
The Nonparticipation Problem:

Behavioral Economics and The Take-Up of Social Benefits

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The nonparticipation of low-income households in social benefit programs remains a puzzle to many economists, especially when analyzed through a neoclassical lens. For some households, the decision to participate in a government benefit program could mean the difference between living above or below the poverty line. However, behavioral economics—a branch of economics that incorporates human psychology into economic models—may provide a useful framework through which to analyze the nonparticipation of low-income households in government benefit programs. Empirical research suggests that lack of knowledge, incomplete information, hassle costs, and procrastination each play an important role in this policy problem. This paper will begin with an overview of nonparticipation in social benefit programs in the United States, describe the neoclassical theory of how low-income households maximize their utility when deciding whether to participate in such a program, contrast this neoclassical approach with implications from theory and research from behavioral economics, and end with some broad implications—taken from the research—for future policy.

OVERVIEW & THEORY

In 2016, the estimated poverty rate in the United States was 12.7 percent, which translates to approximately one in eight Americans living in poverty. In addition, income inequality has increased in the US. In a study combining tax, survey, and national account data, researchers Piketty, Saez, and Zucman (2018) find that, since 1980, the average pretax income for the bottom 50 percent has stagnated at around \$16,000 per year, while the average pretax income of those at the top one percent rose from \$420,000 to \$1.3 million (2014 dollars). In shares of total income, this represents an eight percentage point drop (from 20 percent to 12 percent) for the bottom 50 percent and an eight percentage-point increase (from 12 percent to 20 percent) for the top one percent. This means that “[t]he two groups have essentially switched their income shares, with eight points of national income transferred from the bottom 50% to the top 1%” (5).

Through “transfers,” the government attempts to alleviate poverty and income inequality by taxing middle and high-income Americans and reallocating that tax revenue to those who are low-income through social welfare programs. Though it is unlikely that social welfare programs will solve the problem of income inequality, they do provide a meaningful benefit to those struggling in poverty. For example, using data from the US Census Bureau, the Center on Budget and Policy Priorities (CBPP 2017) estimates that in 2016, the Supplemental Nutrition Assistance Program (SNAP) and refundable tax credits (the Earned Income Tax Credit and Child Tax Credit) lifted 3.6 and 8.2 million people above the poverty line, respectively. Yet most social welfare programs do not have full participation rates. This problem of “nonparticipation” means that millions of people who qualify for these programs are not receiving assistance.

The nonparticipation of low-income households in social benefit programs designed to aid them is a widespread phenomenon in the United States. The IRS (2017), for example, estimates that approximately 20 percent of qualified tax filers do not claim the Earned Income Tax Credit (EITC). In 2014, 17 percent of those eligible for SNAP did not claim benefits (Cunningham 2017). Other programs have lower uptake. For instance, in each month in 2011, an average of 37 percent of eligible families did not claim benefits under the Women, Infants, and Children (WIC) program (USDA 2014), and in 2012, 72 percent of eligible families did not claim Temporary Assistance for Needy Families (TANF) benefits (Falk et al. 2015). Though take-up rates vary by program, the explanation behind nonparticipation remains a question to many economists.

Economists use a unit of measure known as “utility” to assess the amount of satisfaction or happiness that an individual gains from a particular decision or action (Goolsbee, Levitt, and Syverson 2013). In a neoclassical economic framework, it is assumed that individuals have full information about the costs and benefits of a particular decision, that individuals are completely rational in their decision-making, and that as a result, individuals will always make the decision that maximizes their utility. When considering whether to participate in a social welfare program for which they qualify, an individual decides whether the benefits of the program (i.e. the utility derived from his or her income in the absence of the program, plus the utility derived from the resources provided by the program itself) are greater than the costs of participating in the program (Currie 2006). Individuals then choose to

participate if the benefits outweigh the costs. Typical proposed costs of participation in welfare programs are stigma (Moffit 1983) and transaction costs (Currie 2006). However, stigma—often cited as the main reason low-income households do not participate in social welfare programs—has less of an impact on uptake than previously theorized by economists (Currie 2006; Bhargava and Manoli 2015). This finding further puzzles economists who often perceive transaction costs—the time and effort associated with participating in the program such as time spent filling out forms—to be much lower than the perceived benefit; it is estimated that in a single year the “typical EITC non-claimant forgoes an estimated \$1,096, equivalent to 33 days of earned income” (Bhargava and Manoli 2015, 3489-3490).

