Tech Saksham

Case Study Report

Data Analytics with Power BI

"An Analysis of Unemployment in Republic of India"

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ABSTRACT

The word unemployment belongs to a state in which a respective actively seeks employment but is unsuccessful. It is said to be one of the critical measures of the economy's strength. The unemployment rate is the most generally used method to arbitrate a country's unemployment rate. This can be found by honestly dividing the number of people without jobs by the total population covered in a nation's labour force. National and local governments often effort to offer employment convenience to secure people who meet the acceptability criteria set by them. Commonly, work is availed for groups of particular upon a fixed minimum wage sufficient for bare continuance and provides further chances for them to find permanent jobs. These attempts are made to develop the country's growths and cut down the overall unemployment rate. The rate of unemployment in India has been expanding over the years. The current paper purpose to interpret the element leading to unemployment and its impact on the Indian economy. The study focal point on how employment rate performance a vital role in overall advancement of the economy.

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CHAPTER 1

INTRODUCTION

1.1 Problem Statement

The word unemployment belongs to a state in which a respective actively seeks employment but is unsuccessful. It is said to be one of the critical measures of the economy's strength. The unemployment rate is the most generally used method to arbitrate a country's unemployment rate. This can be found by honestly dividing the number of people without jobs by the total population covered in a nation's labour force. National and local governments often effort to offer employment convenience to secure people who meet the acceptability criteria set by them. Commonly, work is availed for groups of particular upon a fixed minimum wage sufficient for bare continuance and provides further chances for them to find permanent jobs. These attempts are made to develop the country's growths and cut down the overall unemployment rate. The rate of unemployment in India has been expanding over the years. The current paper purpose to interpret the element leading to unemployment and its impact on the Indian economy. The study focal point on how employment rate performance a vital role in overall advancement of the economy.

Objectives of the Study

- To study the present Condition of Unemployment in Rural and Urban area.
- To identify the Causes of Unemployment in India.
- To Examine the Government Programmers Unemployment.
- Suggestions and Findings.

1.2 Proposed Solution

The proposed solution is to develop a Power BI analysis platform that can effectively analyze and visualize unemployment data in the Republic of India. This platform will integrate data from various sources, including government employment records, demographic data, education levels, and industry trends. It will provide comprehensive insights into unemployment trends, regional disparities, and demographic patterns, enabling policymakers and stakeholders to make data-driven decisions. The Power BI platform will feature interactive visualizations, customizable dashboards, and advanced analytics capabilities, allowing users to explore unemployment data from different perspectives. Additionally, the platform will offer predictive modeling tools to forecast future unemployment rates and identify potential intervention strategies.

1.3 Feature

- **Rate:** The percentage of the labor force that is unemployed and actively seeking employment**.**

- **Duration:** The length of time individuals remain unemployed.

- **Types:** There are different types of unemployment, such as frictional (temporary unemployment between jobs), structural (mismatch between skills of workers and requirements of jobs), and cyclical (due to economic downturns).

- **Impact on Economy:** Unemployment can affect overall economic growth and consumer spending.

- **Policies:** Governments often implement policies to reduce unemployment, such as job training programs or economic stimulus packages.

1.4 Advantages

- **Structural Adjustment:** Unemployment can facilitate the reallocation of labor from declining industries to growing industries, promoting economic efficiency in the long run.

- **Labor Market Flexibility**: It can encourage greater flexibility in the labor market, making it easier for employers to hire and adapt to changing economic conditions.

- **Time for Skill Development:** Unemployed individuals may use their time to acquire new skills or further their education, which could improve their long-term employability.

1.5 Scope

The scope of unemployment refers to the extent and nature of unemployment within a specific area, region, or country. It includes factors such as the total number of unemployed individuals, the duration of their unemployment, the reasons for their unemployment (such as cyclical, structural, or frictional), and the impact of unemployment on the economy and society. Understanding the scope of unemployment is crucial for policymakers and economists to develop effective strategies to address and mitigate its effects.

