PRESENTED BY- "GROUP DYNAMIC"

BUSINESS STATISTICS ASSIGNMENT

TOPIC: DATA VISULAISATION AND SUMMARY

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INTRODUCTION

Our data is about the Board-wise Numbers and Percentage of Tribal Students Passed in Class XII as per Record Received from the Department of School Education and Literacy, from 2016 to 2020.

The purpose of selecting the data on board-wise numbers and the percentage of tribal students who passed Class XII from 2016 to 2020, as recorded by the Department of School Education and Literacy, is to analyze educational trends and outcomes for tribal students over these years. This analysis aims to identify progress, highlight disparities, and evaluate the effectiveness of educational policies and programs. By understanding these trends, our project seeks to inform future policy-making, resource allocation, and targeted interventions to support the educational advancement of tribal students.

Source:

Board-wise Numbers and Percentage of Tribal Students Passed in Class XII from the Department of School Education and Literacy (DoSE&L), from 2016 to 2020

DATA SOURCE LINK - https://data.gov.in/

Our data is measured through 4 levels of measurements, they are:

1. Nominal data
   - Nominal data are used to label variables without any quantitative value. Example: Hair colour, nationalities, names of people.

2. What is ordinal data

   - Ordinal data is a kind of qualitative data that groups variables into ordered categories. Example: Income- low, middle, high.

3. What is interval data

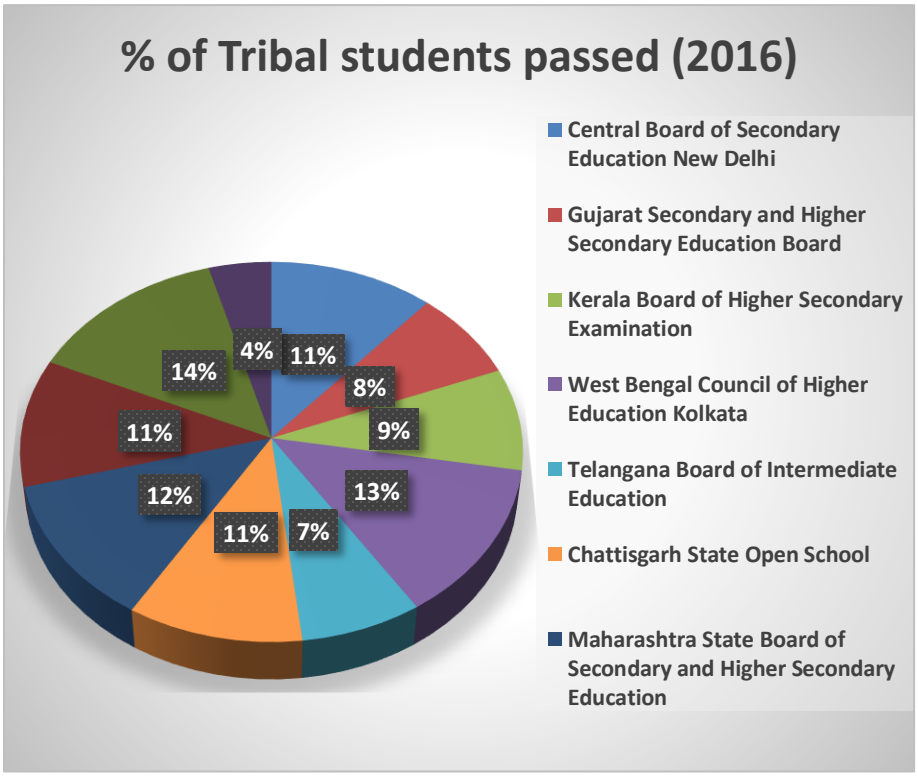
- Interval data is a data type that is measured on a scale where each value is placed at an equal distance from one another. Example: Temperature, time (12-hour clock).

4. What is ratio data

- Ratio data is quantitative data, having the same properties as interval data, with an equal and definitive ratio between each data and absolute "zero" being treated as a point of origin.

