Abstract IC22007

Our study provides a comprehensive assessment of the flow of funds of Paycheck Protection Program(PPP) based on the data provided. The PPP program was founded to support small businesses as a responding to economic impact of the COVID-19 pandemic, providing nearly 800 billion loans from March 2020 to June 2021. Although the PPP program was designed to be "first-come-first-served", some applications were still removed. To detect the reasons of application removal, we conducted research from both loan provider and debtor perspectives, using logistic regression, classification and visualization.

From the perspective of policy maker, our model is dedicated to discover the industries, geological region, company size and congressional district preferred. By regarding approval rate (successful loan amount/total loan amount) as the main one-dimensional evaluation index, we found strong evidence indicates direct correlation between certificated banks and application results. By researching forgiveness rate, we concluded the main industries where loans are going to. By comparing historical covid-19 data with loan approval locations, we illustrated the relation between loan approval rates and local pandemic severity.

From the perspective of loan applicants, our model could forecast the result of applying loan with accuracy over 70%. We concluded from model that acquiring forgiveness certification is mainly determined by certain features. The findings of these characters are intuitive for the success rate of applying loans and receiving Exemption Eligibility.