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Responding to a Spouse's Lost Income

Yongsung Chang, Elin Halvorsen, and Marios Karabarbounis. "Spousal Labor Response to Primary Income: Identification and Heterogeneity." Federal Reserve Bank of Richmond Working Paper No. 25-13, November 2025.

Does a spouse increase the amount they work when their spouse loses income? Finding proof of what economists call the "added worker effect" has historically been difficult. It seems intuitive that people would be incentivized to balance out their spouse's wage loss to prevent large drops in household income, but economic work to date has found little evidence that this is the case.

There are several statistical challenges to estimating the added worker effect. Productivity changes are frequently correlated between spouses, which can bias results. For example, a recession where both spouses' wages decreased would falsely suggest a negative added worker effect if spousal correlation wasn't accounted for. Additionally, it is difficult to differentiate in the data between unexpected and long-term earnings losses that impact household consumption and anticipated short-term losses that do not, such as a primary earner resigning before starting a new job in a month. For these reasons, directly measuring the effect of job displacements on spousal income will likely lead to biased estimates.

A recent working paper by Marios Karabarbounis of the Richmond Fed and co-authors Yongsung Chang of Seoul National University and the Bank of Korea and Elin Halvorsen of Statistics Norway addressed these statistical issues using Norwegian data that matched households to the balance sheets of their employers. Instead of using a variable like job displacements, the authors used firm revenue as measured by sales data from workers' employers as an instrument. Changes to firm-specific sales that do not originate from a broad labor market recession affect worker income but are unrelated to job opportunities the spouse has if the couple does not share an employer, and the income loss caused by a firm's revenue change cannot be predicted in advance. Thus, measuring firm revenue let the researchers exclusively measure shocks to income that were unpredictable and uncorrelated between spouses, avoiding the identification challenges faced by past studies.

Karabarbounis, Chang, and Halvorsen determined that a company's ratio of sale revenue to assets is highly correlated with primary income earnings, indicating that the sales-to-revenue ratio is an effective instrument. Using that instrument, they found that a 10 percent decline in a family's primary income increased the spousal employment rate by 1.5 percentage points and spousal earnings by 4.2 percent.

The comprehensive nature of the dataset, which documents a household's total worldwide assets and demographic information, let the authors examine the added worker effect among specific groups. Among poor households, which are less equipped to weather income losses, a 10 percent primary income decline increased spousal earnings by 8.8 percent — more than twice the average. There were also substantial differences based on household age: A 10 percent primary income decline caused a 2.7 percentage point increase (80 percent larger than the average) in spousal employment in households between ages 25 and 39, while the same decline had no effect on households close to retirement.

The authors next constructed a model of households that work, consume, save, accumulate skills, and face spells of unemployment and lower wages that vary in time and intensity. They also added a government that provides welfare and social security funded by taxes. The model predicted an added worker effect that is extremely similar to the one found using variations in employer sales data: A 10 percent decline in the primary worker's earnings increased the spousal employment rate by 1.3 percentage points and spousal earnings by 2.7 percent.

Finally, the authors used this model to demonstrate the welfare effects of a temporary income reduction shock on a small percentage of the population. In this scenario, a welfare transfer (e.g., a temporary government relief program) would support the consumption of households but reduce spousal employment. The authors formulated an alternative fiscal assistance program with the goal of supporting consumption and employment at minimal cost. For those impacted by income reduction, receiving a transfer is contingent on being employed, and the transfer is doubled if both members of the household are employed. This policy, they found, would provide almost the same average welfare benefits as an unconditional transfer but require less government funding.

The finding of a small but substantial added worker effect that is compounded in poor and young households contrasts with most past studies. This is an especially notable result given that Norway has a relatively high spousal employment rate and generous welfare system — the effect could be even more pronounced in a country without these features. Taking this added worker effect into account could improve temporary relief programs, maintaining the welfare benefits they provide while lowering their cost. **EF**