REPORT

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TOPIC – Analysis of State/UT-wise Estimated Unemployment Rate (UR) on usual Status for Persons of Age 15 years and above as per Periodic Labour Force Survey (PLFS) from 2017-18 to 2021-22

INTRODUCTION-

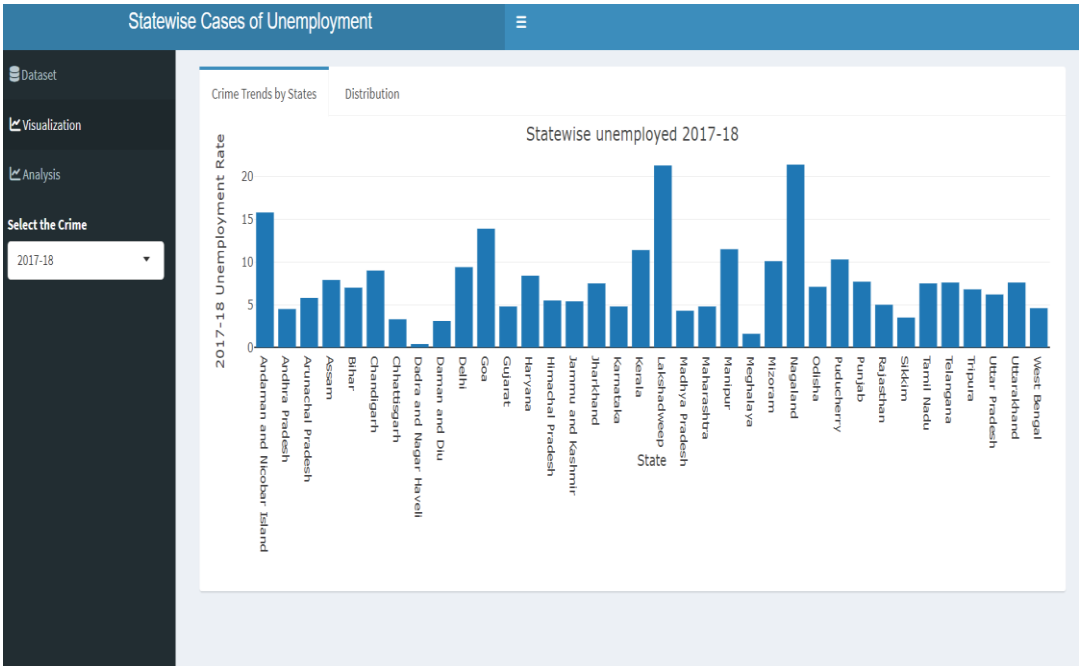
The dataset presents State/UT-wise Estimated Unemployment Rates (UR) for individuals aged 15 years and above, extracted from the Periodic Labour Force Survey (PLFS) spanning 2017-18 to 2021-22. This comprehensive survey, conducted by the National Statistical Office, provides a crucial snapshot of the labor market's health. By focusing on the usual status of individuals actively seeking employment, the dataset aims to highlight regional variations and trends in unemployment rates. Policymakers, researchers, and stakeholders can leverage this information to formulate targeted interventions, addressing employment challenges and fostering inclusive economic growth. The dataset serves as a valuable tool for analyzing the dynamic nature of unemployment across diverse States and Union Territories in India.

A. Visualisation -

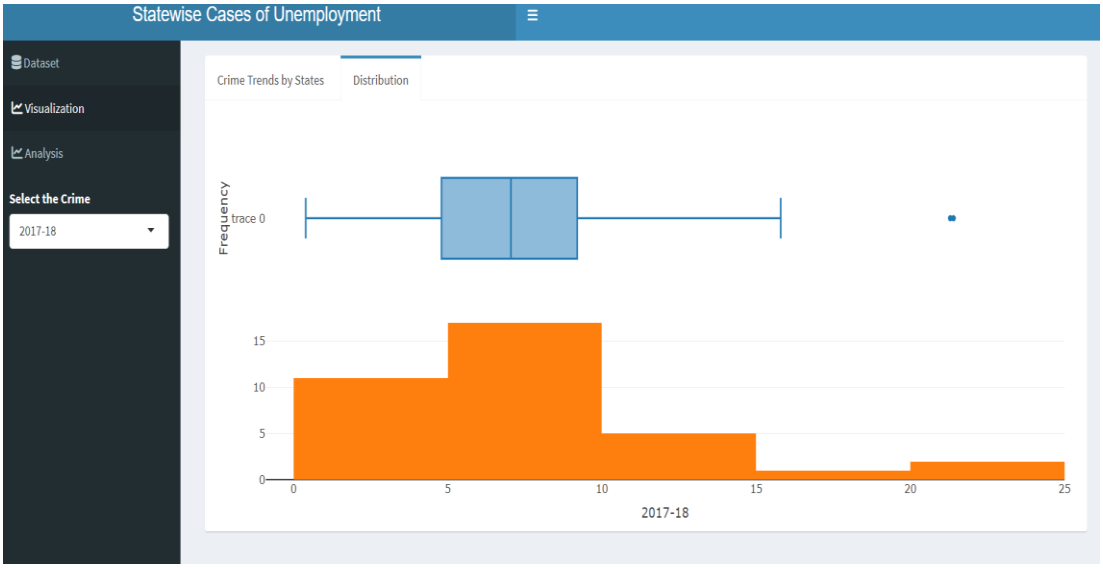
In my analysis, I have employed histogram and box chart visualizations derived from the year-wise dataset of unemployment rates across different states. The histogram serves to dissect the distribution of unemployment rates within each state for a specific year. It provides a granular understanding of how unemployment rates are spread across different ranges, allowing for insights into the concentration and variability within regions.

