



# An Analysis of Trends in Gross State Domestic Product of Northeastern States in India

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## I. Introduction:

The Gross State Domestic Product is an important parameter that indicates the economic growth and developmental status of a particular state in the country. The growth of the State Domestic Product contributes in the socio-economic development of the concerned state in particular and the country as a whole in general. The eight numbers of northeastern states are comparatively different from the other Indian states in the context of natural resources, economic activities, geo-graphical location and socio-economic conditions. The region is adorned by flora and fauna and rich in natural resources. The countries that surround the northeastern region are Bangladesh, Myanmar; China, Bhutan and Nepal (Deshamukhya and Roy, 2017). The northeastern states of India are comparatively backward in comparison to some other states in the country in different aspects. But, along with the different states of India, the State Domestic Products of northeastern states are also increasing but fluctuating over the years. There is uneven growth of state domestic product (SDP) of Indian states which is a constraint in the overall growth of India's gross domestic product (Nayak et. al., 2019). The growth rates of the Gross State Domestic Product in different northeastern states of India maintain increasing but fluctuating trends in the recent years as found in the study. Moreover, the inter-state analysis represents the variation in the growth rates of Gross State Domestic Product in the states of northeast India over the period under study.

Trends in the Gross State Domestic Products have been analysed for the northeastern states based both on the current year prices and constant prices. A comparative analysis between the trends in the nominal and real GDP of different northeastern states has been made in this study. The actual trend lines of the growth of both nominal and real Gross State Domestic Products have been fitted for the period under the study. Annual average growth rates of the Gross State Domestic Product at current year prices as well as the constant prices have been estimated. The percentage shares of Gross State Domestic Product of the different northeastern states out of the aggregate Gross State Domestic Products of northeastern states together in the recent years have been investigated. The study is based on the secondary data. Data have been collected from the North Eastern Development and Finance Corporation Ltd (NEDFi) data bank. The study covers the period from 2011-12 to 2020-21.

## II. Objectives of the Study:

The present study is based on the following objectives-

1. To understand the state-wise actual trends in the Gross State Domestic Products of the northeastern states of India.

2. To examine the inter-state variations in the trends of the Gross State Domestic Products in the states of northeast.
3. To understand the comparative trends between the nominal and real Gross State Domestic Products of northeastern states of India.
4. To examine the average annual growth rates of Gross State Domestic Products of the northeastern states.
5. To understand the percentage shares Gross State Domestic Product of northeastern states out of the aggregate of Gross State Domestic Product of the northeastern states together.

### III. Methodology:

#### III.1 Data Sources:

The present study is mainly based on the secondary. The secondary data have been collected from the North Eastern Development and Finance Corporation Ltd (NEDFi) data bank.

#### III.2 Data Analysis:

For analyzing the data, different statistical tools have been applied in this study. Percentages and ratios have been estimated. The actual trend lines have been fitted of the Gross State Domestic Products of the northeastern states for the period under the investigation. Moreover, state-wise trend lines of the annual growth rates of gross state domestic products of the northeastern states have been estimated. For this purpose, line diagrams have been used.

The average annual growth rates (AAGRs) of the Gross State Domestic Products for the different northeastern states have been estimated. For this purpose following statistical equation has been applied.

$$\text{Average Annual Growth Rate (AAGR)} = \frac{\sum_i^n \text{AGR}/n}{\dots\dots\dots} \quad \text{(i)}$$

Where, AGR = Annual Growth Rate, i (year) = (1, 2, 3, ....., n).

For examining the percentage shares of Gross State Domestic Product of each of the northeastern states in the aggregate of Gross State Domestic Product of the northeastern states together, pie chart has been used as a tool of research study.

### IV. Results and Discussions:

The following sections of the paper represent the findings and discussions of the research investigation.

#### IV.1 Trend in the Gross State Domestic Products of Northeastern States at Current Prices:

The trends in the state-wise Gross State Domestic Products of each of the eight numbers of northeastern states of India have been investigated. The following figure [refer figure- no. 1] represents the trends lines of the Gross State Domestic Products of northeastern states of the country at the current prices from 2011-12 to 2019-20.