INTERPRETATIONS

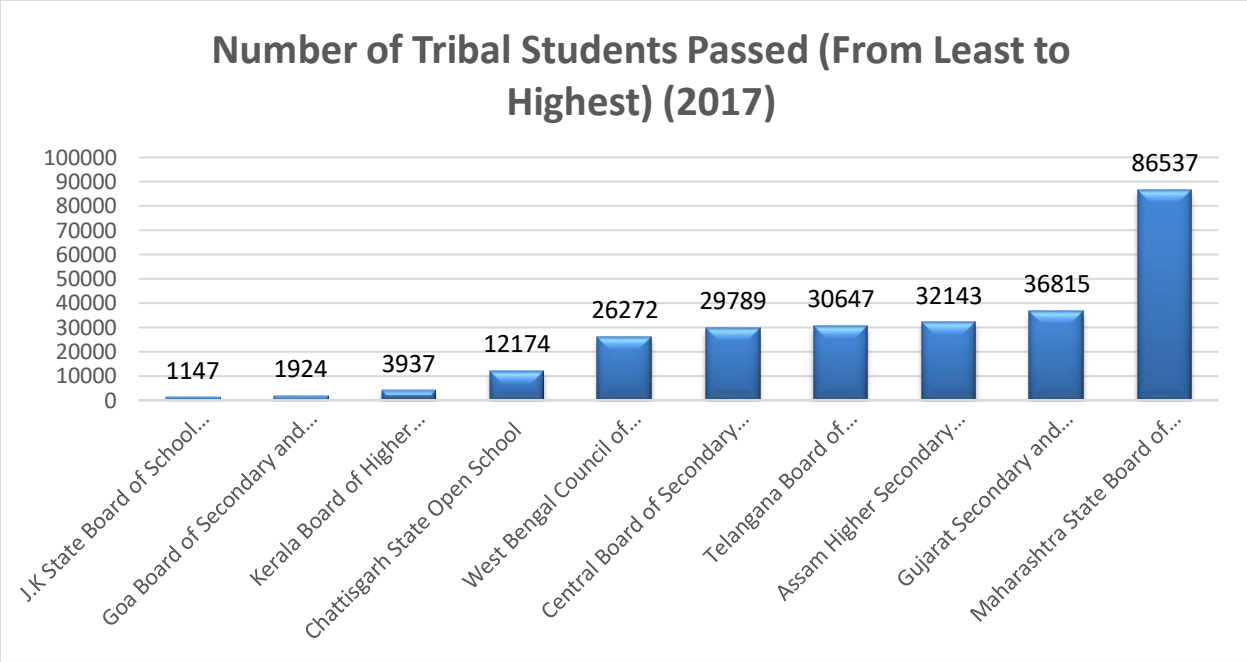
1. PIE CHART SHOWING COMPOSITION OF TRIBAL STUDENTS PASSED IN ALL BOARDS IN 2016



GOA Board of Higher Secondary Education is the highest % of tribal students passing 14%. West Bengal Council of Higher Secondary Education Kolkata: Represents 13% of tribal students passing. Other boards include Maharashtra State Board, Chhattisgarh State Higher Education, Goa Board of Secondary and Higher Secondary Education, Central Board of Secondary