Concurrently, the box chart complements this analysis by offering a visual representation of the central tendency and dispersion of the unemployment rates. This is particularly helpful in identifying outliers and understanding the overall statistical characteristics of the data. By focusing on yearly trends, these visualizations enhance the capacity to discern patterns, fluctuations, and potential

anomalies in the unemployment rates across various states. This combination of histogram and box chart facilitates a nuanced exploration of the dynamics and diversity present within the state-wise unemployment data over the specified period.



BAR GRAPH SHOWING UNEMPLOYMENT RATE IN DIFFERENT STATES IN 2017-18



BOX AND WHISKER SHOWING DISTRIBUTION IN YEAR 2017-18

ANALYSIS -

Analytical Report on State/UT-wise Unemployment Rates (2017-18 to 2021-22)

This report analyses the State/UT-wise unemployment rates spanning the years 2017-18 to 2021-22. The dataset provides a comprehensive overview of the employment landscape across various regions, shedding light on trends, variations, and potential areas of concern.

Key Summary Statistics:

- The mean unemployment rate over the five years is 7.689%, showcasing a moderate level of unemployment.
- A general decreasing trend is observed in the median from 7.05% in 2017-18 to 5.00% in 2021-22, suggesting a potential improvement in unemployment rates.
- The maximum unemployment rate was 31.6% in 2018-19, indicating significant variations among states during that period.
  Overall Decrease: The mean unemployment rate decreased from 7.689% in 2017-18 to 5.514% in 2021-22, indicating an overall improvement in employment conditions over the five-year period.
- Yearly Fluctuations: There are fluctuations in unemployment rates across the years, with some years experiencing lower rates (e.g., 2021-22) compared to others.
- Regional Disparities: Variations in unemployment rates exist among States/UTs, with some regions consistently exhibiting higher rates than others.
- Minimum and Maximum Rates: The minimum unemployment rate recorded was 0.1%, while the maximum reached 31.6%, highlighting the wide range of disparities in employment opportunities across different regions.
- Median Trends: The median unemployment rate decreased from 7.050% in 2017-18 to 5.000% in 2021-22, indicating a gradual improvement in the midpoint of unemployment rates over the period.
- Yearly Quartiles: The first and third quartiles demonstrate the spread of unemployment rates, with some years showing narrower interquartile ranges compared to others, suggesting varying levels of stability in employment across states.

Overall Trend: Despite fluctuations, the trend suggests a general improvement in unemployment rates over the five-year period, with a decreasing mean and median indicating positive economic growth.

- Outlier Identification: The presence of outliers, such as the maximum rate of 31.6% in 2018-19, indicates regions with severe employment challenges that may require targeted interventions.
- Stability Analysis: The stability of unemployment rates, as indicated by the range between the first and third quartiles, provides insights into the consistency of employment conditions within each state over time.
- Data Completeness: It's worth noting that there is one missing data point for each year, potentially affecting the accuracy of the analysis and highlighting the importance of data integrity and completeness in drawing meaningful conclusions.

