Antiquated vs. Modernized Unemployment Insurance Systems During the COVID-19 Pandemic

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Introduction

COBOL is an antiquated programming language that is used for many U.S. state Unemployment Insurance (UI) systems. While efficient under “normal conditions”, these systems were overwhelmed by the sudden spike in claims following the March 13th lockdown. The purpose of this project was to determine whether there was a difference in the UI benefit delays between modernized and antiquated states.

Methods:

This project entailed determining the modernization status of each of the 50 states and Washington D.C. by using data from the UI Information Technology Support Center and contacting the IT departments of each state. A difference-in-difference approach was then used to show how consumer spending was higher in states with modernized systems. In addition to helping with state identification and gathering data, I also helped edit the paper that my mentor wrote for this project.

Results:

The difference-in-difference model showed that consumer spending was higher in states that had modernized UI systems. This suggests that those states were able to provide UI benefits at a higher rate than states using COBOL. Thus, the results of this project show that states with modernized systems are better equipped to handle sudden surges in unemployment insurance claims.

Discussion:

Although the results of this project suggest that there is great benefit to having a modernized UI system, COBOL is well-equipped to handle claims normally and an extreme spike in unemployment like we saw during the pandemic is very rare. Therefore, states may not feel that there is enough incentive to invest a large amount of money into transitioning their systems. For this same reason, the government may not feel that there is sufficient reason to prioritize subsidies for state UI mainframe modernization.

Future Work:

While the modernization status for each state was found, we still have not determined whether the state of Delaware uses COBOL for their UI mainframe system. This last piece of information would help to provide a full picture of the impact of COBOL usage specifically on UI benefit delays as opposed to modernized vs. antiquated systems.

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