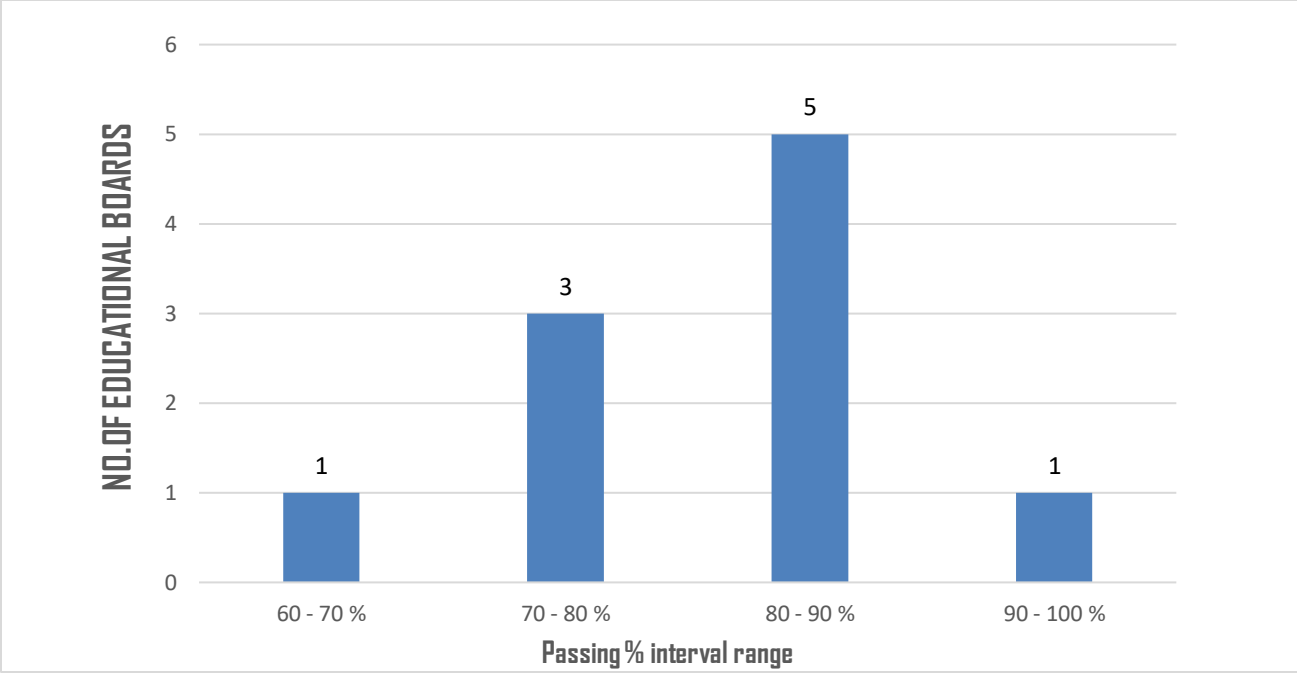
Education New Delhi and more with passing percentages ranging from 11% to 5%.

2. Bar graph showing number of students passed highest to lowest



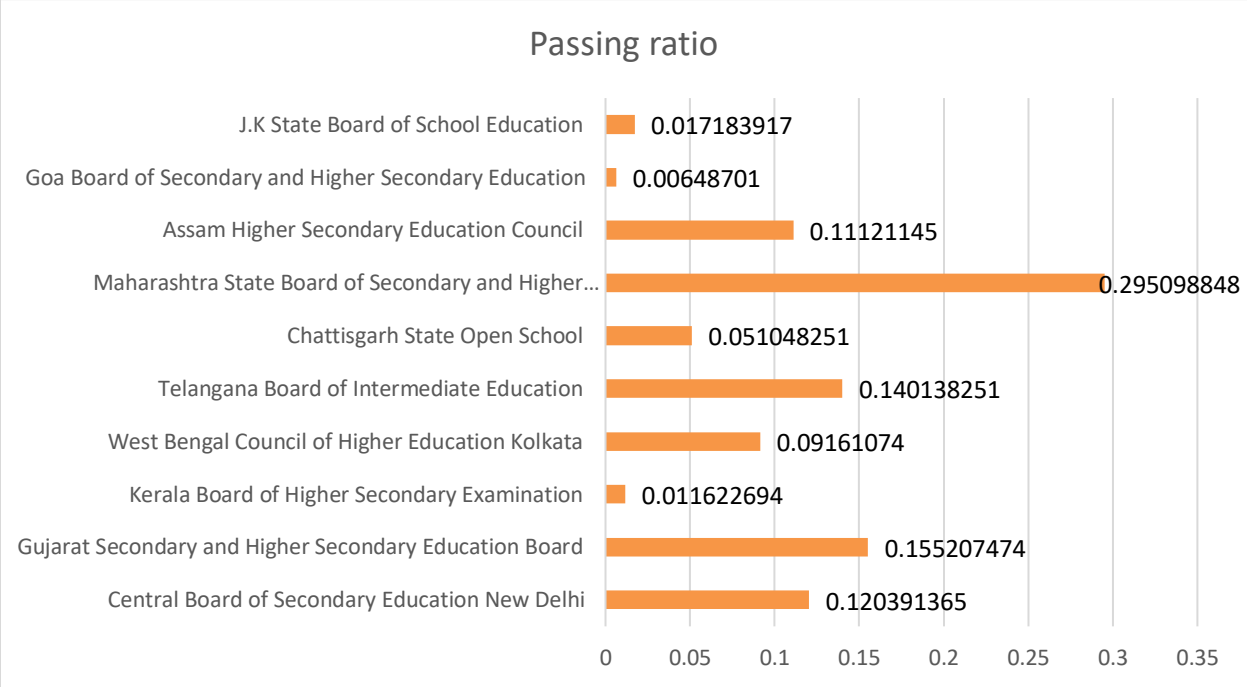
J. K Board of School of Education is the least no. of tribal students passed with 1147 students. Highest no. of tribal students is from Maharashtra State Board of Secondary & Higher Secondary Education with 86537 students along with Gujarat, Assam etc.

