BY BRENNAN MERONE

Assessing Unemployment Insurance

Facundo Piguillem, Hernán Ruffo, and Nicholas Trachter. "Unemployment Insurance when the Wealth Distribution Matters." Federal Reserve Bank of Richmond Working Paper No. 23-08, May 2023.

Unemployment insurance (UI) programs assist unemployed workers but can also reduce their incentive to search for a new job. This trade-off has led to multiple studies about whether the benefits of UI programs outweigh the costs. Most microeconomic analyses of these programs have determined that these programs do benefit society. In contrast, many macroeconomic analyses disagree, noting that unemployment benefits often tend to reduce production, reduce private savings, and increase prices. Recent research by Richmond Fed economist Nicholas Trachter, along with Facundo Piguillem of the Einaudi Institute for Economics and Finance and Hernán Ruffo of Universidad Torcuato Di Tella, attempts to reconcile these views by incorporating sources of wealth inequality into their model.

The authors noted that it is often difficult to match real-world wealth distributions in macroeconomic models. To combat this, they used a life-cycle model to track workers and their earnings over their careers. In their model, workers accumulate assets and human capital as they work, then receive UI for a specified amount of time if they become unemployed. While workers are unemployed, they actively search for a job, incurring some cost. At the end of their careers, the workers retire and receive a pension from the government. This model contains numerous mechanisms that make evaluating the efficacy of welfare programs much easier. First, younger workers are typically not able to save enough money to finance their unemployment due to their limited work history. Additionally, workers in this model must also save money for their retirement, rather than simply building a "rainy day" fund in case they lose their job. This allows the authors to generate a wealth distribution that is much more consistent with the actual data.

The authors then searched for the UI system that would maximize workers' lifetime utility under this framework. They found that the optimal policy under standard supply-and-demand analysis has the same potential duration as the current system in the United States (approximately six months). But they found the optimal replacement ratio (the percentage of the claimant's weekly wage that is paid in benefits) to be slightly higher — 63 percent compared to the current 50 percent. The benefits of such a program are substantial, with the authors estimating that the difference between an optimal program and no program would be equivalent to a 4 percent decrease in workers' lifetime consumption.

When this model is expanded to allow for macroeconomic effects, the findings are largely unchanged. This is primarily due to the life-cycle aspects of the model. If a standard framework assumes people live forever and constantly face a risk of losing their jobs, they have strong incentives to save money when they are unemployed, and they have infinite time periods in which to do so. Thus, these models typically lack workers with few or no assets, and therefore have substantially fewer low-wealth individuals than what is observed in the data. Another important factor to consider is that UI will affect aggregate capital and labor only proportionally to each other, such that the capital-labor ratio (and therefore the effect on prices) will barely change as benefits increase.

To demonstrate the effects that the life-cycle approach can have on the wealth distribution, Piguillem, Ruffo, and Trachter moderated many components that were more directly linked to age — including human capital and pensions. When they did this, the optimal solution saw a replacement ratio of only 5 percent for six months with very little overall benefits arising from changing the current policy. This is because without the life-cycle effects in the model, individuals have fewer incentives to save for retirement, hence their savings are much more responsive to the availability of UI. Furthermore, given the intergenerational linkages within the model, the drop in savings is amplified over time, gradually changing the asset distribution of future generations. This shows that the life-cycle components of the model environment end up being crucial to the results.

The authors also considered whether unemployment programs act as a method to transfer wealth to younger generations, as younger workers have a much larger risk of becoming unemployed. To address this, the authors laid out two scenarios. In the first, the UI budget is balanced by age, with workers within a certain age group paying a tax to finance unemployment benefits for workers of the same age. In the second, they set age-dependent taxes as a way of flattening the overall income curve. The optimal policy does not change much in either scenario, and the replacement ratio is still above 50 percent of income in both cases.

The authors' approach, they noted, ultimately serves to reconcile various schools of thought pertaining to the optimal unemployment policy, as well as emphasizing the role that savings elasticity, wealth distribution, and human capital play in evaluating UI programs. These factors, and many associated externalities, can be used to evaluate other questions relating to an individual's job search in future research. **EF**