have shown limited engagement in agricultural activities. Additionally, the industrial sector has been the lowest contributor to the Gross State

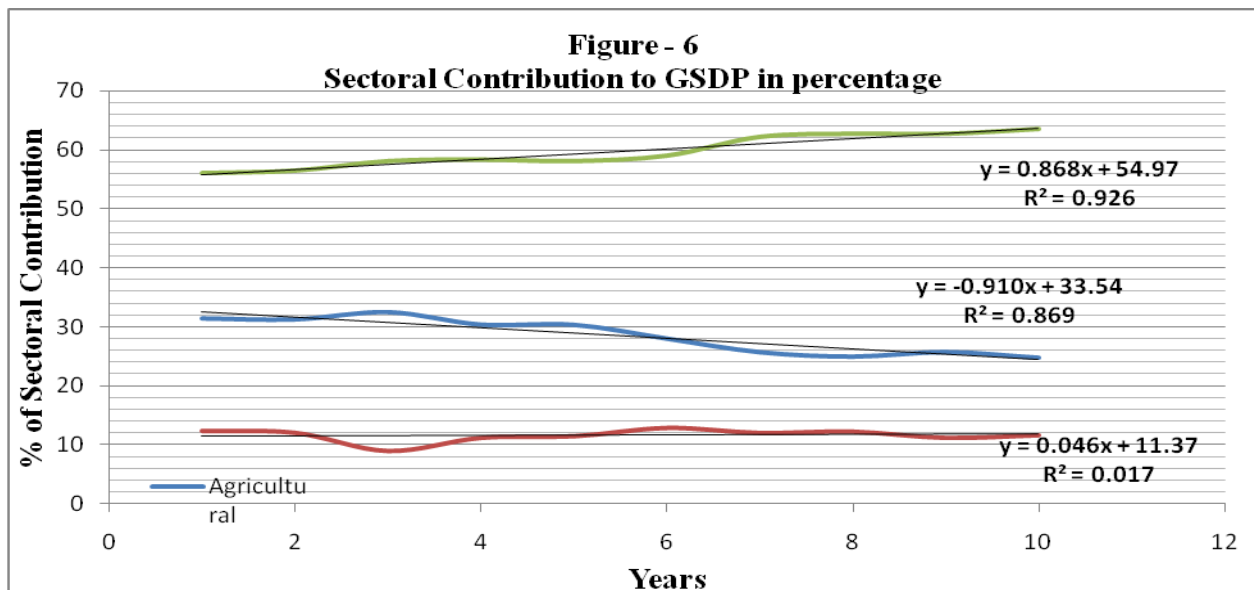
Domestic Product (GSDP), with no significant development observed since 2012. The average rate of growth of industrial sector contribution stands to be at -1.64%. On the other hand, the service sector has emerged as the primary contributor to the state's GSDP, signifying a shift from an agrarian to a service-based economy in Nagaland. The sectoral contribution to GSDP is presented in the following Figure-5.



Source: Compiled from analysis of data

The graph 5 shows the percentage of contribution of agricultural, industrial and service sector to the state GSDP. The percentage of contribution of service sector is high compare with other sectors. The service sector curve moves downward direction which indicates the development that taken place in the state. The contribution percentage of the industrial sector shows some fluctuation, without a clear upward or downward trend. This suggests that the necessary industrial development may not have occurred in the state. Similarly, the contribution percentage

of the agricultural sector also displays fluctuations, with a downward trend indicating that the anticipated level of development may not have been achieved. Hence, the economic development of Nagaland depends on service sector. Nagaland is no more agrarian state rather sector of service. This can be well known with the help of linear curve present in the following figure 6.



Source: Compiled from analysis of data

Here, the linear curves presented for service sector moves upward which denotes, service sector is developing and contributing highest income to GSDP of the state. The next, agricultural sector is the second highest contributor to GSDP of the state, the linear curve moves towards downward which denotes it is not performing as expected level. Third, industrial sector contribution to GSDP of the state is constant and the condition is poor.

