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Findings

- Income volatility has increased over the last three decades, and the increase has been largest among families with the lowest incomes. Moreover, the interaction of income volatility and the administrative structure of food assistance programs has important implications for eligibility and take up of benefits.
- Earnings volatility may reduce participation in food assistance programs. Exits from the Food Stamp Program for households with fluctuating incomes mirror the timing of recertification of program eligibility.
- A key policy question is how the increase in volatility observed in recent years affects the design of the programs, both in terms of benefits and eligibility requirements. Program design requires striking a balance between errors that award benefits to people who should not receive them and errors that deny benefits to people who should receive them.

Income Volatility and Food Assistance Programs

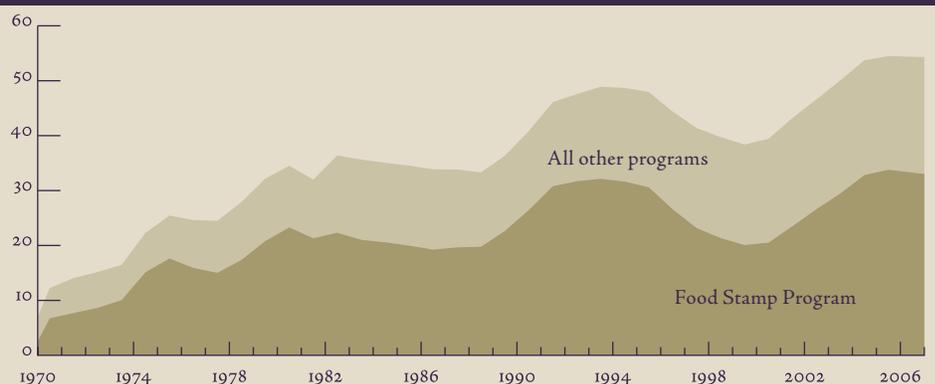
By Dean Jolliffe, Economic Research Service, U.S. Department of Agriculture and James Ziliak, University of Kentucky.

Overview

In recent years, approximately 20 percent of Americans participated in at least one of the U.S. Department of Agriculture's (USDA) 15 food assistance programs at some point during the year, the largest of which are the Food Stamp Program, the National School Lunch and Breakfast Programs, the Supplemental Nutrition Program for Women, Infants, and Children (WIC), and the Child and Adult Care Food Program. In fiscal year 2006, 26.7 million people participated in the Food Stamp Program in an average month (receiving on average \$94 in benefits per month), while 30 million children participated in the National School Lunch Program on any given school day (totaling 5 billion lunches served in the year). Inflation-adjusted expenditures for the Federal food assistance programs increased nearly eight-fold from \$7 billion in 1970 to \$54 billion in 2007 (2007 dollars; see Figure 1); they play an important role in improving the wellbeing of the low-income population.

This brief highlights new research on food assistance from the edited volume *Income Volatility and Food Assistance in the United States*, published in fall 2008 by the W.E. Upjohn

Figure 1. USDA Food Assistance Expenditures (real 2007 \$, billions)



Source: Authors' calculations, based on Economic Research Service, USDA.

Note: Expenditures in real 2007 dollars, adjusted using the Personal Consumption Expenditures deflator.

Institute for Employment Research. Income volatility, that is, periodic fluctuations in household income, has increased substantially over the past two decades and has emerged as a pressing policy concern. The chapters, presented at a conference co-sponsored by the National Poverty Center and USDA's Economic Research Service, examine different aspects of the relationship between participation in food assistance programs and income volatility.

While expenditures on food assistance programs have increased significantly over the last several years, so too has income volatility. Ben Keys, University of Michigan, describes trends in the variance of income between 1970 and 2000. He considers an individual's income as consisting of a permanent component (as estimated by a long-term average) and a transitory component, which is the year-to-year fluctuations around the permanent component. Then, he breaks the overall variation in income into that part which is explained by differences across individuals' permanent incomes (permanent variance) and the variance in the year-to-year fluctuations (transitory variance).

Using data from the Panel Study of Income Dynamics (PSID) and as shown in Table 1, Keys demonstrates that there have been large increases in both permanent and transitory variance of total family income over the study period. The increase in permanent variance reflects greater inequality in family income over time. For families headed by either a black man or black woman, the variation across families in permanent income more than doubled over the last three decades. While the dispersion of permanent family income increased, so too has the variation in the year-to-year income fluctuations. For families headed by a white man, permanent and transitory variance increased by

approximately 80 percent over the thirty years. And for families headed by a black man, transitory variance more than tripled.

The Relationship between Income Volatility and Program Participation

Keys shows that income volatility has been increasing across most subgroups in the population, but the extent to which that rising volatility affects program participation is not well understood. Robert Moffitt, Johns Hopkins University, and David Ribar, University of North Carolina at Greensboro, develop a model of program participation that incorporates income volatility. Using data from the Three City Study, they examine whether volatility in earnings affects program participation differently depending on a household's income level. They focus on differences between households with trend incomes above and below the eligibility threshold for the Food Stamp Program. Their findings suggest that earnings volatility reduces participation among low-income households but this effect dissipates for higher-income households.

