What Has Anti-immigration Legislation Caused?

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Background

Trump's Administration has enacted a series of harsh anti-immigration bills to restrict the aliens from entering the US illegally. Such policy is likely to have a significant impact on the nation's economy since undocumented immigrants play an important role in some industries (e.g., agriculture).

Purpose

We are interested in understanding the potential effects of Trump's anti-immigration policy. More specifically, we want to examine to what extent will implementing nation-wide anti-immigration bills cause the change of employment in each industry, holding the other factors constant.

Methodology

We focus on several states who have enacted anti-immigration law previously, which are **Alabama, Arizona, Georgia, Utah, and South Carolina**. Through studying these states, we can obtain an idea of how the nation-wide anti-immigration legislation will impact the economy.

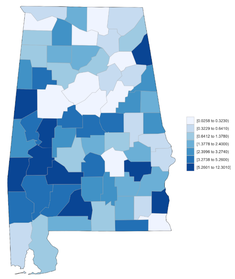

Figure 1. Percent of Agricultural Employment for Counties in Alabama

Our data is from **QWI**, which provides the quarterly total employment for each country, and its data can be broken down by industry and education level.

We utilize the **Difference in Difference** technique to conduct our analysis. More specifically, we study the differential effect of implementing an anti-immigration bill on counties' employment versus their similar counties in the neighbor states, where no anti-immigration legislation is enacted. To do this, we first generate the valid county pairs whose similarity is significant enough.

The **composition of total employment** is the primarily measurement of counties' similarity with the ones in neighbor states. In this project, only the top five percent of similar county pairs are selected.

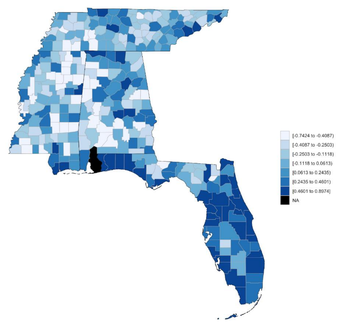

Figure 2. Similar Counties of Bladwin, AL

As regards any certain county, such an approach can be used to generate the similarities between all the other counties across the entire U.S. with itself, which will be a useful tool for some other research projects.

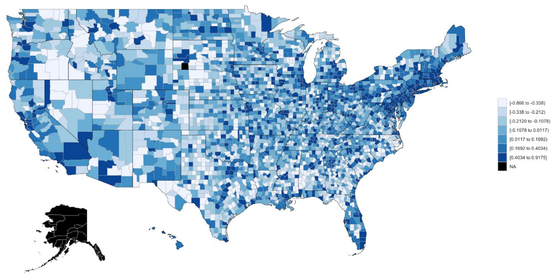

Figure 3. Degrees of Similarity between Newport News, VA and All Other Counties in U.S.

After generating the valid county pairs, we run a linear regression on the data of these pairs. The formula of the regression is:

$$Dy = Dlaw + lag1\_Dlaw + lag2\_Dlaw + lag3\_Dlaw$$

Fixed Effect on Time and County Pairs

Dy represents (y1 – y2) – lag1(y1 – y2), in which y1 is one county's ratio of total employment for a certain educational level and a certain industry to its average value across time, and y2 is the same value for the other county within that pair.

Dlaw represents law1 – law2, in which both law1 and law2 are binary variables whose value is either 0 (there is no anti-immigration legislation) or 1 (there is anti-immigration legislation).

By setting the fixed effect on both time and county pairs, we try to make sure the difference is caused primarily by the enactment of legal restrictions on undocumented immigrants instead of other factors.

Results

The estimates of coefficients are displayed as follows. The results reveal that the enactment of anti-immigration bills does not have a significant impact on the employment of most industries, yet some industries do react more dramatically than others. Moreover, as regards different educational levels, the results also vary from each other.

Furthermore, taking different lag values will make a difference in the estimated coefficients for some industries, and such impact can be positive or negative. However, most industries' estimated coefficients do not fluctuate significantly with different lag values.