3. Bar graph showing data of passing % of education boards in interval range



60-70% Range: Only 1 educational board falls into this range, indicating that very few boards had a low passing percentage.70-80% Range: There are 3 educational boards in this range, showing a moderate number of boards where a good percentage of students passed.80-90% Range: The highest number of educational boards (5) is in this range, suggesting that most tribal students achieved a high passing rate in 2020.90-100% Range: Only 1 educational board falls into this range, indicating that very few boards had an exceptionally high passing rate. Overall, the chart suggests that the majority of educational boards had students with passing rates between 70% and 90%, with the most common range being 80-90%.

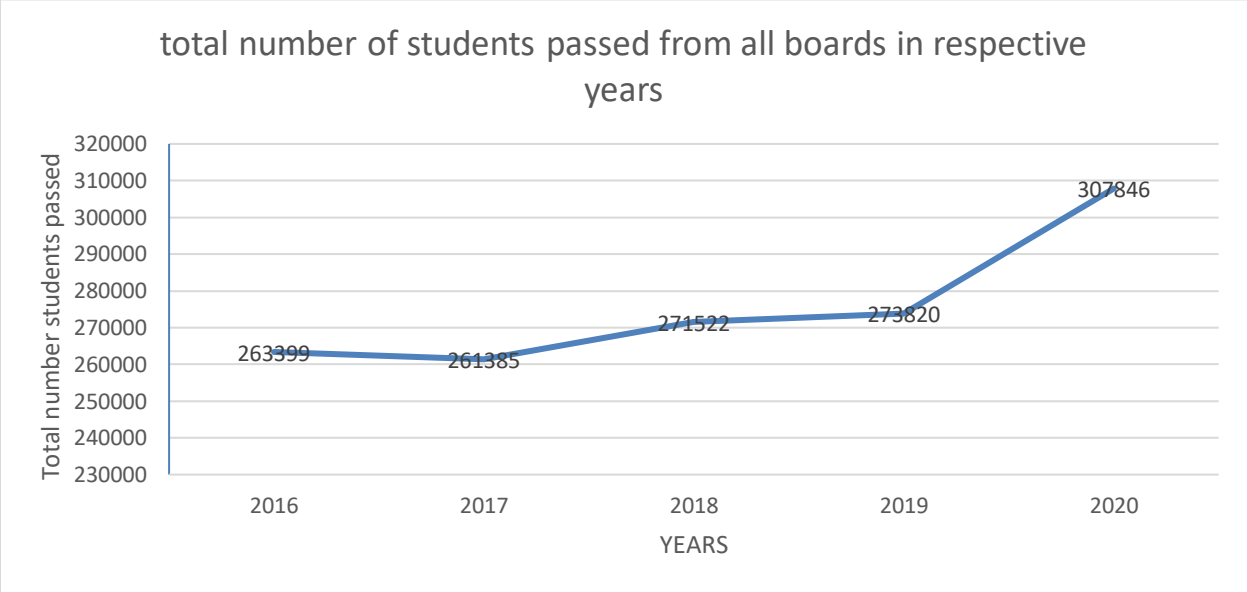
4. CLUSTER BAR SHOWING PASSING RATIO OF STUDENTS ACROSS VARIOUS BOARDS



Maharashtra State Board of Secondary and Higher Secondary Education: This board has the highest passing ratio, significantly larger than the others, indicating that a substantial proportion of tribal students who passed in 2020 were from this board. Assam Higher Secondary Education Council: The second-highest passing ratio, showing that a notable number of students passed from this board as well. West Bengal Council of Higher Education Kolkata and Telangana Board of Intermediate Education: These boards also show moderate passing ratios, contributing significantly to the overall passing numbers.4Other Boards: The remaining

boards, such as the Goa Board, J.K. State Board, and Central Board of Secondary Education (CBSE), show smaller passing ratios, indicating that fewer tribal students passed from these boards in 2020.Overall, the chart highlights the disproportionate contribution of some boards, like Maharashtra and Assam, to the total number of tribal students who passed in 2020, while other boards contributed less.