In contrast to neoclassical assumptions about individual behavior, behavioral economics postulates that individuals display imperfect optimization, bounded self-control, and nonstandard preferences when making decisions (Congdon, Kling, and Mullainathan 2011; Laibson and List 2015). Imperfect optimization suggests that although people try to make optimal choices, “they sometimes don’t succeed” (Laibson and List 2015, 386). This failure to always make the optimal decision may be the result of an individual not acting fully rationally or not having complete information. Individuals exhibit bounded self-control when they place greater value on the present than on the future (Laibson and List 2015). This “present bias”—known as hyperbolic discounting—implies that individuals are likely to procrastinate on tasks that do not give them significant immediate benefits. Lastly, the notion of non-standard preferences challenges neoclassical assumptions about choice. For example, behavioral economics describes the phenomena of loss aversion, where “people suffer from a loss about twice as much as they benefit from a gain of equal absolute magnitude” (Laibson and List 2015, 387). These three deviations from the neoclassical model provide a framework through which to conduct an alternate analysis of the nonparticipation of low-income households in government benefit programs.

It is important to note that these three principles of behavioral economics are not inherent traits of low-income populations. Rather, all human beings exhibit the psychological tendencies that behavioral economics describes. However, the consequences of these behaviors may lead to worse outcomes for those who are low-income as they have “narrow margins for error” (Bertrand, Mullainathan, and Shafrir 2006, 8). Procrastinating on the application and missing the deadline to apply for SNAP benefits, for example, could mean skipping meals various times that month, whereas someone in a higher income bracket has alternatives if they put off going to the grocery store.

BEHAVIORAL ECONOMICS AND NONPARTICIPATION

Although the neoclassical model assumes individuals have full information when they make decisions, it is likely that lack of awareness of social welfare programs leads to imperfect optimization and explains, at least in part, the nonparticipation of low-income households in such programs. For example, in a survey, Bhargava and Manoli (2015) found that only 56 percent of eligible filers reported awareness of the EITC. In the same paper, Bhargava and Manoli conducted a randomized control trial in which they sent out different notices to EITC non-claimants. They found that displaying benefit information in the headline of a flyer increased the response by 33 percent relative to the control, suggesting some

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households were not aware they qualified for benefits. Similarly, Meyers and Heinze (1999) found that, in California, the majority of mothers eligible for employment-related childcare subsidies did not receive their benefits because they were not aware of the programs.

Limited information and program complexity are also likely to impede decision-making optimization and contribute to program nonparticipation. There are a myriad of social welfare programs in the United States, each unique and complex in its application process and eligibility requirements. In the experiment mentioned above, Bhargava and Manoli (2015) found that complexity played a large role in nonparticipation. Indeed, a complex notice—which was one page longer than the control mailer, featured denser textual layout, and repeated eligibility information—decreased the response rate by 27 percent relative to the control mailing.

The EITC is designed to increase labor supply and earnings among low-income working households (Eissa and Liebman 1996). In order to achieve this goal, low-income households need to understand how the EITC changes their incentives and returns to work. In a randomized control trial, Chetty and Saez (2009) found that a treatment—consisting of a two-minute explanation of how the EITC works from an H&R Block tax professional—significantly raised the treatment group’s EITC refund by \$68 relative to the control group. Furthermore, the increased refund reduced the probability that the treatment group had low incomes (below \$7,000) by 1.4 percentage points. This finding suggests that some EITC recipients do not have full information when applying for their refund.

Economic models typically cite three transaction costs that likely impede government benefit program participation: the cost of applying for a benefit, the cost of learning about the benefit and rules of the program, and stigma (Currie 2006). However, smaller “hassle costs” can also contribute to the nonparticipation of low-income households in social welfare benefits. Common examples of hassle costs include lengthy applications and having to reapply numerous times per year. Although neoclassical economists have previously dismissed these costs as being “too minor to be taken seriously, such hassles are likely to be especially detrimental in the context of program take-up” (Bertrand, Mullainathan, and Shafir 2006, 16). In a report on SNAP applications (known as food stamps at the time), O’Brien et. al (1999) found that more than half of states had food stamp applications between 10 and 36 pages long, some states required applicants to provide accurate information under penalty of perjury, and 43 states asked questions about family resources such as whether they had burial plots or whether their children received income from babysitting. Other hassle costs like fingerprinting and home visits verifying whether families are “really poor” are also likely to contribute to program nonparticipation (Bertrand, Mullainathan, and Shafir, 2004, 422). In an analysis of food stamp participation, Currie and Grogger (2001) found that a one month increase in the recertification interval of food stamps led to a half percentage point increase in the program participation rate for single parents. Overall, these findings suggest that hassle costs, “though probably small in an economic model, are exactly the kind of channel factors that might greatly dissuade people” from participating in social welfare programs (Bertrand, Mullainathan, and Shafir 2006, 17).