CHAPTER 2

SERVICES AND TOOLS REQUIRED

2.1 Tools and Software used

Tools:

PowerBI: The main tool for this project is PowerBI, which will be used to create interactive dashboards for real-time data visualization of unemployment trends in the Republic of India.

Power Query: This is a data connection technology within PowerBI that enables you to discover, connect, combine, and refine unemployment data from various sources.

Software Requirements:

PowerBI Desktop: This Windows application will be utilized to create reports and publish them to PowerBI for analyzing unemployment data.
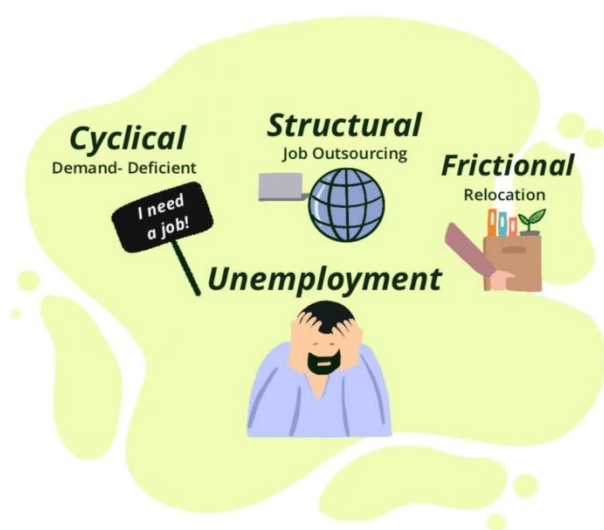
PowerBI Service: Utilize this online SaaS (Software as a Service) service to publish reports, create new dashboards, and share insights regarding unemployment in the Republic of India.

PowerBI Mobile: Access unemployment reports and dashboards on the go using the PowerBI mobile application."

CHAPTER 3

PROJECT ARCHITECTURE

3.1 Architecture

Here's a high-level architecture for the project:

RURAL UNEMPLOYMENT:

This kind of employment prevails is on rural areas. The nature of problem is also complicated. There are only two types of unemployment commonly found in agricultural economy e.g., India

1. **Seasonal Unemployment:** In an agrarian economy like India, seasonal unemployment is the most significant type of unemployment in rural sector. Agriculture labour in India is mostly dependent on monsoon.

2. **Disguised Unemployment**: In the rural subsistence agrarian sector of the Indian economy, the problem of disguised unemployment is also typical. Disguised unemployment refers to that type of unemployment in which laborers appear to be working and employed but in reality, they are not employed as they do not add to the total output. In other words, they are removed from their jobs, output would not decrease.

URBAN UNEMPLOYMENT:

This type of unemployment is found in urban areas i.e., towns and cities.

1. **Industrial Unemployment:** This refers to unemployment amongst workers in industries and factories in urban areas. Industrial workers may be skilled or unskilled. Industrial is open unemployment.

2. **Educated Unemployment:** It is the problem of educated middle class people of urban society. It means joblessness amongst the graduates, post graduates, doctors, engineers etc. However, this type of unemployment does not exist in countries worldwide. These are specific type of unemployment that exist only in few countries especially those in involved in agricultural activities like India.

CAUSES OF UNEMPLOYMENT:

Unemployment levels are increasing dramatically in many parts of the world. There is considerable debate among economists as to the causes of unemployment. Keynesian economics emphasizes unemployment resulting from insufficient effective demand for goods and service in the economy. Others point to structural problems, inefficiencies, inherent in labour markets. Classical economics tends to reject these explanations, and focuses more on rigidities imposed on the labor market from the outside, such as minimum wage laws, taxes, and other regulations that may discourage the hiring of workers.

In the setup of a modern market economy, there are many factors, which contribute to unemployment.

Causes of unemployment are varied and it may be due to the following factors:

HIGH POPUALTION GROWTH:

The rapid increase in population of our country during the last decade has further worse the unemployment problem in the country. Due to rapidly increasing population of the country, a dangerous situation has arisen in which the magnitude of unemployment goes on increasing during each plan period.