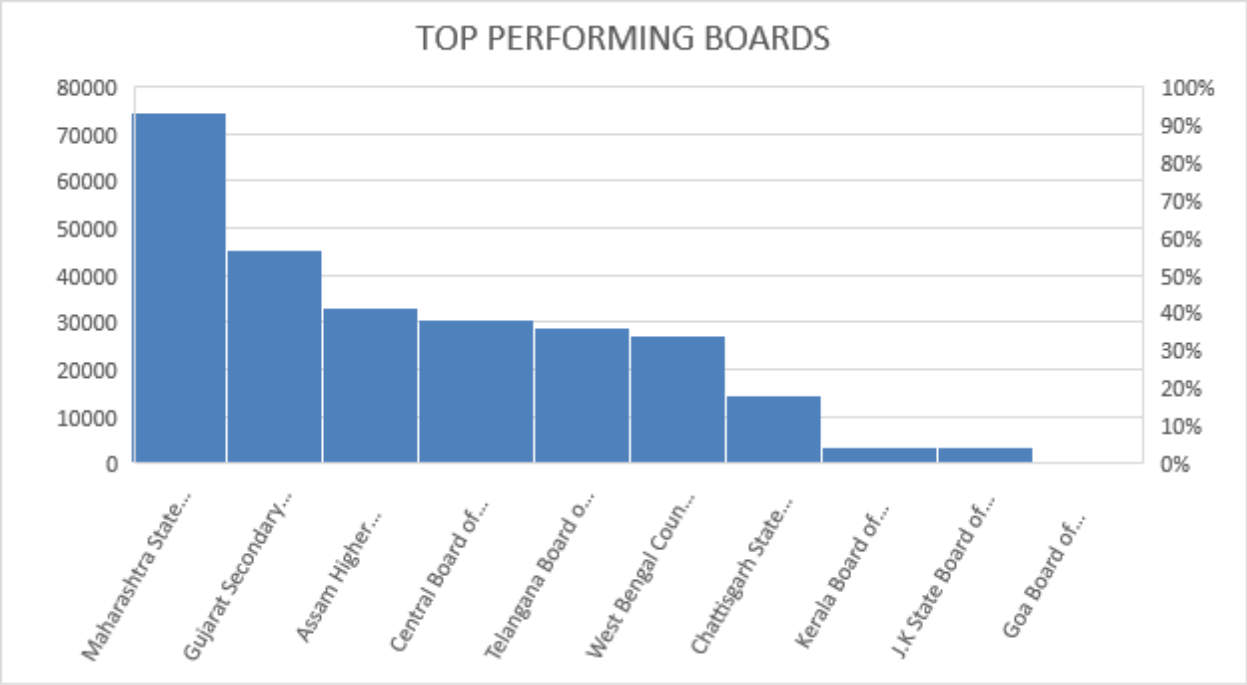
5. TRENDLINE SHOWING NUMBER PASSED OF STUDENTS



The data presented shows a steady increase in the total number of students passing from all boards between the years 2016 and 2020. In 2016, 263399 students passed, and while 2017 saw a slight decline to 261,285, the trend quickly reversed with a significant rise to 271522 in 2018. This upward trajectory continued into 2019 with 276820 students passing, reflecting a consistent, albeit gradual, improvement over these years. However, 2020 marked a dramatic increase, with the number of

passing students soaring to 307,846. This sharp rise in 2020 could be attributed to several factors, such as changes in exam policies, adjustments in grading systems, which might have influenced educational assessments. Overall, the data illustrates a consistent pattern of growth in student performance, except spike in 2020.

