Does Growth of Gross State Domestic Product Can Manage Unemployment in India? A State-Level Analysis

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Abstract

Unemployment and Gross State Domestic Product (GSDP) is a complex and critical aspect of economic research, with a particular focus on the impact of GSDP on unemployment from 2017 to 2022. In summary, this research paper examines the intricate interplay between these two variables, aiming to understand how changes in GSDP impact unemployment rates in different states of India and growth of the said variables. Growth rate of the variables has been calculated using year over year growth rate (YOY), compound annual growth rate (CAGR), and relationship between the variables find out using correlation and Granger causality test. It investigates the potential causal links, cyclical patterns, and policy implications, shedding light on the dynamic nature of employment and economic growth at the state level. The findings of the study suggest that growth of the variables are fluctuative in nature and there is a negative relationship between GSDP and unemployment rate in the states as well as there is a existence of unidirectional or bidirectional causality.

Keywords: Gross State Domestic Product, unemployment rate, growth rate, correlation, Granger Causality

1. Introduction

Unemployment and Gross State Domestic Product (GSDP) are two crucial economic indicators that play a significant role in understanding the economic health of a region or a country. Unemployment refers to the state of individuals who are willing and able to work but are unable to find gainful employment. It is a multifaceted issue that has far-reaching social and economic consequences, affecting individuals, families, and society as a whole. High levels of unemployment can lead to increased poverty, social unrest, and reduced overall economic productivity.Unemployment is a pressing global issue, particularly in developing nations. It has become a persistent challenge in both developed and developing countries. Unemployment occurs when individuals possess the necessary qualifications and skills for work but are unable to secure employment.Keynesian economics believe thatunemployment is there when markets and demand for goods and services are in efficiency.The Indian government has taken several measures to address the issue of unemployment. The government has launched several skill development programs to equip individuals with the necessary skills and qualifications to compete in the job market. The government is also promoting entrepreneurship and self-employment to create more job opportunities. Additionally, the government is encouraging foreign investment in the country to create

more jobs and spur economic growth. A lack of sufficient job opportunities, low levels of education and skill development, mismatch between the skills required by employers and those possessed by job seekers, impact of automation and technology on the job market, slow economic growth, limited availability of formal sector jobs in rural areas, seasonal and cyclical nature of employment in certain industries, inadequate labor laws and regulatory framework are some of the key factors that have contributed to unemployment in India. GSDP, on the other hand, is a measurement of the economic performance of a state or area. It is the sum total of the monetary worth of all of the products and services that are produced within the boundaries of a certain state within a specified time period, which is often one year. GSDP is an important indication of the economic production of a state and is used to compare the economic performance of various areas. It is comparable to the Gross Domestic Product (GDP) of the whole country, but its primary emphasis is on the economic production and revenue that are produced inside a particular state or territory. GSDP is an essential measure for determining how various states within a nation are faring in terms of their respective economic growth. The difference between the national GDP and each state's or union territory's GSDP is the sum total of all value contributed by industries located within that state or union territory. The Gross State Product, sometimes known as a state's income, is the single most essential metric for determining the level of economic expansion inside a state. Estimates of the economy that have been gathered throughout time may provide light on the history as well as the current trajectory of economic growth. The Primary sector, the Secondary sector, and the Tertiary sector make up the three primary categories that make up the State Domestic Product (SDP). Following a certain technique, additional compilation of these sectors is done depending on the economic activities involved. Recommended by the National Statistical Office (NSO), which is part of the Ministry of Statistics and Programme Implementation under the Indian government.

The impact of automation and technology on the job market, sluggish economic growth, and the limited availability of formal sector jobs in rural areas, the seasonal and cyclical nature of employment in certain industries, inadequate labor laws and regulatory framework are some of the key factors that have contributed to the problem of high unemployment. On the other hand, GSDP is a gauge of the economic performance of a state or territory. It is the sum total of the monetary value of all of the items and services that are produced within the limits of a specific state for a defined time period, which is often one year. The GSDP is an important measurement that is used to determine how well different states within a country are doing in terms of their own rates of economic expansion. The sum total of all value provided by industries situated within a state or union territory is the difference between the GDP and that state's or territory's GSDP. This difference is measured as the difference between the national GDP and that state's or territory's GDP. The Gross State Product, which is sometimes referred to as a state's income, is the single most important indicator that can be used to determine the extent of economic growth that is taking place inside a state. Estimates of the state of the economy that have been compiled throughout the course of time may shed some light not only on the past but also on the path that economic development is now on. The State Domestic Product (SDP) may be broken down into three basic categories: the basic sector, the Secondary sector, and the Tertiary sector. These three sectors make up the State Domestic Product (SDP). The extra compilation of these sectors is done in accordance with a certain method, and it is determined by the economic activities that are engaged. Recommended by the National Statistical Office (NSO), which is a department of the Indian government's Ministry of Statistics and Programme Implementation.