**Trends in the State-Wise Gross State Domestic Products of Northeastern States from 2011-12 to 2019-20 (at Current Prices) Rs. in Crore**

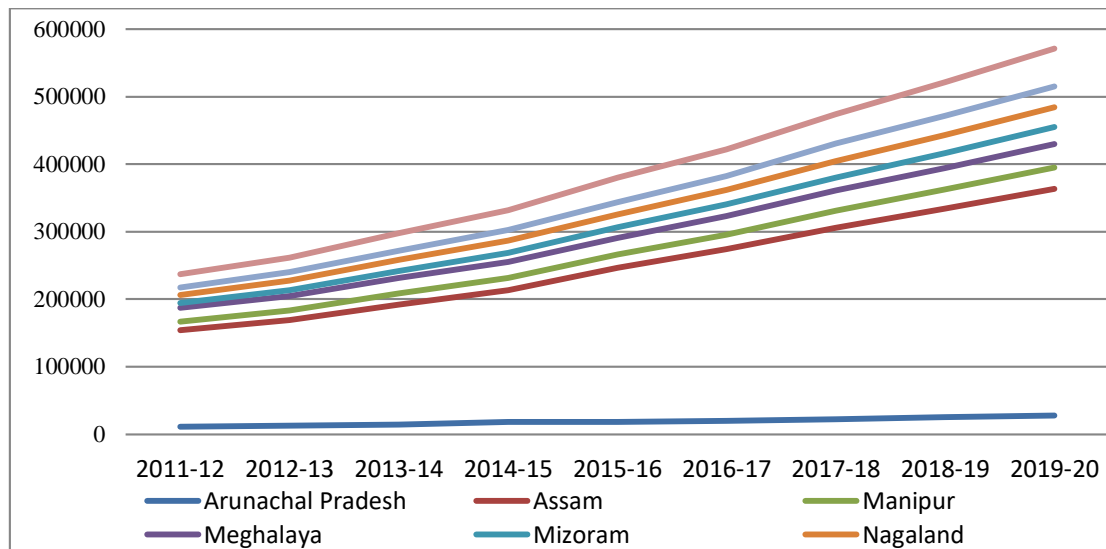


Figure- 1

In the figure [refer figure no. 1], the vertical axis represents Gross State Domestic Products at current prices (Rs. in crore) and the horizontal axis represents years. As observed in the figure [refer figure no. 1], the state-wise Gross State Domestic Products at current prices (Nominal GSDP) of all the eight numbers of northeastern states of India have the increasing trends over the period under the study. Even though exact figures cannot be found from the graphical representation, still it has been observed from the figure [refer figure no. 1] that the absolute values of the Gross State Domestic Product at current prices in the state of Assam is far higher in comparison to the other northeastern states during the period of study.

#### **IV.2 Trends in the Gross State Domestic Products of Northeastern States at Constant Prices:**

The trends in the state-wise Gross State Domestic Products at constant prices (base year is 2011-12) that is the real Gross State Domestic Products of each of the northeastern states have been examined from 2011-12 to 2019-20. Accordingly, the actual trend lines of the real Gross State Domestic Products (GSDPs) at constant prices of the eight numbers of northeastern states of India are represented in the following figure [refer figure no. 2].

**Trends in the State-Wise Gross State Domestic Product of Northeastern States from 2011-12 to 2019-20 (at Constant Prices, Base Year 2011-12) Rs. in Crore**