JOBLESS GROWTH:

Although India is a developing country, the rate of growth is inadequate to absorb the entire labour force in the country. The opportunities of employment are not sufficient to absorb the additions in the labour force of the country, which are taking place as result of the rapidly increasing unemployment in India.

INEFFICIENT AGRICULTURAL AND INDUSTRIAL SECTORS:

Industrialization is not rapid in our country and industrial labor finds few job opportunities. As enough other employment opportunities are not available, agriculture is the principal area of employment in our country. Thus, pressure on land is high, as about 2/3 of the labor force is engaged in agriculture. Land is thus overcrowded and a

large part of the work force is underemployed and suffer from disguised unemployment.

INAPROPRIATE EDUCATION SYSYTEM:

After remaining at schools and colleges for a number of years men and women come out in large numbers, having gained neither occupational nor vocational training nor functional literacy from which all future skilled, educated professional, and managerial manpower is drawn.

WEAKNESSES IN PLANNING TECHNIQUES:

The growth strategy underlying our plans has been found to be faulty. Lack in infrastructure development and poor labour-intensive techniques planning has made unemployment a severe issue in our Indian economy.

GOVERNMENT POLICY FOR REMOVING UNEMPLOYMENT:

Employment Policy up to the 1980s: Direct measures to eliminate unemployment were not preferred as the apprehension was that they could slow down the growth process by raising consumption expenditure on the other hand, and cutting down the economic surplus on the other. This policy was obviously inadequate to tackle the unemployment problem and as a result, the number of unemployment rose. Hence government decided to concentrate on self-employment ventures in various fields farm and non-farm operations.

Such as: -

- Rural development programme
- National rural employment programme
- National scheme of training youth for self employment
- The operation food II dairy project
- Integrated rural development programme
- Rural landless employment guarantee programme

Employment Strategies during the 1990s: Defining its employment perspective the

Eighth Plan clearly stated, "The employment potential of growth can be raised by readjusting the sectoral composition of output in favour of sector and sub-sector having higher employment elasticity." In certain sectors where technologies are to be upgraded to a higher level of efficiency and international competitiveness, there is little scope for generating additional employment. However, in respect of certain other sectors some flexibility may be available in the choice of technologies and thus it may not be difficult to generate considerable employment.

MAJOR EMPLOYMENT PROGRAMS

- **Swaranjayanti Gram Swarozgar Yojana (SGSY)** was launched from April 1, 1999 after restructuring the IRDP and allied schemes. It is the only self-employment programme for the rural poor.

- **Sampoorna Grameen Rozgar Yojana (SGRY)** was launched on September 23, 2001 and the scheme of JGSY and Employment Assurance Scheme was fully integrated with SGRY. It aims at providing additional wage employment in rural areas.

- **The National Rural Employed Programme (NREP)** was started as a part of the Sixth plan and was continued under the Seventh Plan. It was meant to help that segment of rural population which largely depends on wage employment and has virtually no source of income during the lean agricultural period.

- **The Scheme of Training Rural Youth for Self-Employment (TRYSEM)** was initiated in 1979. It aimed at training about 2 lakh rural youth every year to enable them to become self-employed.

- **Jawahar Gram Samridhi Yojana (JGSY)** whose objective was creation of infrastructure and durable assets at the village level so as to increase

opportunities for sustained employment to the rural policy.

SOLUTION:

- Faster economic growth is viewed as a means of generating more jobs.

- Unemployment agencies could tighten their job search and job acceptance requirements.

- Improvements to the education and training provided to young people, with a greater focus on vocational skills.

- Countries need to ensure that their welfare systems do not provide discouragement to work.

- Government support to struggling industries in order to try to save jobs.

- Provide more training and education to the unemployed. This could help improve computer skills and communication. These people will become more confident and employable.