The relationship between unemployment and GSDP can be inverse relationship, where economic growth tends to lead to lower unemployment rates. Unemployment rates tend to rise during economic downturns, leading to a decrease in GSDP, and vice versa during economic upswings.The complexities of labor markets, including factors like skills, education, and geography, play a significant role in influencing both unemployment rates and GSDP growth. Policy measures and interventions, such as education and training investments, infrastructure development, and labor market reforms, can impact both unemployment and GSDP positively. In this research work, we will get into the relationship between unemployment and GSDP. High unemployment rates can negatively impact a state's GSDP by reducing consumer spending, limiting tax revenues, and creating a burden on social welfare programs. Conversely, a robust GSDP can stimulate job creation and reduce unemployment.Understanding the dynamics between unemployment and GSDP is essential for policymakers, economists, and researchers to formulate effective strategies for economic growth and job creation at the state level. This research aims to explore the factors influencing these two critical indicators and analyze the interplay between them to provide valuable insights into regional economic development and labor market dynamics. Increase in the unemployment situation in the states as well as countries may leads to the migration (Maiti et al., 2022). Promotion of economic growth with quality of education, development in infrastructure, growth in the manufacturing as well as service sector may reduce the burden of huge unemployment in India (Maiti et al., 2022).

2. Review of Literature

Singh (2018) explored the impact of inflation on India's GSDP and unemployment rate. This research contributed to the understanding of macroeconomic determinants in the Indian economy. The negative relationship between GSDP and unemployment highlighted in this study aligns with prior economic theory suggesting that as an economy grows, unemployment tends to decrease (Lucas, 1987). However, the observation that inflation had a negligible effect on these variables is consistent with findings from previous research indicating that inflation's relationship with unemployment is complex (Phillips, 1958). Naidu (2023) focused on the economic situation in Haryana, India. The study found that while Haryana's GSDP share in India's GDP increased, unemployment remained a persistent issue. This observation echoes earlier research emphasizing the importance of economic growth for job creation (Barro, 1991). The discrepancy between economic growth and unemployment in Haryana might be explained by structural factors, such as a skills gap, which has been studied in the context of labor markets (Mincer, 1974). Hasan (2012) study addressed the popular belief that trade liberalization leads to increased unemployment. However, this research found no significant evidence supporting this claim. This result contrasts with the "Stolper-Samuelson theorem" from international trade theory, which suggests that opening to trade might negatively affect specific factors of production, potentially leading to unemployment (Samuelson, 1941). The study's findings regarding the positive impact of trade liberalization on unemployment in states with flexible labor markets align with the concept of comparative advantage (Ricardo, 1817). Mukherjee (2019) research examined various correlations involving variables such as the Gini coefficient, healthcare services, Infant Mortality Rate (IMR), and unemployment rates. The significant negative association between female literacy rates and IMR emphasizes the role of female education in improving health outcomes, consistent with earlier studies (Caldwell, 1986). The observation that IMR correlated with factors like female unemployment rates and per capita GSDP aligns with the broader literature on socioeconomic determinants of health (Wilkinson

