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Title: Essays in Macroeconomics with Heterogeneous Households

I study about the macroeconomic implication of heterogeneities households.

Regarding my first topic, I study the relationship between health insurance policy and household bankruptcy. Based on empirical evidence that medical expenditures are one of the main causes of household bankruptcy, recent studies have emphasized the positive effects of the Affordable Care Act (ACA) on household finance. This paper reevaluates this hypothesis from a macroeconomic perspective. I ask two questions. First, is the average household bankruptcy rate useful in evaluating the ACA? Second, what are the macroeconomic and welfare consequences of the ACA?

To explore these questions, I take the following steps. First, given distributional features in the ACA, using data from the Medical Expenditure Panel Survey (MEPS), I investigate disparities in emergency room visits, medical conditions, and medical expenditures across income group. In the MEPS, I find stylized facts indicating disparities in those variables across income groups over the life cycle. In the second step, to account for these empirical findings, I build an overlapping generations general equilibrium model that features the usage of emergency rooms, the endogenous distribution of health shocks, and endogenous decisions on default. This model succeeds in explaining the three stylized facts found in data, while fitting key aggregate and life cycle moments. Among the model components, the endogenous distribution of health shocks is a key to replicating the stylized facts.

I conduct a policy experiment with the ACA. The model predicts that the average bankruptcy rates are not useful in evaluating the ACA, as a general equilibrium effect can lead to a rise in the average bankruptcy rate with improvements in welfare. The ACA reduces the aggregate capital level, as expansions in health insurance lessen precautionary savings motives and increase income tax rates. This change raises the risk-free interest rate, which increases the cost of borrowing driven by equilibrium loan rate schedules consistent with default risk. This rise in borrowing costs has a disproportionate impact on young individuals, as they are more likely to need to borrow to smooth consumption against income shocks rather than health shocks. As a result, whereas expansions in health insurance with the ACA decline medical bankruptcies, non-medical bankruptcy rate can be higher due to this general equilibrium effect.

For welfare implications, the ACA improves welfare by 0.8 percent, compared to the economy before the ACA. The model captures both a direct force and an indirect force behind this welfare improvement. The Improvements in health, which follows expansions in health insurance from the ACA, directly increase the welfare level. The improvements in health also indirectly reduce earnings inequality, which results in improvements in consumption inequality.

My second study investigates the effect of compositional change in the pool of job-seeking workers on aggregate unemployment during recessions. According to the Heterogeneity Hypothesis, this compositional effect is large enough to play an important role in the persistence of aggregate unemployment because labor market frictions are different between observable demographic groups.

In order to examine this effect, I build a model features search frictions and labor supply decisions along the extensive margin, and conduct three experiments. Firstly, I assume the cyclical labor market frictions that are the same within a gender but different between genders to capture both the cyclicity and the compositional effect of labor market frictions. I regard it as my benchmark. Secondly, I fix labor market frictions over time, but they are still different between groups to capture the compositional effect. Lastly, all of the individuals have the same labor market frictions, but they are cyclicity to examine the effect of the cyclicity for each worker. For each exercise, I obtain the impulse-response function of aggregate unemployment as well as that of other labor market variables.

My result is that the main source of the persistence and cyclicity of aggregate unemployment is the cyclicity of labor market frictions for each individual worker. Rather, the effect of changes in the pool of unemployed is not large enough to affect aggregate unemployment. Furthermore, it is not able to match the cyclicity of the aggregate unemployment, qualitatively. When the economy has only the compositional effect, the aggregate unemployment is weakly procyclical, which is inconsistent with data.