4. Trend of Growth of Per Capita Income of Nagaland

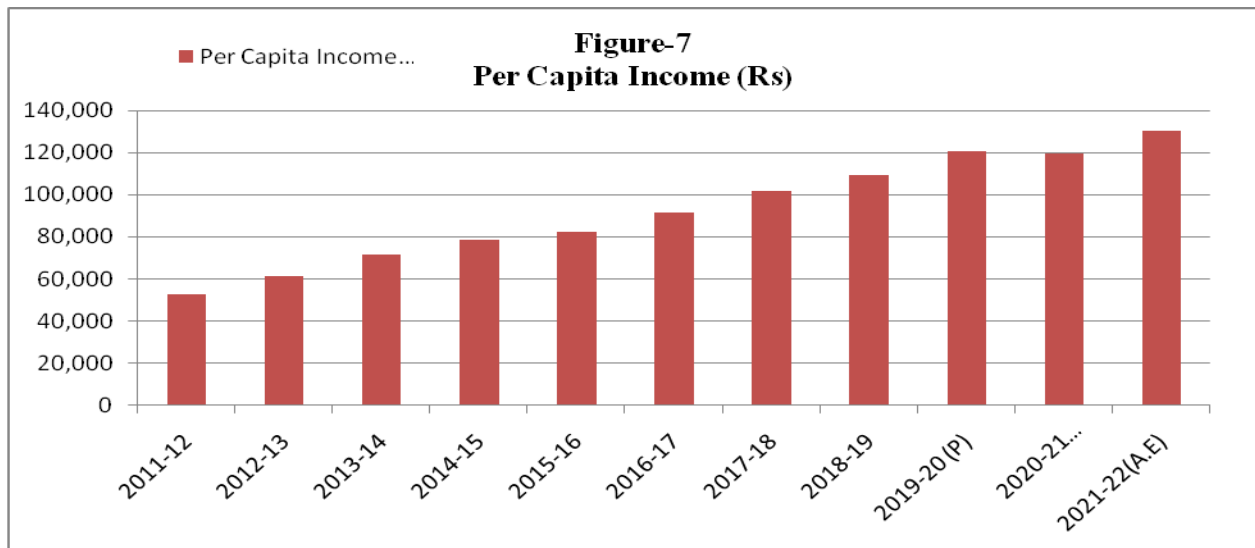
Per capita GSDP is a common measure for gauging the prosperity of nation or state and is used by economists to analyze the prosperity of a state based on its economic growth. In order to measure 'prosperity,' economists use GDP per capita, which measures the total value of goods and services of the country in a given year divided by its population. The following table 4 represents the per capita income of the people of Nagaland.

Table 4: Per capita Income of Nagaland

Year	Per Capita Income (Rs)	Growth rate of PCI
2011-12	53,010	
2012-13	61,225	15.5
2013-14	71,510	16.8
2014-15	78,367	9.59
2015-16	82,466	5.23
2016-17	91,347	10.77
2017-18	102003	11.67
2018-19	109198	7.05
2019-20 (P)	120871	10.69
2020-21 (Q.E)	119274	-1.32
2021-22(A.E)	130221	9.18

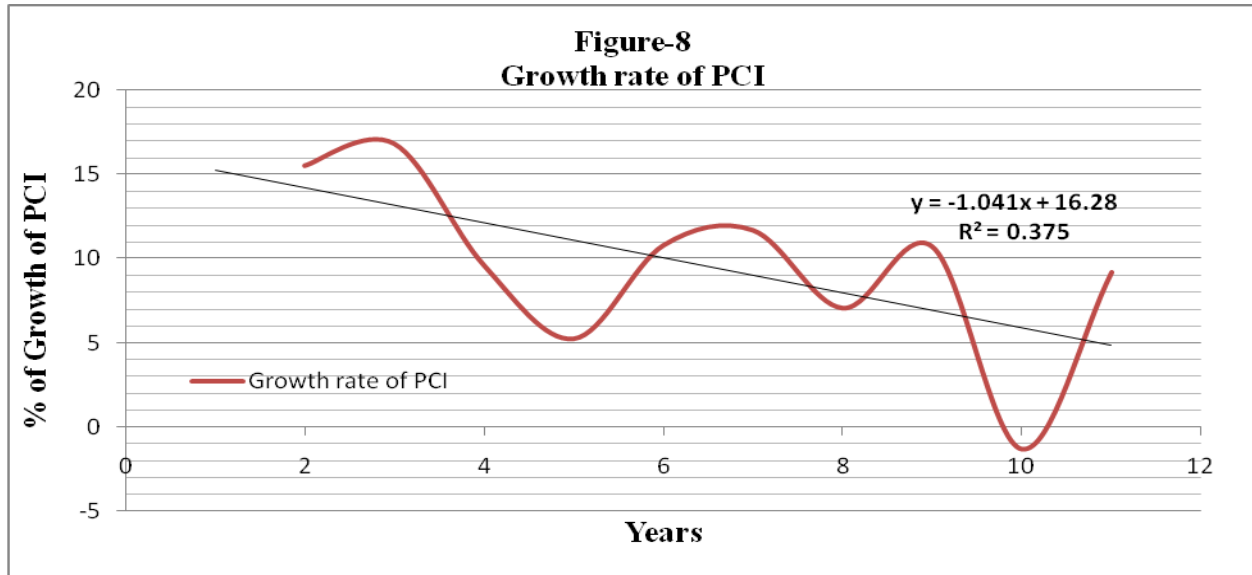
Sources: Nagaland Economic Survey 2021-22, P= Provisional, QE= Quick Estimates, AE= Advance Estimates