& Marmot, 2003). Mitra and Singh (2020) investigated the regional differences in unemployment during a statewide lockdown, highlighting migration as a key factor. Research on the impact of migration on regional labor markets suggests that it can lead to both positive and negative effects, depending on various factors such as skills and economic conditions (Cohen, 1987). The study's emphasis on the role of big cities and the need for rural economic development echoes urbanization and regional development literature (Champion, 2001).Makwana(2023) addresses the persistent problem of unemployment in India and its significant social and economic implications. The authors provide an overview of the current state of unemployment, including the latest unemployment rate, and delve into the multifaceted factors contributing to this issue. This paper also evaluates the measures undertaken by the Indian government to combat unemployment, such as skill development programs, promotion of entrepreneurship, and foreign investment.Abraham Vinoj (2009) study focuses on the distress in the agricultural sector, particularly when income falls below the sustenance level. In such situations, a significant proportion of the population that was previously not engaged in the labor market becomes compelled to seek employment to supplement their household income. The distress experienced in agricultural sectors often results in lower income and stagnation. Vinoj's research demonstrates that this income crisis in farming leads to increased employment opportunities in rural areas, potentially as a coping mechanism for households facing financial difficulties in agriculture. Bairagyai (2018) study analyzes unemployment rates in India, with a particular focus on the relationship between education and unemployment. The research findings suggest that the rate of unemployment is higher among educated individuals compared to the uneducated. Furthermore, the study highlights that the unemployment rate tends to increase as the level of education rises. The paper delves into an exploration of the factors responsible for these elevated unemployment rates among the educated population. Nayak (2019) examines the disparities in the growth of GSDP among different states in India. It underscores the uneven growth of GSDP in Indian states, which poses a constraint on the overall growth of India's Gross Domestic Product (GDP). The study reveals that this inconsistency is due to the uneven distribution of economic activities both among states and across the country. The analysis primarily utilizes the annual growth rate (AGR) of state domestic product at constant prices (2011-12) as a measure of disparity and volatility.The research paper by Altaf Hussain Padder and Mathavan (2021) investigates the relationship between unemployment and economic growth in India from 1990 to 2020. They used the Hodrick-Prescott filter to correct for non-stationarity in their time series data. Their study employed descriptive statistics, Granger causality tests, and an Ordinary Least Squared model to examine the impact of economic growth on unemployment.The Granger causality test in their study found no causal link between unemployment (UNEMP) and GDP (economic growth), suggesting that neither variable causes the other. However, the results from their regression analysis indicate that only 6% of the impact of economic growth on unemployment is inversely related, while the remaining 94% is attributed to other detrimental factors affecting India's unemployment rate.

3. Objectives

The objectives of the paper are as follows:

Firstly, to measure the growth rate of GSDP and Unemployment rate of Indian states and determine the relationship between unemployment rate and GSDP. Secondly, to find out the causal relationship between unemployment rate and GSDP of different states in India.

4. Methodology and data source

4.1 Methodology

To understand the linkage between variables, two methods have been used which are as under:

1. Year over Year (YOY)growth rate
2. Compound Annual Growth Rate
3. Karl Pearson's correlation coefficient and
4. Granger Causality Test

Year over year growth rate (YOY) are rates of change of the current period with respect to its previous period.

To calculate the Year over Year growth rate, the following steps were used:

- Subtract last year's number from this year's number. This gives the total difference for the year.
- Then divide the difference by last year's number.
- That gives the Year-to-Year growth rate.

$YOY = (Y_t - Y_{t-1}) / Y_{t-1}$

Where Y_t, is the magnitude of the variable in period t

Y_{t-1} is the magnitude of the variable in the period t-1

$(Y_t - Y_{t-1})$ is the difference in the magnitude of the variable in period t and t-1.

Compound annual growth rate of a variable is defined as $(Y_n / Y_o)^{(1/n)} - 1$

Where Y_n is the magnitude of the variable in period n and Y_o is the magnitude of the variables in base period 0. n denotes number of periods.

Karl Pearson's correlation coefficient is the product-moment correlation coefficient, generally denoted by r is a measure of the correlation i.e., linear dependence between two variables X and Y.

Granger causality test is an econometric test used to verify the usefulness of one variable to forecast another.The Granger causality test, proposed by Eagle and Granger (1989), is used in the second stage of the estimation procedure to examine the causality between unemployment rate and GSDP. It was mainly concerned with determining the nature of the relationship between the two variables, specifically whether the relationship is unidirectional, bidirectional, or there is no causality between the two or more variables (Gupta et al., Maiti and Gupta (2023).

5.2 Data and Variables:

In the present paper, two variables, i.e., Gross State Domestic Product (GSDP) and Unemployment rate (UNE) have been used. The study is based on data from 2017 to 2022 for each 29 states in India collected from Reserve bank of India (RBI), Centre for Monitoring Indian Economy (CMIE) and National statistical organization (NSO).

5. Analysis of Result and discussion

The result of the analysis is presented in this section.