- The Government needs to try to create demand in the economy.
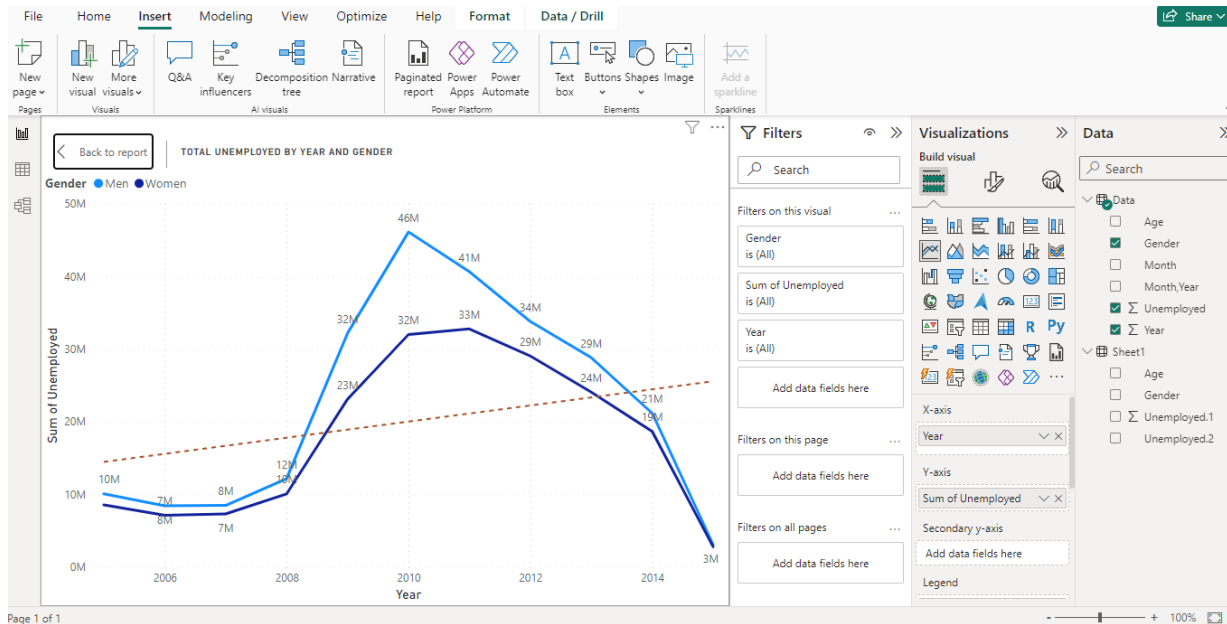
CHAPTER 4

MODELING AND RESULT

We will start by importing the data into Power BI, and then we will transform and clean it to prepare it for analysis. We will then create a series of visualizations that will help us better understand the data, including bar charts, line charts, and maps. Finally, we will create a dashboard that summarizes the key findings of our analysis.

Total People Unemployed by Age & Gender:

- To analyze the total unemployed by year and gender in India using PowerBI, begin by importing the unemployment data into the software. Then, create a
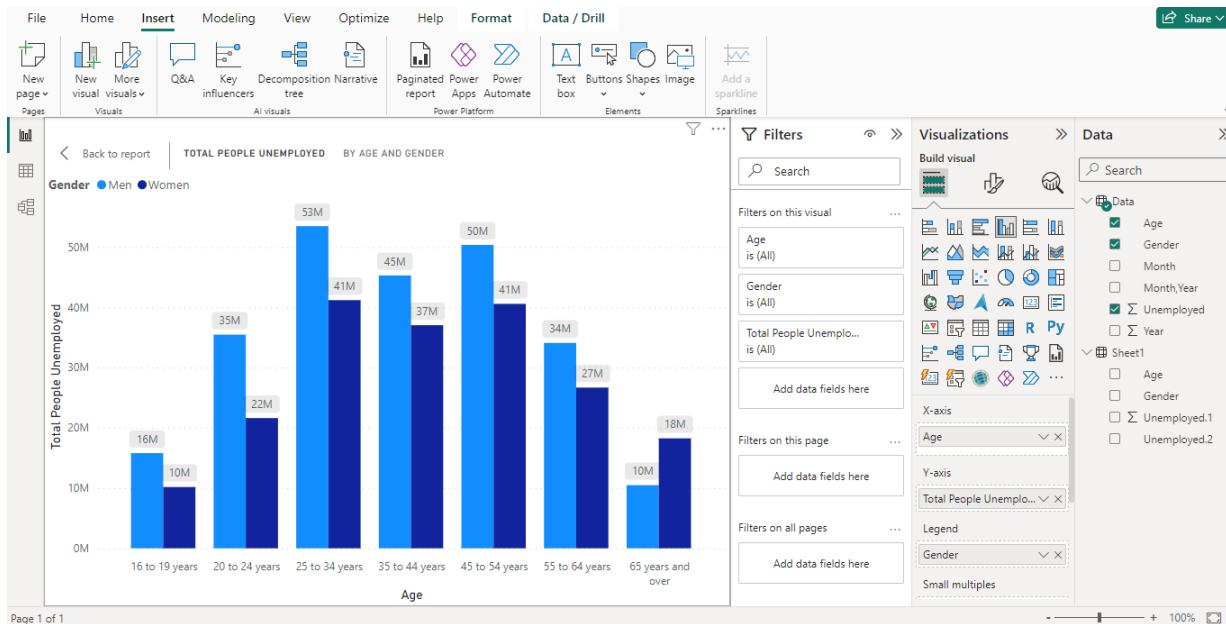
table visual and drag the "Year" field to the Axis and the "Gender" field to the Legend.