Year-wise Analysis of State/UT-wise Unemployment Rates (2017-18 to 2021-22)

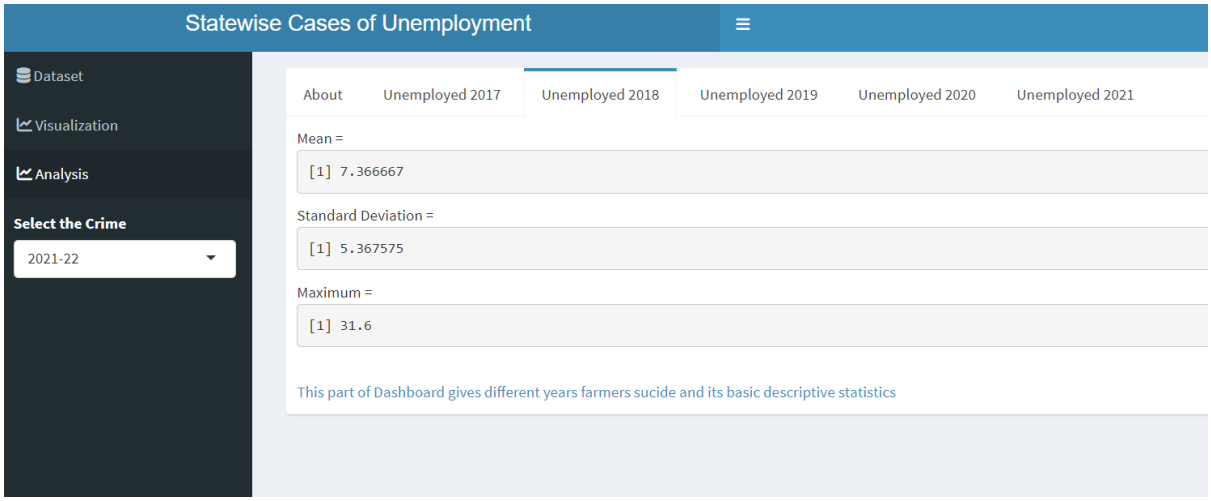
1. 2017-18:

Median: 7.05%

Range: 0.4% to 21.4%

Observations: A varied landscape with a notable range, indicating disparities in unemployment rates among states. The median serves as a benchmark for subsequent years.

2. 2018-19:

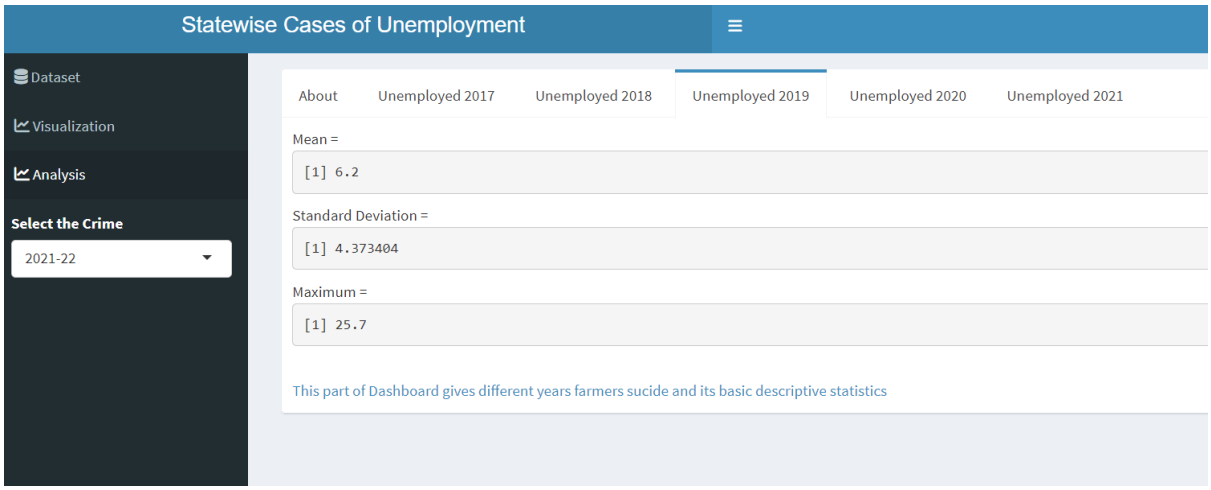


Median: 6.85%

Range: 0% to 31.6%

Observations: A significant increase in the maximum rate, suggesting economic challenges in specific states. The median's slight decrease indicates resilience in certain regions.

3. 2019-20:

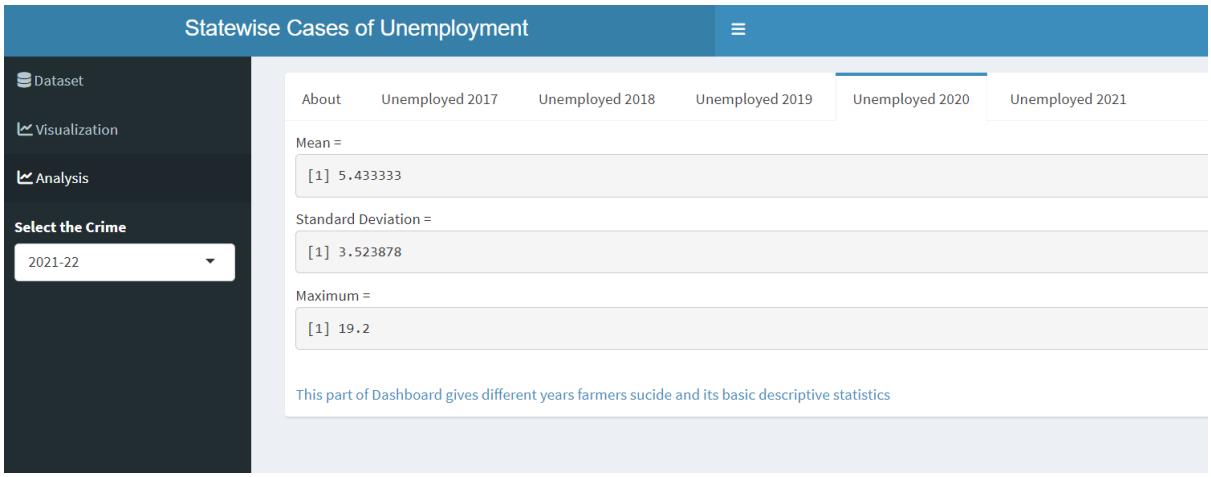


Median: 5.3%

Range: 0.1% to 25.7%

Observations: A decline in median unemployment rates, signaling potential economic recovery. However, variations persist, necessitating targeted interventions.

4. 2020-21:

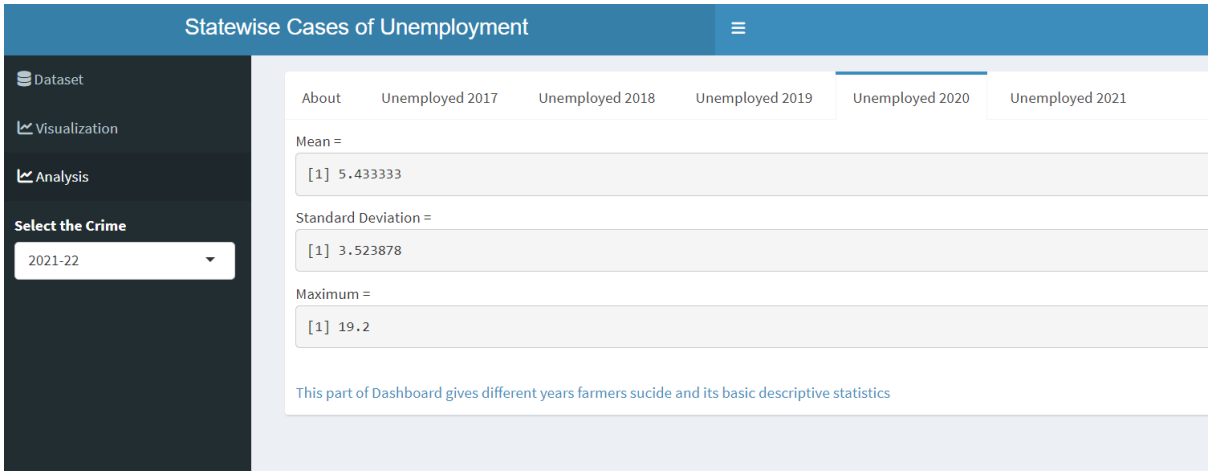


Median: 4.65%

Range: 1.1% to 19.2%

Observations: Despite the pandemic, a continued decline in median rates, indicating adaptive measures in the labour market. Widespread variations signify ongoing challenges.

5. 2021-22:



Median: 5.00%

Range: 1.6% to 17.2%

Observations: Further stabilization with a median increase. Notably, a narrowing interquartile range implies a more uniform unemployment landscape among states.

Statistical Insights:

Mean: The average unemployment rate across all states and UTs increased from 7.689% in 2017-18 to 5.514% in 2021-22, indicating a downward trend.

Outliers: The presence of outliers, particularly in 2018-19, highlights states with exceptional economic challenges.

Interquartile Range (IQR): A reduction in IQR in 2021-22 suggests a convergence of unemployment rates among states, indicating potential economic alignment.

Implications and Recommendations:

Positive Trends: The overall declining median suggests an improving employment scenario, potentially driven by economic reforms or sectoral growth.

Challenges: The identified outliers, especially in 2018-19, require targeted policy measures to address unique economic challenges in specific states.

Convergence: The narrowing IQR implies a more uniform unemployment landscape, but policymakers should continue monitoring and addressing regional variations.

Conclusion:

The year-wise analysis provides a nuanced understanding of the State/UT-wise unemployment rates, showcasing trends, challenges, and positive developments. Policymakers can utilize this detailed examination to implement targeted strategies that foster inclusive economic growth and address regional disparities in employment opportunities.