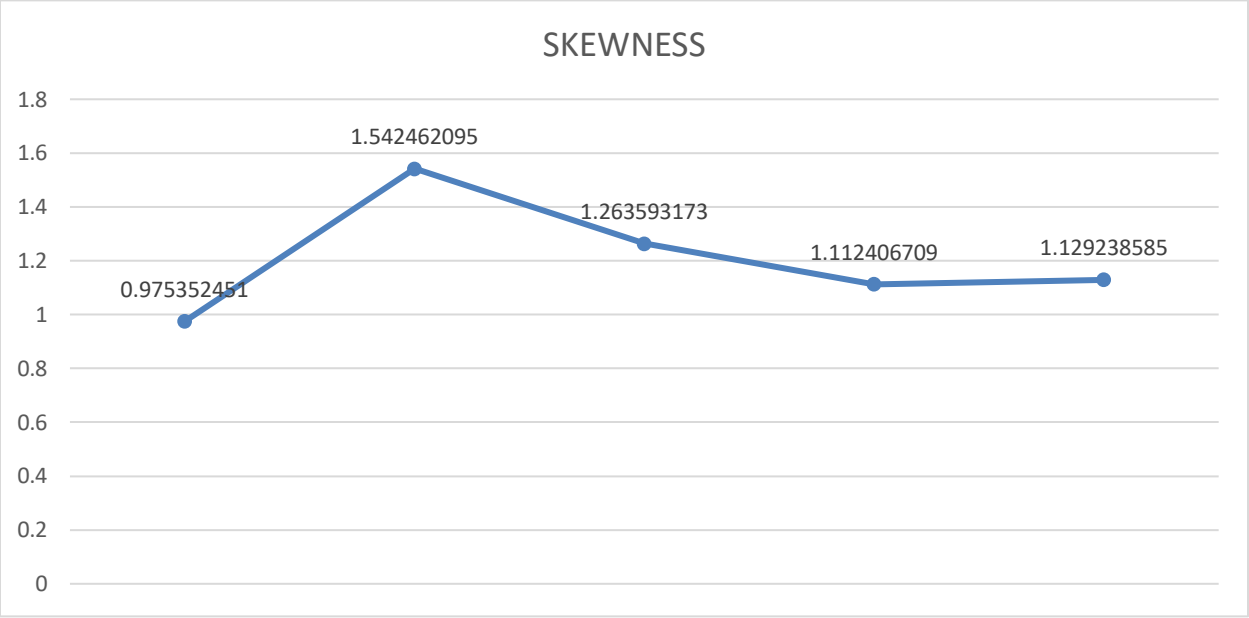
6. TOP PERFORMING BOARD CONSISTENTLY



The chart shows that the Maharashtra State Board of Secondary and Higher Secondary Education has the highest number of passing tribal students between 2016 and 2020, with 74720 students, followed by the Gujarat Board with 43556 students. Boards like Assam and CBSE also performed well, with over 30000 students each. In contrast, the J & K, Goa, and Bihar boards had the lowest numbers, with 4000 students each. This highlights a

significant disparity in educational outcomes for tribal students across different regions, with Maharashtra and Gujarat leading in success.

7. SKEWNESS OF DATA



The chart displays the skewness values of the number of students who passed in five different years from various boards of schools. Skewness measures the asymmetry of the distribution of data. Positive skewness indicates a distribution with a longer tail on the right side, meaning most students passed with lower grades, but a few achieved very high scores. Conversely, a negative skewness would indicate the opposite.

From the chart, the skewness values range from approximately 0.975 to 1.123, all of which are positive. This suggests that across all five years, the distribution of student performance was

consistently positively skewed. The highest skewness value occurs in one of the middle years, indicating that during this year, the distribution had the most pronounced right tail, with a significant concentration of students achieving lower scores and a few achieving exceptionally high scores. Over the years, skewness gradually decreases, implying that the distribution became more symmetric, although it remained positively skewed.

CONTRIBUTION BY GROUP MEMBERS

Vikyath - I have contributed and helped to find the data from different sources and verify them, I have contributed for nominal data.

Surya – I have contributed to data visualization (making graphs) by seeing which charts are relevant to data set we have here and choosing relevant data from data set in MS Excel

Biswanath - the data we have chosen here. my contribution to this is to finding the ordinal data and also with others to understand the whole about this data.

lasya - I helped in identifying and selecting data from the dataset to compare different categories for ratios and other data types and helped in making charts

Diksha - I assisted in adding trendlines to the graphs, helping us prepare the overall assignment from data so we can present the data in simple form

Percy - I contributed by organizing interval data, which included in making the data into intervals so it would be helpful in making accurate visualization of data in graph and in numerical form.