

Relationship between Local Finance, Education, and Poverty

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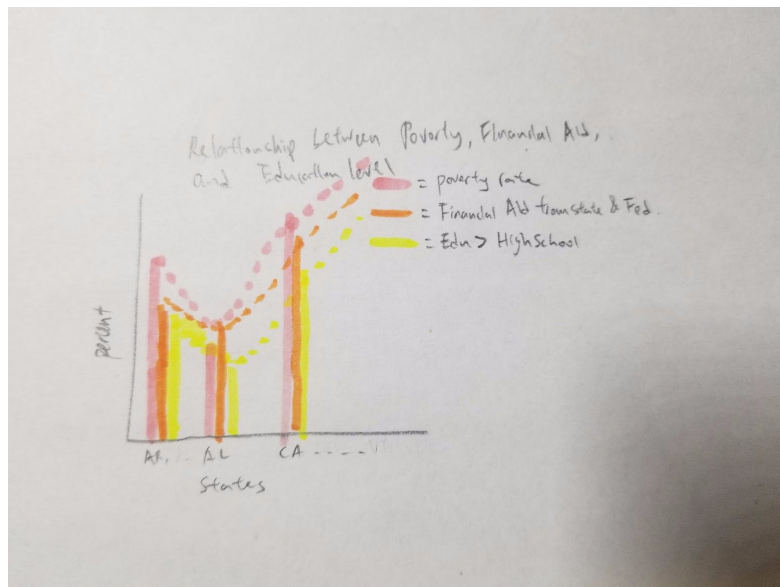
Group Members:

1. Michael Wu
2. Angie Mejia
3. Pranav Bhasin
4. Sara Wu

Description:

It is a common belief that people from a lower socio-economical background will have a lower education level. Through this project, we want to find out whether the affluency of a geographical area actually impact students' ability to attain higher education. If so, what kind of conditions, as in geographical, the background of their parents, or others would impact their opportunity the greatest. Furthermore, we want to explore whether the FAFSA program actually helps students from those low income backgrounds afford college by comparing dataset from different times.

A simple sketch or mockup of a potential design



A Task Division

- Michael Wu:
 - Creating different visualizations to have a better perspective about the datasets collected.
 - Looking for relevant observations from the created visuals.
- Sara:
 - Collection of data from various sources and selection of relevant material for review.
 - Creation of slides for the final presentation
- Pranav :
 - Looking for additional data for reaffirming the observations. Looking for relevant work done in ten past. Looked for relevant tools for the project to be utilized.
 - Created and presented the opening pitch for the project.
- Angie:
 - Reviewing content and looking for interesting observations arising from the same.
 - Creation of slides for the final presentation
 - Reviewing existing research on topic to see things that haven't been looked at closely within our topic such as the connection between FAFSA scholarships and how long people stay in college

Challenge & Problems

One of the obvious challenges that we've had so far is finding something new in the data that hasn't already been discussed. In terms of poverty and education this is something that has had prevalence and a focus for a long time. It's difficult to look past the obvious connection between poverty and education. On the other hand, a topic that seems like it will prove to be interesting is the amount of aid that has been given and how that affects the length of time people stay in college. From what we've seen so far, most research focuses on student learning from a young age to around the end of high school. Instead of also focusing on this, we want to focus on higher education starting from high schools and looking at how successful people are at getting into college despite having the financial means to. Then move onto if the state they are from affects the amount of aid and what happens if the aid isn't enough.

A second challenge is with the data itself. We have FAFSA data on how much recipients are receiving, but things like the state they are from are affecting the way the data is displayed because states with more people are getting less. Also, finding ways to graph effective plots that will be simple enough to show the point we are trying to make. Overall, making it cohesive with the units we are using in the graphs in terms of percentages versus dollar amounts.

Current Status

1. Imported, organized, and cleaned all the datasets, which includes
 - a. FinancialAidByLocation.xls
 - b. Unemployment.xls
 - c. PovertyEstimates.xls
 - d. PopulationEstimates.xls

e. Education.xls

2. Converted datasets to datascience.table format for easier manipulation (since we all took Data 8 and have common knowledge in its functions)
3. Created a dictionary of states abbreviation and its full name because we need to later transform the abbreviation to full state names
4. Made a vertical bar graph of unemployment for each state for years 2014, 2015 and 2016.
5. Made another bar graph of the total number of people in poverty in 2015
6. Made a function that would auto label a given bar, by calculating its height
7. Made a congregated graph of the comparison of Education, Poverty, Unemployment, and Financial Aid

7. A proposed timeline for completing the project

- October 31st: Information obtained from the Department of Economic Research for the last two years, specifically on education levels and location.
- November 4th: Information was processed and cleaned on the various parameters relating to, but not limited to, poverty levels from Department of Economics. This information was then analyzed thereafter.
- November 10th: Group Meeting - Obtained FAFSA information and processed the relevant sections necessary for visualizations. This information was cleaned for obtaining sections related to our specific line of research.
- November 14: Analyzed the data and prepared visual aids ready such as graphs and maps that point to various forms of data in specific states. Further, we also want to cross tabulate data for any correlations between poverty levels and income.
- November 21th: Group Meeting(online) - Working on final presentation and division of work for the holidays.
- November 28th: Final Presentation