ECONOMIC RESEARCH

Putting a Price on Unemployment

October 26, 2017

Rising unemployment has different effects across family types and educational levels, new research from the Federal Reserve Bank of Atlanta shows.

Julie Hotchkiss, an Atlanta Fed economist who studies labor issues, and two coauthors—Robert Moore of Georgia State University and Fernando Rios-Avila of Bard College—analyzed the welfare cost to families of unemployment using 2015–16 data from the Current Population Survey of the U.S. Bureau of Labor Statistics (BLS). Welfare is a term economists use to describe a person's or family's level of satisfaction or overall well-being.

For families, on average, the analysis found that the welfare loss from a one-percentage-point rise in the aggregate unemployment rate was equivalent to $1,156 a year. That estimate takes into account not only the income lost as a result of not working but also the time gained to do other things. The study sample included 20,163 married families and 15,485 single families.

Their research is useful because it offers a glimpse of potential consequences of monetary policy decisions. The Federal Reserve has a dual mandate to maintain full employment and stable prices, and this research informs policymakers about the implications of a rising unemployment rate for real families.

In calculating the expected welfare loss, the researchers considered the probability of a person losing his or her job as the unemployment rate rises, based on factors such as age and educational level. "Other estimates of the cost of unemployment you see in the economics literature often just calculate that cost based on a person's income," explained Hotchkiss. "When the unemployment rate rises, each person has less than a 100 percent chance of losing his or her job, and by taking that probability into account, we can offer a more accurate estimate of the expected cost of unemployment."

Hotchkiss adds that although not having a job may be problematic for someone out of work, being unemployed does increase the amount of time that can be used for other things. "Of course, the fact that they would prefer to be working means that the welfare gained from having more time to do other things doesn't fully offset the welfare loss in income if they become unemployed," she noted. (Hotchkiss elaborated on her new research in a recent episode of the *Economy Matters* podcast.)

$1,156 a year equates to "significant" loss

To put a welfare loss of $1,156 a year into perspective, the paper mentioned a survey that found that 63 percent of Americans do not have enough savings to cover an unexpected expense of $500 to $1,000. "That opened my eyes," said Hotchkiss. For a person who is employed, $1,156 may not seem on its face to be a very large amount, she added. But the research paper noted that a loss at that level "would be significant for a majority of American families."

The researchers' model also allowed them to compare the trade-off between joblessness and an increase in prices. The researchers calculate what level of price increase would produce the same welfare loss to families as a percentage-point rise in unemployment. The answer to that question for families, on average, came to 1.8 percent.

Another major takeaway from the study is that married households stand to experience a greater welfare loss from rising unemployment than single families. For married families, the average expected loss from a percentage-point rise in the jobless rate was estimated at $1,944 annually. By contrast, the average expected welfare cost to a single household came to $131 a year.

Though that finding may seem counterintuitive, the noticeable difference can be explained by the higher possibility that at least one person in a married household could lose work during a time of rising joblessness, Hotchkiss explained.

"When you've got two people in a household, you've got twice the chance of getting hit by unemployment than a single family," Hotchkiss said. Additionally, "married persons have higher earnings, on average, than single persons, so there's more to lose" in terms of earnings, a factor that would also increase a married family's welfare cost, she said.

Differences across education

The researchers also estimated that highly educated individuals generally had a greater average welfare loss from a percentage-point rise in unemployment than those with less education. For example, people with a college degree have a welfare loss that is more than two times greater than holders of a high school diploma, the analysis found. "Someone with a higher level of education will lose more income, on average, if they become unemployed," Hotchkiss said. This higher income loss, she added, outweighs the lower probability of losing a job that a person with more education faces from rising unemployment levels.

Hotchkiss said identifying the dollar amount of expected welfare costs from a rise in unemployment or the equivalent price increase to that economic loss was not necessarily the most important contribution of the research.

"Just acknowledging and knowing that policy affects different families differently is important for monetary policymakers to know," she said. "This awareness will make the policy decision process better."

Karen Jacobs
Staff writer for *Economy Matters*