The per capita income of Nagaland in the year 2011-12 was Rs.53,010 which has been increased into Rs.1,30,221. The average growth of PCI of Nagaland has increased at the of 9.5%. On the contrary, the rate growth has declined from 15.5% into 9.18%. This needs bird view approach. Hence the trend of growth of per capita income of Nagaland is presented in the following diagram 7 and 8.



Source: Compiled from analysis of data

The figure 7 shows PCI of Nagaland since 2011-12. The average growth of PCI of Nagaland has increased at the of 9.5%. But the trend linear of curve presented in the figure-8 slope downward.



Source: Compiled from analysis of data

In this figure 8, the growth rate of PCI Nagaland declines. Here, R-squared (R^2) is 0.375. The linear curves presented for PCI Nagaland moves downward direction which denotes decreasing trend. Hence, the per capita income of the state is not increased since 2012; indicate under development of the state.

Findings and Recommendations

The economy of Nagaland is in a phase of development, albeit with a declining growth rate compared to other states in the North Eastern region. While the Gross State Domestic Product (GSDP) at current and constant prices is increasing, the trend curve indicates a decline. It has been observed that the GSDP of Nagaland at current and constant prices is increasing at a rate of 4.3% with fluctuations. The data interpretation clearly suggests that agricultural development has not progressed in the state over the past decade, with both land and human resources being

underutilized. The industrial sector is the lowest contributor to the GSDP of the state, and the data indicates minimal development in this sector since 2012, with an average growth rate of -1.64%. On the other hand, the service sector is the primary contributor to the GSDP of the state, signifying a transition from an agrarian-based economy to a service sector economy. It is important to recognize that the progression of economic development in any economy is historically linked to structural changes (Fisher, 1935, Clark, 1940 and Kuznets.1973). This is found to be true in case of Nagaland economy. The next indicator per capita income, was Rs.53,010 in the year 2011-12 has been increased into Rs.1,30,221 in the year 2021-22. The average growth of PCI of Nagaland has increased at the rate of 9.5%. On the contrary, the linear curve for the rate growth of PCI has declined from 15.5% in the year 2012-13 into 9.18% in the year 2021-22. The per capita income of Nagaland in terms of money increases. But the trend of linear curve declined. Thus, the per capita income of the state is not increased since 2012. Hence, the Government of Nagaland needs to take strong measures to develop the state.

Limitations

The current research examines the agricultural, industrial, and service sectors as the primary contributors to the Gross State Domestic Product (GSDP) of the State. The contributions of various sub-sectors within these industries are not factored into the calculations. The study utilized secondary data provided by Nagaland, which was estimated through provisional, quick, and advanced methods, potentially impacting the results.

Conclusion

The primary goal of any State's economy is to enhance the quality of life for its residents. This is typically achieved through the advancement of Agriculture, Industry, and the Service sector. The

contribution of these sectors is measured by the total value of production, which determines the Gross State Domestic Product (GSDP). The present study has revealed that the economy of Nagaland is facing challenges that hinder its economic development. It is imperative that Agriculture and Industry become focal points for growth and progress. Merely outlining plans, policies, and strategies will not suffice in driving economic development; they must be executed with precision and dedication. Therefore, the government must take proactive measures to promote growth in the agriculture and industry sectors in order to stimulate progress and ultimately enhance the standard of living for the people of the state.

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