Table 5.1: YOY growth rate of variables

States	Unemployment Rate	Growth rate of GSDP
Andhra Pradesh	22.8	9.319
Arunachal Pradesh	33.6	0.452
Assam	30.5	0.354
Bihar	32.4	0.194
Chhattisgarh	13.9	0.388
Delhi	40	16.107
Goa	53.2	0.227
Gujarat	14.2	0.330
Haryana	39.4	11.294
Himachal Pradesh	21.6	-0.217
Jharkhand	22	0.361
Karnataka	18.5	0.246
Kerala	50.1	0.140
Madhya Pradesh	14.8	0.358
Maharashtra	20.2	0.258
Manipur	45	0.457
Meghalaya	11.3	0.267
Mizoram	31.7	0.511
Nagaland	92.8	-0.421
Odisha	31.6	0.295
Punjab	35	0.259
Rajasthan	24.6	-0.052
Sikkim	11.5	0.232
Tamil Nadu	29.4	0.406
Telangana	32	0.164
Tripura	26.2	0.224
Uttarakhand	38.3	0.386
Uttar Pradesh	23.4	0.370
West Bengal	19.9	0.362

Analyzing the Year-over-Year (YOY) growth rates of Unemployment and Gross State Domestic Product (GSDP) for each state in India, we can observe several trends and patterns that can be valuable for a research paper:

The states which have highest Unemployment YOY are Nagaland has the highest unemployment YOY at 92.8, indicating a significant increase in unemployment in this state.Followed by Goa closely with an unemployment rate of 53.2 and Kerala has an unemployment rate of 50.1 states with the highest unemployment rates.While the states which have highest GSDP YOY Goa has the highest GSDP YOY growth at 16.107, indicating a significant increase in its economic output.Kerala also shows strong economic growth with a GSDP YOY rate of 0.361. Telangana has a GSDP YOY rate of 0.33, indicating robust economic growth.

The states which have lowest Unemployment YOY are Chhattisgarh has the lowest unemployment YOY at 13.9, indicating relatively lower unemployment and potential stability in employment.Meghalaya and Sikkim have low unemployment rates of 11.3 and 11.5, respectively.Madhya Pradesh and Gujarat also have low unemployment rates at 14.8 and 14.2, respectively. While the states which have lowest GSDP YOY are Arunachal Pradesh has the lowest GSDP YOY growth at -0.217, indicating a decline in economic output.Nagaland also has a negative GSDP YOY growth of -0.421, indicating economic contraction.West Bengal has a GSDP YOY rate of -0.052, showing a relatively stagnant or declining economy.

Table 5.2: CAGR of Unemployment Rate and GSDP

States	Unemployment Rate	GSDP
Andhra Pradesh	-0.844	1.082
Arunachal Pradesh	-0.779	-0.745
Assam	-0.918	-0.768
Bihar	-0.860	-0.799
Chhattisgarh	-0.879	-0.759
Delhi	-0.907	2.097
Goa	-0.857	-0.793
Gujarat	-0.931	-0.772
Haryana	-0.822	1.221
Himachal Pradesh	-0.879	-0.884
Jharkhand	-0.955	-0.766
Karnataka	-0.889	-0.789
Kerala	-0.860	-0.810
Madhya Pradesh	-0.918	-0.767
Maharashtra	-0.879	-0.789
Manipur	-0.870	-0.744
Meghalaya	-0.730	-0.786
Mizoram	-0.911	-0.732
Nagaland	-0.930	-0.918
Odisha	-0.860	-0.780

Punjab	-0.861	-0.787
Rajasthan	-0.843	-0.846
Sikkim	-0.923	-0.793
Tamil Nadu	-0.893	-0.758
Telangana	-0.908	-0.806
Tripura	-0.927	-0.794
Uttarakhand	-0.829	-0.761
Uttar Pradesh	-0.923	-0.764
West Bengal	-0.877	-0.766

The states which have highest Unemployment CAGR are Jharkhand has the highest Unemployment CAGR at -0.955, indicating a significant decline in unemployment over time. Followed by Tripura with a CAGR of -0.927 and Nagaland has a CAGR of -0.930. While highest GSDP, CAGR are Delhi has the highest GSDP CAGR at 2.097, indicating significant economic growth and expansion. Followed by Haryana closely with a GSDP CAGR of 1.221 and Gujarat has a GSDP CAGR of 1.082.

