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Food Stamps

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Project 1

Exploratory Data Analysis of the Food Stamps

Introduction

This report is an analysis of data from the U.S. food stamp program, covering the years from 1969 to 2015. The dataset includes information on the number of people who participated in the program in millions and the costs in billions of dollars each year. I chose this dataset because it helps show how important the food stamp program is to support people, especially during tough times. By looking at this data, we can see how things like economic changes may affect how many people need food assistance.

Exploratory Data Analysis (EDA) Process

To understand this data better, I started by checking the columns and types of data in the dataset. Then, I looked at trends over time, including how the number of participants and the costs changed each year. I also looked at the distribution of these numbers to see if there were patterns, and finally, I checked the relationship between participants and costs. Some of the main observations were that both participants and costs increased over time, and there was a strong connection between the two.

Visualizations and Insights

Trend of Participants in Food Stamp Program (1969-2015)

I used a line chart to show how the number of participants changed over the years. This chart shows that more people joined the food stamp program as time went on, with some years having big increases. These spikes could be related to economic issues or changes in program rules, showing that more people rely on this help when times are tough.

Trend of Costs in Food Stamp Program (1969-2015)

I also made a line chart for the costs over the years. Similar to the participant trend, the costs went up over time and had sudden increases in certain years. This probably

happened when more people needed food assistance, or when there were adjustments to benefits. It shows that the program has become more costly as demand has risen.

Distribution of Participants in Food Stamp Program

The distribution of participants was shown using a histogram. This histogram shows that most years had a lower number of participants, but in certain years, the number was much higher. These high points might show times when more people needed food support.

Distribution of Costs in Food Stamp Program

I made a bar graph for the costs as well. Similar to participants, most years had lower costs, but some years showed a big jump in spending. This matches up with years when more people were using the program, meaning that higher costs usually came when more people needed assistance.

Relationship Between Participants and Costs in Food Stamp Program

To see if there was a relationship between participants and costs, I created a scatter plot. This plot shows a strong positive trend, which means that as more people joined the program, the costs also went up. This makes sense because the more people that need help, the more it costs to run the program.

Conclusion

From this data analysis, I found that both the number of people using food stamps, and the costs of the program have increased over time. This increase could be due to economic challenges or changes in who qualifies for help. The distribution shows that certain years had much higher participation and costs, which could link to events like recessions.

For future research, it would be interesting to look at what specific events caused these spikes or to see if certain areas had higher rates of participation. Overall, this analysis shows that the food stamp program is a big support system for people in need, especially during tough economic times.