David Ribar and Marilyn Edelhoch, South Carolina Department of Social Services, trace eligibility fluctuations back

to the competing goals of food assistance programs: increasing food purchasing power for the eligible population versus ensuring that benefits are delivered to only the needy while maintaining program costs. They analyze detailed administrative food stamp data from South Carolina and, as shown in Figure 2, demonstrate that only about one-fifth of program exits were due to determinations of income ineligibility while about two thirds of program exits coincided with the timing of paperwork or administrative requirements for the program. Ribar and Edelhoch note that for households with fluctuating incomes, program exits mirror the timing of recertification of program eligibility, but this does not necessarily imply that they were no longer eligible. Households that failed to file the required paperwork for recertification had worse economic circumstances on average—lower and more variable incomes—than households determined to be income ineligible.

Income Volatility and At-Risk Groups

Targeting of benefits often results in focusing on at-risk groups of the population, such as single mothers, children, the elderly, or welfare recipients. Constance Newman of the Economic

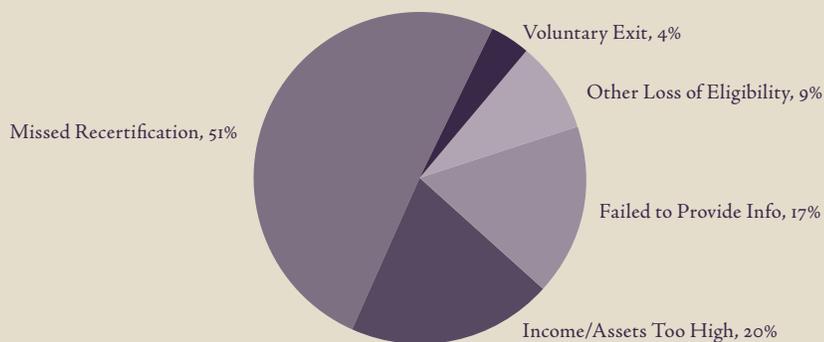
Table 1. Permanent and Transitory Variance of Family Income, 1970–2000

Results	Permanent Variance			Transitory Variance		
	1970–79	1990–2000	change	1970–79	1990–2000	change
White Men	0.20	0.37	81.2%	0.08	0.14	80.0%
White Women	0.28	0.44	56.9%	0.18	0.26	45.9%
Black Men	0.36	0.89	147.9%	0.13	0.41	228.0%
Black Women	0.31	0.63	103.9%	0.17	0.36	106.4%

Source: Keys, Ben. "Trends in Income and Consumption Volatility, 1970–2000." Chapter 2 in *Income Volatility and Food Assistance in the United States*, Jolliffe, D. and J. Ziliak (eds.). MI: W.E. Upjohn Institute.

Note: Heads of households, with positive wage and salary earnings, aged 20–59. Income is real, annual family income in logs, "change" is measured as the percent difference between the 1990s and the 1970s, relative to the value for the 1970s. All estimates weighted with sample weights.

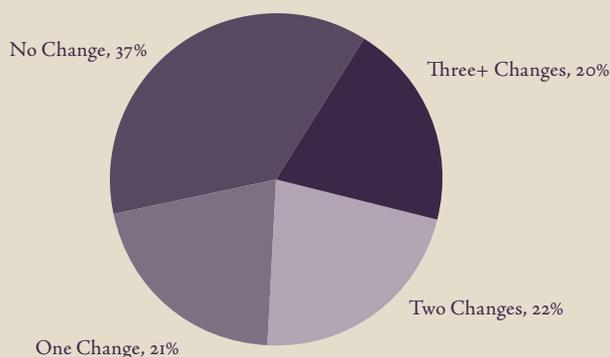
Figure 2. Reasons for Food Stamp Program Exits



Source: Authors' calculations based on Ribar, D. and Edelhoch, M. 2008. "Earnings Volatility and the Reasons for Leaving the Food Stamp Program." Chapter 4 in *Income Volatility and Food Assistance in the United States*, Jolliffe, D. and J. Ziliak (eds.). MI: W.E. Upjohn Institute.

Note: Combining black- and white-headed cases, based on administrative data from South Carolina.

Figure 3. Change in Eligibility Status, National School Lunch Program, 1998–99



Source: Newman, Constance. 2008. "The Income Volatility See-saw: Implications for School Lunch." Chapter 6 in *Income Volatility and Food Assistance in the United States*, Jolliffe, D. and J. Ziliak (eds.). MI: W.E. Upjohn Institute.

