Executive Summary

Title: The Effects of Disability, SNAP Participation and Changes in Benefits on Food Insecurity

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Background and Methodology:

The Supplemental Nutrition Assistance Program (SNAP) serves more than 42,000 thousand people to reduce food insecurity and improve nutritional well-being by providing $126 average monthly benefits per person (2017). While the effects of SNAP participation on food insecurity are well-documented in the literature, how much SNAP reduce food insecurity of households with member(s) with disabilities, those who are more likely to participate and less likely to be food secure, are less recognized. In November 2013, the SNAP benefits decreased by around 5% on average due to the expiration of the American Recovery and Reinvestment Act (ARRA) that may affect the program effectiveness of SNAP on reducing food insecurity, and if it does, the changes in the program effectiveness may differ between households with and without a disabled member. However, considerably less research has been conducted on this issue.

To fill these research gaps, this study utilizes the public- and restricted-access National Health Interview Survey (NHIS) 2011–2015 and examines how much the effects of SNAP participation on alleviating food insecurity differ by the presence of member(s) with disabilities in a household, and in the presence of a disabled member, who in the household has disabilities—among a household head, spouse/partner, and children. How much the downsized SNAP benefits attenuate the program effectiveness of SNAP for households with and without a disabled member are estimated as well. An analytical sample for this study is comprised of 64,209 households below 200% of the federal poverty line, which is broken down into 29% SNAP participant households and 25% food insecure households.

To obtain more efficient estimates, a copula-based endogenous switching regression model is employed in which distributions of unobservables are featured by the Ali-Mikhail-Haq(AMH)–Plackett copula function that replaces joint normal distribution and is selected as the best-fitting combination of copulas among 25 alternatives. To aid model identification, state-specific SNAP policy variables—broad-based categorical eligibility, a vehicle restriction for SNAP asset test, and the combined application process for SNAP—function as instruments. Based on the parameter estimates, the program effects are estimated on the framework of the unconditional and conditional average treatment effects on the treated.

Findings:

For overall households, SNAP participation reduces the probability of food insecurity by 13.2% points, further 15.3 % and 11.4% points for those with and without a disabled member, respectively. SNAP participation reduces the probability of food insecurity by 17% and 11.9% points for households headed by a person with and without a disability, respectively. On the other hand, SNAP has a greater effect on reducing the probability of food insecurity for households headed by a person with a spouse/partner without a disability than those with disabilities or households headed by a person without a spouse/partner, that is 13.9% and 11.5% points, respectively. There is little difference in the effects of SNAP by children's disabilities. Additionally, the results suggest that the downsized SNAP benefits attenuate the program effectiveness of SNAP by 3.7% points for households with member(s) with disabilities and 3.9% points for those without a disabled

member, with very few differences between those two cohorts.

Overall, this study finds that SNAP participation is effective to mitigate food insecurity for households with member(s) with disabilities than those without a disabled member and overall households, and the effectiveness of SNAP substantially varies by who in the household has disabilities. This study adds to the literature that the downsized SNAP benefit is related to the decreased program effectiveness. In particular, the program effects are rarely sensitive to the use of state-specific SNAP policy variables, but vary by a selection of copula joint distribution functions, meaning that distributional assumptions on unobservables are decisive on the estimated program effects, rather than the use of the instruments that satisfy exclusion restrictions.

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