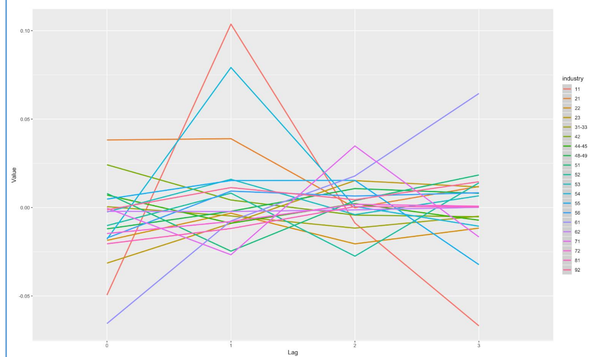

Figure 4. Coefficients Estimates for Education Level 1

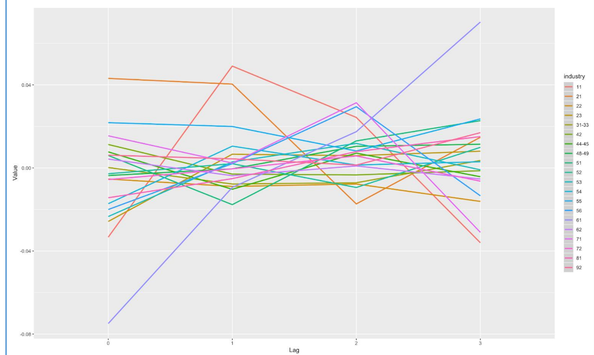

Figure 5. Coefficients Estimates for Education Level 2

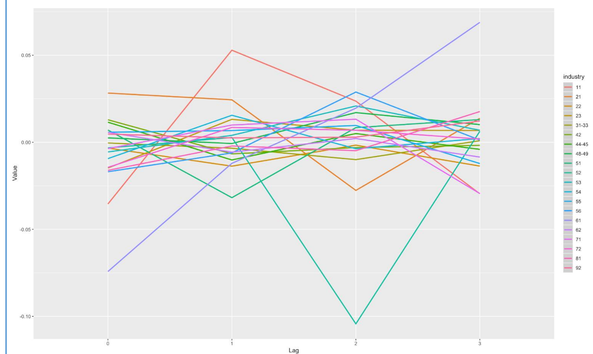

Figure 6. Coefficients Estimates for Education Level 3

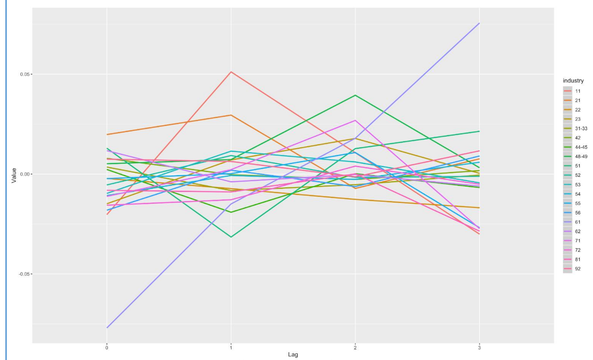

Figure 7. Coefficients Estimates for Education Level 4

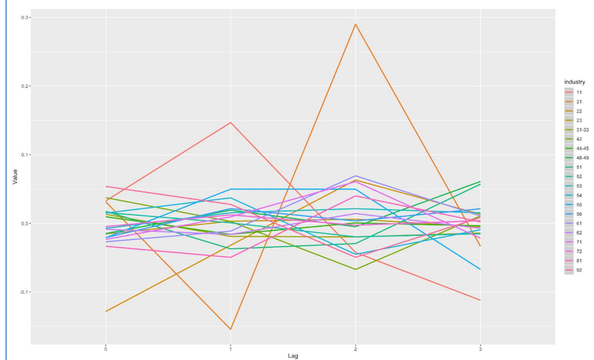

Figure 8. Coefficients Estimates for Education Level 5

What I've Learned as an RA

- Basic knowledge of R programming and how to utilize R to process data, to visualize data, and conduct data analysis (regression model).
- Realization of programming's importance in today's job market and the basic knowledge and skills to self-learn a programming language.
- Realization of literature's merit for doing research and a better understanding of how to read literature efficiently and how to generate inspirations from it.
- Knowledge of and experience with Difference in Difference Model, Monte Carlo Analysis, Vector Autoregression Model, and Artificial Neuron Network.
- Basic idea of how to conduct economics research from generating an idea to publishing the paper.
- Clearer picture of my career path (e.g., the graduate programs that I want to enter and the field that I want to concentrate on in the future).

What to do the next

- Reach out to people with expertise in immigration legislation issues and see if they are willing to collaborate on this project and help us interpret the regression results.
- Conduct more literature studies to obtain a more comprehensive knowledge of the issue at hand.
- Promote the approach to measure county pairs' similarity (e.g., taking more variables into account).
- Run the same regression with more lag values. Compare the results with the current regression.
- Run a similar regression with industry and ethnicity as the independent variables. Compare the results with the regression on industry and educational level.
- Start to write the draft paper of this project based on what we have learned.

References

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