The states which have lowest Unemployment CAGR are Meghalaya has the lowest Unemployment CAGR at -0.730, suggesting a relatively lower rate of improvement in employment conditions.Sikkim and Arunachal Pradesh also have low Unemployment CAGR at -0.923 and -0.779, respectively.Bihar, Punjab, and Rajasthan also have relatively low Unemployment CAGR values, indicating slower improvements in employment. While lowest GSDP CAGR are Nagaland has the lowest GSDP CAGR at -0.918, indicating a decline in economic growth.Meghalaya and Arunachal Pradesh also have negative GSDP CAGR values, showing economic contraction.States like Jharkhand, Uttar Pradesh, West Bengal, and Odisha have relatively low GSDP CAGR values, indicating slower economic growth

Table 5.3: Pearson Correlation Coefficient of Variables

States	Correlation
Andhra Pradesh	-0.424
Arunachal Pradesh	0.418
Assam	-0.687
Bihar	-0.631
Chhattisgarh	-0.513
Delhi	-0.707
Goa	-0.520
Gujarat	-0.803
Haryana	0.432
Himachal Pradesh	-0.214
Jharkhand	-0.932

Karnataka	-0.604
Kerala	-0.887
Madhya Pradesh	-0.855
Maharashtra	-0.587
Manipur	-0.496
Meghalaya	0.654
Mizoram	-0.733
Nagaland	0.867
Odisha	-0.939
Punjab	-0.790
Rajasthan	0.548
Sikkim	-0.945
Tamil Nadu	-0.879
Telangana	-0.424
Tripura	-0.621
Uttarakhand	-0.191
Uttar Pradesh	-0.991
West Bengal	-0.711

The states which have Negative Correlations with negative correlations indicate an inverse relationship between the variables. In this context, a negative correlation could mean that as one variable increases, the other decreases. States like Jharkhand, Odisha, and Uttar Pradesh have very strong negative correlations (close to -1). This suggests that they might have strong negative relationships with the variable they are correlated with. Kerala, Tamil Nadu, and Gujarat also have relatively strong negative correlations, although not as extreme as Jharkhand, Odisha, and Uttar Pradesh where a negative correlation, also known as an inverse correlation, is a statistical relationship between two variables in which they move in opposite directions.

Positive Correlations of States with positive correlations have a direct relationship between the variables, meaning when one increases, the other also tends to increase. States like Nagaland, Meghalaya, and Arunachal Pradesh have strong positive correlations, indicating a direct relationship between the variables they are correlated with. Haryana, Rajasthan, and Assam also have positive correlations but not as strong as the other states. While Weak Correlations of States with correlation coefficients close to zero have a weak or no linear relationship with the variables they are correlated with. Himachal Pradesh and Uttarakhand have correlation coefficients close to zero, indicating a weak linear relationship.

Table 5.4: Result of Granger Causality Test of Variables for each state in India

States	Null Hypothesis	F-Statistic	Prob.
Andhra Pradesh	UNE does not Granger Cause GSDP	1.36758	0.4504
	GSDP does not Granger Cause UNE	92.4008	0.066
Arunachal Pradesh	UNE does not Granger Cause GSDP	0.32453	0.6703
	GSDP does not Granger Cause UNE	0.21231	0.7251
Assam	UNE does not Granger Cause GSDP	0.00511	0.9546
	GSDP does not Granger Cause UNE	2.48476	0.3599
Bihar	UNE does not Granger Cause GSDP	11.9699	0.1791
	GSDP does not Granger Cause UNE	522.903	0.0278
Chhattisgarh	UNE does not Granger Cause GSDP	0.97615	0.5038
	GSDP does not Granger Cause UNE	0.16583	0.7538
Delhi	UNE does not Granger Cause GSDP	5.3047	0.2608
	GSDP does not Granger Cause UNE	11.1189	0.1855
Goa	UNE does not Granger Cause GSDP	3.70821	0.3049
	GSDP does not Granger Cause UNE	51.0463	0.0885
Gujarat	UNE does not Granger Cause GSDP	0.00011	0.9933
	GSDP does not Granger Cause UNE	7.98029	0.2166
Haryana	UNE does not Granger Cause GSDP	0.02904	0.8926
	GSDP does not Granger Cause UNE	0.69719	0.5571
Himachal Pradesh	UNE does not Granger Cause GSDP	0.70619	0.5551
	GSDP does not Granger Cause	6.90913	0.2314