- Next, add the "Total Unemployed" field to the Values section. Customize the visual appearance to enhance clarity and readability.
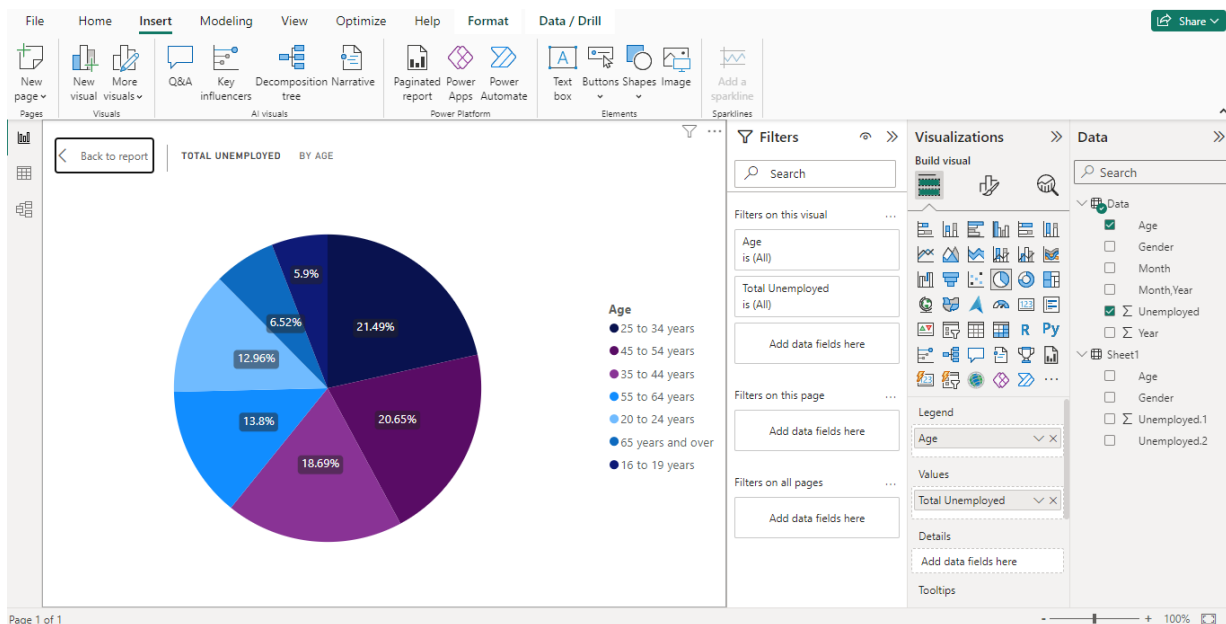

Total People Unemployed by Age & Gender:

- For assessing the total people unemployed by age and gender, import the relevant dataset and create a clustered column chart.
- Place the "Age" field on the Axis and the "Gender" field on the Legend. Add the "Total Unemployed" field to the Values section. Adjust the visual as needed to effectively present the data.
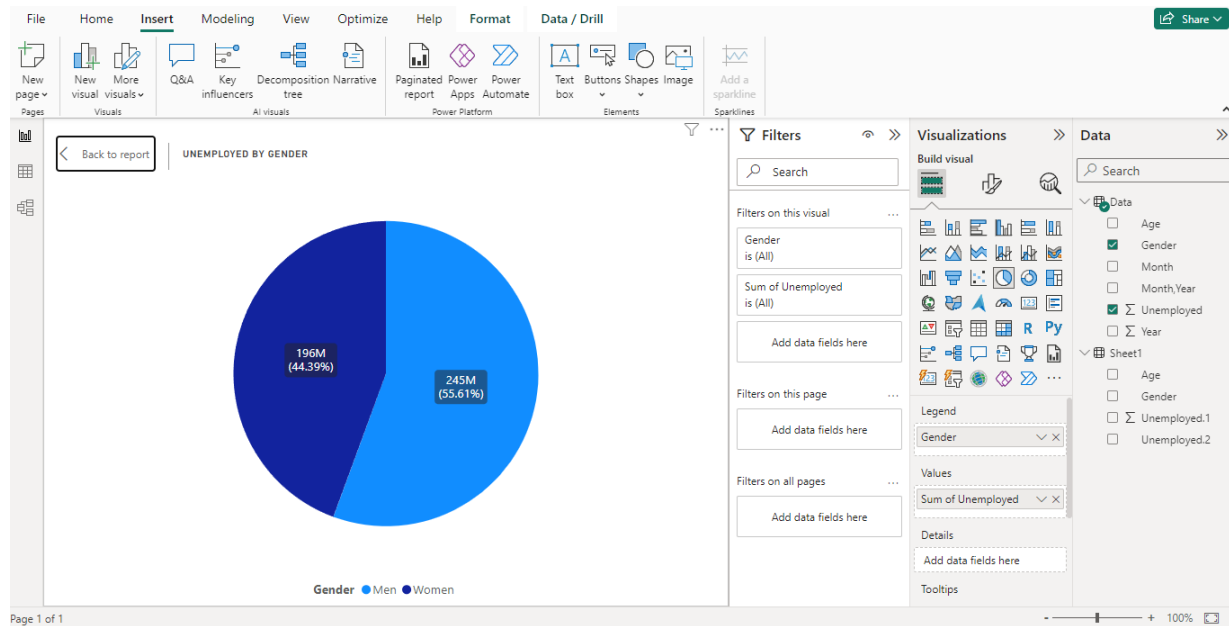
Unemployed by Age:

To examine the total unemployed by age, import the data and generate a column chart. Arrange the "Age" field on the Axis and add the "Total Unemployed" field to the Values section. Customize the appearance of the visual to optimize understanding.

Unemployed by Gender:

For exploring the total unemployment by gender, import the dataset and create a pie chart or a donut chart. Assign the "Gender" field to the Legend and add the "Total Unemployed" field to the Values section. Tailor the visual presentation to enhance clarity.
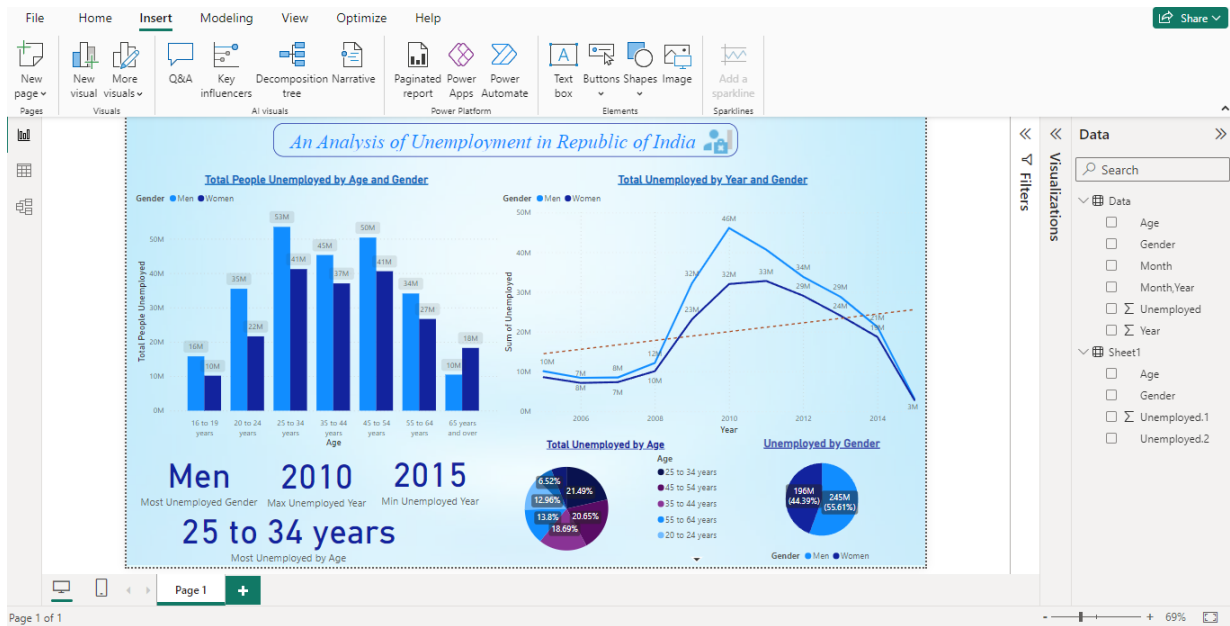

Maximum & Minimum Unemployed in Year:

- To identify the most unemployed gender, import the data and generate a card visual. Place the "Gender" field in the Fields section and add the "Total Unemployed" field to the Values section. Apply sorting to ascertain which gender has the highest number of unemployed individuals.
- For determining the maximum and minimum unemployed in a year, import the data and create a table visual. Arrange the "Year" field on the Rows and add the "Total Unemployed" field to the Values section. Utilize conditional formatting to highlight the maximum and minimum values for easier identification.

Dashboard

CONCLUSION

The project "An Analysis of Unemployment in the Republic of India" utilizing PowerBI has effectively showcased the transformative power of data analytics in addressing socioeconomic challenges.

The whole length of discussion concludes that to solve the unemployment problem of India the development plans and the family planning programmed, both, should be reformed on the lines suggested herein above whereby the extra employment opportunities will be generated fast, on one hand, and population growth will be checked, on the other, in such a way that growth of employment opportunities would considerably exceed to the population growth.

To solve these massive problem efforts should be made to rectify the mistakes in the development move on one hand, & to mitigate the high population growth, on the other reselect its programmers & reconstruct its plans so as to make the development move rural oriented.

This will bring about fast agricultural development, uplift of village life & revival of village industries, artisanship & handicraft to check the massive rural- urban migration. As regards to the check on high population growth the prevailing family planning programmed has been proved insufficient & incomplete.

FUTURE SCOPE

The future scope of the project "An Analysis of Unemployment in the Republic of India" holds immense potential for leveraging advanced analytics and machine learning techniques to predict future trends based on historical data. By integrating these predictive analytics into the project, stakeholders can anticipate shifts in unemployment rates and tailor interventions accordingly to mitigate their impact. Furthermore, Powerbi's versatility in integrating diverse data sources presents an opportunity to incorporate a wide array of socioeconomic indicators, governmental policies, and demographic data for a more comprehensive understanding of unemployment dynamics. As data privacy and security remain paramount concerns, future iterations of the project should prioritize the implementation of robust data governance frameworks to safeguard sensitive information and ensure compliance with regulatory requirements. Additionally, exploring the integration of real-time data streams could provide timely insights into emerging unemployment trends, enabling policymakers and stakeholders to make informed decisions and allocate resources effectively. Ultimately, these advancements have the potential to revolutionize the approach to addressing unemployment challenges in India, fostering inclusive growth and socioeconomic development.

LINK

https://github.com/githubtraining/hellogitworld.git