Note: Sample consists of all households which were eligible for School Lunch Program at least once during 1998–99

Research Service uses data from the 1996 and 2001 waves of the Survey of Income and Program Participation data to examine the connections between income volatility and eligibility status of children for the National School Lunch Program (NSLP). Newman first documents that low-income households, especially those eligible for free or reduced-price NSLP meals, have greater month-to-month income variation than higher-income households.

Figure 3 shows that of those who were eligible at least once during the year for the NSLP, two-thirds changed eligibility during the school year. An estimated 27 percent of households that were income eligible for subsidized lunches when the

school year began were no longer eligible for benefits by December due to monthly income changes. The fluctuations come largely from work-related changes such as the number of hours worked by family members, changes in the fraction of adults in the household who were working, and changes in wages.

Craig Gundersen, University of Illinois, and James Ziliak, University of Kentucky examine the relationship between participation in the Food Stamp Program and age. Summary statistics show that participation rates decline with age. However, using data from the PSID for calendar years 1979–2002, Gundersen and Ziliak show that after controlling for

socioeconomic and demographic factors, participation follows a U-shaped pattern, with the young and old more likely to receive benefits than middle-aged people. They find that food stamp participation is, on average, higher among those with high levels of permanent-income volatility, but is lower among those with volatile transitory incomes. Over all ages, Food Stamp Program participation is higher for those with above average income volatility.

Brian Cadena, University of Colorado, along with Sheldon Danziger and Kristin Seefeldt, University of Michigan, examine the dynamics of poverty and program participation using unique longitudinal data a sample of women receiving benefits in 1997 from the Temporary Assistance to Needy Families (TANF) program. They examine the characteristics of individuals and food stamp policies that predict entry and exit from food assistance programs. They find that women are more likely to combine food stamps with employment than with TANF. Over the course of the study, the fraction of women who were employed went up and the fraction receiving either food stamps or TANF declined, though food stamp participation leveled off at a higher rate than TANF participation. Cadena et al. find that women return to the Food Stamp Program more quickly than to TANF, which adds to the previous research of Blundell and Pistaferri (2003), and Gundersen and Ziliak (2003) that food stamps play an important role in smoothing temporary income fluctuations.

Design of Food Assistance Programs

While it is important to understand how income volatility affects participation in food assistance programs, a key policy question is how the increase in volatility observed in recent years affects the design

of the programs (both in terms of benefits and eligibility requirements). For example, a household that is income-eligible in one month may later have monthly income that exceeds the limit due to income volatility. The program can save payments to these newly ineligible households by examining current-period eligibility at regular intervals. To do this, though, requires recertifying eligibility, which entails staff and equipment costs to the program and time and travel costs to participants. Robin Boadway, Queen's University, Katherine Cuff, McMaster University, and Nicolas Marceau, Université du Québec à Montréal, point out that the combination of multi-dimensional government objectives for food assistance programs, a heterogeneous target population, and information asymmetry between the government and potential recipients all have important implications for program design. Program design requires delicate balancing between errors that award benefits to people who should not receive them and errors that deny benefits to people who should receive them, coupled with concerns over disincentive effects to work and save. The authors argue that the response to short-term volatility should be more generous than for more long-term need, and that the issue of "false positive" errors in administering benefits should be given less weight.

Mark Prell, Economic Research Service, examines errors of providing benefits to ineligible and policies to reduce such errors. His chapter is concerned with the tradeoff between costs of recertification and payments to ineligible in order to estimate the optimal length of time between eligibility certification for children enrolled in the Women, Infants, and Children (WIC) Program, which provides food assistance for very young children and expectant mothers. His research finds that

the optimal length of time is 12 months and varies from 7 to 14 months as income volatility increases or decreases.

Conclusion

A striking result in all of the chapters in the volume is the level of agreement about basic facts. Using different data and methodologies, all of the researchers agree that income volatility has increased over the last three decades, that the increase has been largest among those with the lowest incomes, and that the interaction of income volatility and administrative structure of food assistance programs has quantitatively important implications for eligibility and take up of benefits. In spite of this consensus, research on income volatility and its connections with food assistance programs and the other components of the social safety net is still in its infancy. Additional research on income volatility is critical, particularly in relation to improving program design and targeting of benefits to the needy. The chapters in the W.E. Upjohn Institute volume hopefully should serve as an important springboard for a greater understanding of volatility and its ultimate impact on economic wellbeing of low-income families.

♦ *To review the introduction and table of contents for this volume, go to www.upjohninst.org/publications/titles/iv.html*

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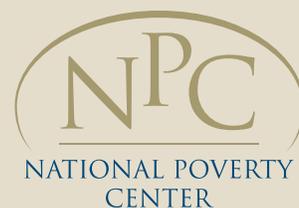
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Blundell, Richard and Luigi Pistaferri. 2003. "Income volatility and household consumption: The impact of Food Assistance programs," *Journal of Human Resources* 38(Supplement): 1032–1050.

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