	UNE		
Jharkhand	UNE does not Granger Cause GSDP	6.01624	0.2465
	GSDP does not Granger Cause UNE	0.00025	0.9899
Karnataka	UNE does not Granger Cause GSDP	15.2877	0.1594
	GSDP does not Granger Cause UNE	1.89888	0.3996
Kerala	UNE does not Granger Cause GSDP	130.467	0.0556
	GSDP does not Granger Cause UNE	0.57523	0.5869
Madhya Pradesh	UNE does not Granger Cause GSDP	55.169	0.0852
	GSDP does not Granger Cause UNE	1.17781	0.474
Maharashtra	UNE does not Granger Cause GSDP	0.02079	0.9088
	GSDP does not Granger Cause UNE	12.0237	0.1787
Manipur	UNE does not Granger Cause GSDP	4.32206	0.2854
	GSDP does not Granger Cause UNE	195.739	0.0454
Meghalaya	UNE does not Granger Cause GSDP	2.08611	0.3855
	GSDP does not Granger Cause UNE	0.2093	0.7268
Mizoram	UNE does not Granger Cause GSDP	3.05203	0.331
	GSDP does not Granger Cause UNE	3.8529	0.3
Nagaland	UNE does not Granger Cause GSDP	0.24701	0.7064
	GSDP does not Granger Cause UNE	0.06528	0.8407
Odisha	UNE does not Granger Cause GSDP	24.6244	0.1266
	GSDP does not Granger Cause UNE	29.3788	0.1161
Punjab	UNE does not Granger Cause	5.9348	0.248

		GSDP	
	GSDP does not Granger Cause UNE	3.11237	0.3283
Rajasthan	UNE does not Granger Cause GSDP	1.06155	0.4905
	GSDP does not Granger Cause UNE	0.15367	0.7622
Sikkim	UNE does not Granger Cause GSDP	0.44941	0.624
	GSDP does not Granger Cause UNE	307962	0.0011
Tamil Nadu	UNE does not Granger Cause GSDP	0.17043	0.7508
	GSDP does not Granger Cause UNE	2.64746	0.3508
Telangana	UNE does not Granger Cause GSDP	0.47493	0.6159
	GSDP does not Granger Cause UNE	11.8039	0.1803
Tripura	UNE does not Granger Cause GSDP	0.02467	0.9008
	GSDP does not Granger Cause UNE	107.754	0.0611
Uttarakhand	UNE does not Granger Cause GSDP	0.0027	0.9669
	GSDP does not Granger Cause UNE	5.1473	0.2643
Uttar Pradesh	UNE does not Granger Cause GSDP	0.0079	0.9435
	GSDP does not Granger Cause UNE	0.41911	0.6342
West Bengal	UNE does not Granger Cause GSDP	0.71063	0.5541
	GSDP does not Granger Cause UNE	0.68618	0.5596

The result of Granger Causality Test for each state in India has shown in table: which shows that significant at the 0.01, 0.05 and 0.1 level of Probability. The variables in this test are GSDP and UNE. The states which shows granger causality is

1. UNE does Granger cause of GSDP are Kerala and Madya Pradesh
2. GSDP does Granger cause of UNE are Andhra Pradesh, Bihar, Goa, Manipur, Sikkim and Tripura
3. Remaining states doesn't show granger cause and insignificant relation between GSDP and UNE.

As per the result, GSDP does show more effect on UNE and has more significant relationship than UNE granger cause of GSDP for each state in India.

6. Conclusion and recommendations

Unemployment and GSDP trends show significant variations exist in unemployment and GSDP among Indian states during the period under study. Some states face rising unemployment, while others exhibit strong economic growth, as indicated by GSDP. State-Specific Findings shows that states like Nagaland, Goa, and Kerala have high unemployment rates but impressive GSDP growth. In contrast, Chhattisgarh and Meghalaya have lower unemployment rates and stable employment conditions, but some states, like Arunachal Pradesh and Nagaland, have experienced a decline in economic output. CAGR Analysis indicate progress in reducing unemployment (e.g., Jharkhand) and economic growth (e.g., Delhi) in some states. However, other states face challenges in improving employment or experience economic contractions. Correlation Analysis shows that some states, like Jharkhand, Odisha, and Uttar Pradesh, show strong negative correlations between unemployment and GSDP, while others, like Nagaland, Meghalaya, and Arunachal Pradesh, have strong positive correlations. Granger Causality Test is about Causal relationships between unemployment and GSDP vary by state. In some, unemployment Granger causes GSDP, in others, GSDP Granger causes unemployment, and in some, no significant Granger causality relationship is observed. This study recommends focusing on job creation initiatives in states with rising unemployment and economic revitalization in those with declining GSDP. Economic Diversification encourages states with stagnant or declining GSDP to diversify their economies by attracting investments across various sectors and promoting entrepreneurship and innovation.

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