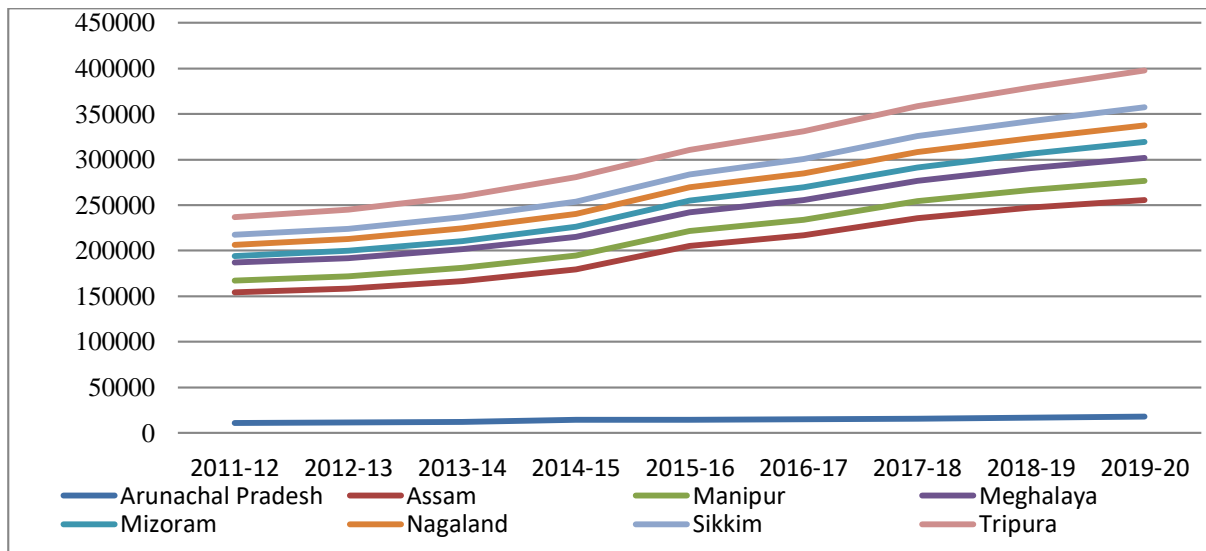


Figure- 2

It the figure [refer figure no. 2], the vertical axis represents Gross State Domestic Products (Rs. in Crore) at the constant prices and the horizontal axis represents years. It has been observed in the figure [refer figure no. 2] that the Gross State Domestic Products at the constant prices (base year is 2011-12) of each of the northeastern states on the country have recorded increasing trends during the period under study. As revealed in the line diagram [refer figure no. 2], the absolute values of the Gross State Domestic Product at the constant prices of the state of Assam is far higher in comparison to the other northeastern states of India during the study period. A minute observation in the figure [refer figure no. 2] reveals that during the years of 2014-15 to 2015-16, the Gross State Domestic Product at the constant prices of the state of Assam has increased at the higher rate compared to the previous years under the present study.

#### **IV.3 Average Annual Growth Rates of Gross States Domestic Products of Northeastern States from 2012-13 to 2019-20:**

To know the exact values of the growth rates of Gross State Domestic Product both at the constant prices and at current prices of the northeastern states over the period under study, average annual growth rates (AAGRs) have been estimated. Moreover the study of the average annual growth rates from 2011-12 to 2019-20 in the different states of northeast India also reflect the understanding of the inter-state comparative positions in terms of average annual growth rates during the period under the investigation.

The following table [refer table no. 1] represents the Average Annual Growth Rates (AAGRs) of the state-wise Gross State Domestic Products estimated both at the current prices and at the constant prices of all the eight numbers of northeastern states of India.

**Table No. 1: Average Annual Growth Rates of Gross States Domestic Products of Northeastern States from 2012-13 to 2019-20 at Current Prices and Constant Prices**

States	AAGRs at Current Prices (in %)	AAGRs at Constant Prices (in %) (Base Year 2011-12)
Arunachal Pradesh	12.47	6.33
Assam	11.26	6.62
Manipur	12.03	6.10
Meghalaya	7.22 <sup>#</sup>	3.02 <sup>#</sup>
Mizoram	<b>16.97*</b>	<b>12.17*</b>
Nagaland	11.77	5.11
Sikkim	13.64	7.41
Tripura	14.33	9.79

Source: Self estimates by the author based on the data collected from NEDFi, India.

\*' represents the highest average annual growth rate and '#' represents the lowest average annual growth rate.

It has been observed from the table [refer table no. 1] that at the current prices, the Average Annual Growth Rate during 2011-12 to 2019-20 is highest that is 16.97 percent in case of the state of Mizoram. The state of Tripura has the second highest Average Annual Growth Rate that is 14.33 percent during the same period under the study. On the other hand, the state of Meghalaya has the lowest Average Annual Growth Rate of the Gross State Domestic Product at the current prices during 2011-12 to 2019-20 that is 7.22 percent. As found in the study, the other northeastern states of India have the different Average Annual Growth Rates of the Gross State Domestic Product between the two extreme values of Average Annual Growth Rates of Mizoram and Meghalaya. It is noted that at the current prices, the states like Assam and Nagaland have more or less the similar Average Annual Growth Rates of the Gross State Domestic Product during 2011-12 to 2019-20. The state of Assam has 11.26 percent and the state of Nagaland has 11.77 percent Average Annual Growth Rates during the same period under the study.

From the table [refer table no. 1] it has been observed that at the constant prices, the Average Annual Growth Rate during 2011-12 to 2019-20 is highest that is 12.17 percent in case of the state of Mizoram. Similarly, the state of Tripura has the second highest Average Annual Growth Rate of Gross State Domestic Product during the same period under the study. But, the state of Meghalaya has the lowest that is 3.02 percent Average Annual Growth Rate of Gross State Domestic Product for the same duration. The other northeastern states of India have different Average Annual Growth Rates of Gross State Domestic Products between the two extreme values of growth rates of Mizoram and Meghalaya. A minute observation in the table [refer table no. 1] reveals that at the constant prices, the states like Arunachal Pradesh, Assam and Manipur have more or less similar Average Annual Growth Rates the Gross State Domestic Products during 2011-12 to 2019-20. That is Arunachal Pradesh has 6.33 percent, Assam has 6.62 percent and Manipur has 6.10 percent Average Annual Growth Rates of the Gross State Domestic Products during the same period under the study.

