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Estimating the Effects of Extended Unemployment Insurance Benefits during the Great Recession: Evidence from Kentucky
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Introduction and Motivation

- An important policy response to the Great Recession was an extension of the Unemployment Insurance (UI) benefit. Regular UI benefits last up to 26 weeks. The temporary Emergency Unemployment Compensation (EUC) extended the maximum benefit duration to 99 weeks during and after the Great Recession.
- Recent analyses that use the Current Population Survey (CPS) data have found very small effects of the recent UI extension on the reemployment rates.
- Most concerns stem from the measurement error in the CPS data, which could bias the estimates largely. I use administrative data from Kentucky unemployment insurance program, which provide accurate information of UI claimants, to investigate the overall effects of extended benefits on unemployment exit rates.

Empirical Strategies and Results

- Assuming that the weekly hazard of leaving UI for a job follows a logistic functional form, I use two specifications from Rothstein(2011) to investigate the overall effects of longer unemployment benefit entitlements on the probability of exiting to employment.
  - I develop specifications which intend to identify effects of the change coming from the evolution of the EUC on the probability of exiting to employment.

Data Summary

- Data from the Kentucky Office of Employment and Training (Jan. 2006 - Dec. 2011)
  - Quarterly record: prior wages, age, gender, ethnicity, reason for separation from employer, geographic location of residence, geographic location of place of work, employer NAICS code, the level of education, veteran status, and school enrollment.

Main Findings

- The more total benefit weeks available, the less likely an unemployed person will find a job at a given period.
  - As total benefit weeks increasing, the exit hazards start to accelerate on short-term unemployed workers. For long-term unemployed individuals, their exit hazards diminish as the total benefit weeks becoming larger.
  - Higher expected remaining benefit induces lower exit rates for employment, which implies that the more extensions unemployed workers are eligible for, the lower job search effort they would exert.
  - UI extension has negative effect on the probability of exiting for jobs.
  - If the extra benefit weeks were added in at the beginning of the unemployment spell, the extension could accelerate the rates of exiting for jobs; however, if the benefit changes happened at the end of the UI, the exit rates will be falling.

Counterfactual Study and Simulation Results

- In the counterfactual study, I assume that there is no extension for each unemployed individual, and the maximum benefit weeks they could claim is 26 weeks.

- The extension of UI decreases the exit hazards for jobs by 0.01 to 0.03, and decrease the overall exit hazards by 0.07 to 0.2
  - I simulate the expected unemployment durations under two scenarios - with extensions and without extensions.
  - Extended benefits have larger effect on the duration of unemployment at higher quotients than at lower quotients of UI spells. On average, having one more week of UI benefit, the unemployment duration will be extended by 0.4 week.

Roodness Check

- Complementary log-log model
  - Given the extreme value distribution assumption, this model produces similar estimates as logit model.
- Cox Proportional hazard model.
  - Assume a Gamma distribution for unobserved heterogeneity.
  - Treating unobserved heterogeneity non-parametrically.
  - Results from both models suggest that there is no heterogeneity issue in my specifications.

Conclusion

- My estimates confirm that increasing unemployment benefits decreases job-finding rates and prolongs unemployment durations, consistent with the prediction of the standard job search model.
- My counterfactual results are higher than those from the previous literature that uses the Current Population Survey (CPS) to study the Great Recession.
- My simulation results are in line with previous literature which study other historical extended UI programs.

Labor Market over the Great Recession

- The national unemployment rate rose from 6% to 10% at the beginning of the Great Recession, and has fallen below 9% since 2012 Jan.
- The unemployment rate of Kentucky is always higher than the national level.
- The share of long-term unemployed started rising rapidly in late 2008 and spiked at 2010 Jan, indicating an extreme weakening of labor demand.