#### **IV.4 Share of Each of the Northeastern States in the Gross State Domestic Product of North Eastern States Together:**

To understand clearly the share of Gross State Domestic Product of each of the eight numbers of northeastern states of India in the Aggregates of the Gross State Domestic Products of the north eastern states together, a pie chart has been fitted. The pie diagram [refer figure no. 3] represents the percentage shares of Gross State Domestic Product at constant prices of each of the north eastern states in India out of the aggregates of the Gross State Domestic Product of the northeastern states together at constant prices in the year of 2019-20 (base year 2011-12).

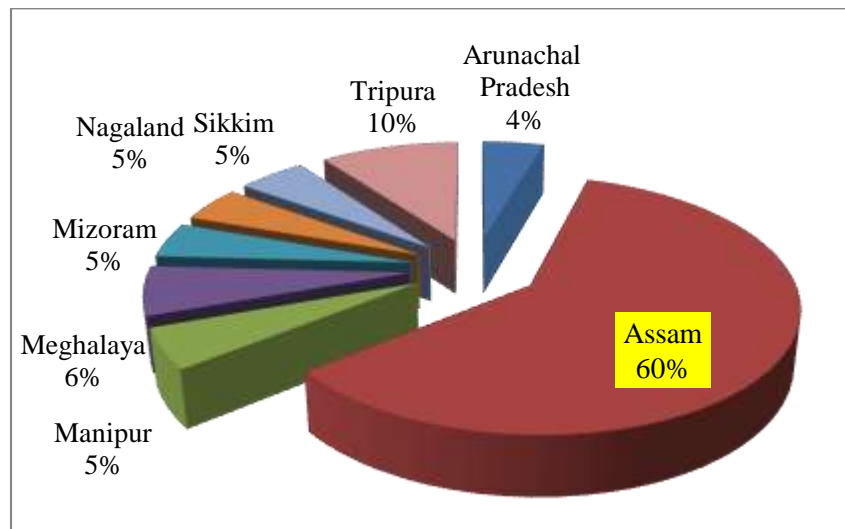


Figure- 3

It has been observed in the figure [refer figure no. 3] that out of the aggregate of the Gross State Domestic Product at constant prices in the year of 2019-20 (base year 2011-12) of the northeastern states of India together, the state of Assam shares the highest percentage, that is 60 percent. This shows that among all the northeastern states, Assam alone shares majority portion out of the aggregate of the Gross State Domestic Product at constant prices in the year of 2019-20. The state of Tripura, shares the second highest in Gross State Domestic Product of the northeastern states that is 10 percent which is far lower in comparison to the percentage share of Assam.

As observed in the figure [refer figure no. 3], that Arunachal Pradesh shares the lowest percentage that is only 4 percent out of the total Gross State Domestic Product at constant prices in the year of 2019-20 (base year 2011-12) of the northeastern states of India together. The state of Meghalaya shares 6 percent and the other states like Sikkim, Nagaland, Manipur and Mizoram each individual state has only 5 percentage share in the aggregate of the Gross State Domestic Product at constant prices in the year of 2019-20 (base year 2011-12) of the northeastern states of India together. Thus, the pie diagram [refer figure no. 3] clearly indicates that there is variation in the shares of each individual northeastern states in the aggregate of the Gross State Domestic Product of the northeastern states of India together. But except the state of Assam, the other northeastern states each have only 4 percent to 6 percent shares in the aggregate of the Gross State Domestic Product of the northeastern states of India together in the year of 2019-20.

## V. Conclusion:

Increase in the size Gross State Domestic Product represents the growth and development of an economy. As found in the study, the Gross State Domestic Products of all the eight number of states of northeastern region of India have the increasing trends during the period under the study. Actual size of Gross State Domestic Product in the state Assam is far higher in comparison to the other northeastern states both in terms of current prices and constant prices. But, there are variations in the size as well as increasing rate of Gross State Domestic Products both at the current and constant prices among the different northeastern states of the country. The Average Annual Growth of Gross State Domestic Product is highest in the state of Mizoram both in terms of current and constant prices. But, the state of Meghalaya has the lowest Average Annual Growth rate of Gross State Domestic Product both in terms of current and constant prices. The Average Annual Growth of Gross State Domestic Products of the other northeastern states are different and remain in between the two extreme growth rates of Mizoram and Meghalaya during the study period.

The percentage shares of each of the northeastern states in Gross State Domestic Product out of the total Gross State Domestic Product at constant prices are different. The state of Assam alone shares the majority portion of the Gross State Domestic Product at constant prices. The other seven north eastern states share very less percentage in the total Gross State Domestic Product of the north eastern states together in the same year under the study.

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