The principle of bounded self-control may also influence whether low-income households participate in government welfare programs. Contrary to neoclassical

economics, people value the present much more than the basic discount rate (the premium at which a person would postpone today's consumption for future consumption) would suggest. This leads to hyperbolic discounting, where individuals "tend to prefer immediate payoffs to later payoffs, even if the later payoff is much greater" (Goolsbee, Levitt, and Syverson 2013, 688). Hyperbolic discounting suggests that low-income individuals are likely to put off applying for government benefit programs. This tendency to procrastinate can be exacerbated by limited information about the programs, the complexity of the program applications, and the complexity of the programs themselves. All in all, low-income families are likely to perceive the present cost of applying for the program as much greater than any future benefit they may receive from it. As mentioned above, Currie and Grogger (2001) found that closer recertification periods had a small, but significant, negative impact on food stamp participation among single parents and rural households. Though this finding may suggest that hassle costs play a significant role in nonparticipation rates, it may also reflect procrastination, though it is likely that these two factors are highly intertwined. In Bhargava and Manoli's (2015) experiment, even receiving a control notice—which was nearly identical to an initial IRS notice mailed months earlier—increased EITC uptake by 23 percent.

Overall, the evidence described above suggests that the framework of behavioral economics can be useful to explain the nonparticipation rates of low-income households in social welfare programs. The issues described in this paper—complete lack of knowledge of government programs, limited information about these often complex programs, significant hassle costs, and procrastination—each contribute to the costs and benefits that an individual or family balances when making the decision to participate in a social welfare program. Bhargava and Manoli (2015) found that the poorest among their sample were the most harmed by the complex program mailing. This finding suggests that these programs are failing to deliver benefits to those who may need them most, implying that increasing program uptake would lead to a particularly large increase in social welfare.

POLICY IMPLICATIONS

Policymakers have justified government intervention as a way to protect people from their own individual biases. Through "nudges," policymakers attempt to change the behavior of those not acting in their best self-interest, while imposing "minimal burdens on those already acting rationally" (Bhargava and Loewenstein 2015, 396). However, researchers also argue that since the government is itself made up of individuals and prone to public pressure, it is also disposed to the same behavioral economic biases as the everyday citizen. This sometimes leads the government to institutionalize—rather than overcome—these biases through policy (Viscusi and Gayer 2015). In the case of uptake in government welfare programs, policymakers may not fully understand the costs low-income households experience when considering whether to apply to these programs. The idea that government actors may also display behavioral biases suggests that any policy change should be analyzed carefully.

Bhargava and Manoli's 2015 experiment is one example of a "nudge." Without removing the ability to opt out, they attempt to increase EITC participation through a low-cost intervention.

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Policymakers may be interested in whether Bhargava and Manoli's intervention actually changed individuals' behavior in the long-term if they consider implementing a similar nudge policy at a state or federal level. In another experiment with the EITC, Guyton et. al (2016) sent reminders to one group in both 2014 and 2015, a second group in only 2014, and did not send any reminders to the control group. Their study found that individuals with the highest EITC filing rates were those who received reminders in both years of their study. Thus "one-time reminders generated one-time effects" (2). This suggests that sending reminders every year would increase participation. However, it should be noted that a longer-term experiment might be necessary to draw further conclusions. It is also possible that the increased participation was due to the novelty of receiving a reminder from the IRS; effects may wear off once the reminders become the norm.

Given the significant impact of hassle costs on participation, it is likely that removing or reducing some of these costs will increase uptake. Shortening or simplifying the application or making the welfare office a one-stop shop, with only one application and automatic enrollment in all qualifying programs, may greatly increase participation and thus social welfare among low-income households. Indeed, Currie (2006, 118) states that uptake among low-income households is greater "the fewer the barriers that are placed in their way." Based on Viscusi and Gayers' theories, it seems sufficient to conclude that social benefit program applications designed by government actors do not consider certain small hassle costs that low-income households experience on a daily basis (such as lack of transportation options, inflexible job hours, or unreliable childcare), which may make participating in social benefit programs more difficult. Taken together, it is reasonable to assume that low-income households factor in much higher hassle costs in their cost-benefit decision to participate in social welfare programs than theorized by government actors.

Lastly, reducing the complexity of how government benefits are described to low-income households may also increase participation rates. If implemented, this policy change could especially lead to gains among the poorest Americans, who tend to be most sensitive to the complexity of social benefit programs. Bhargava and Manoli (2015) found that the decreased response from the complex notice was not due to increasing the perceived effort it would take to apply for the EITC, but rather was due to whether low-income households believed they were eligible to receive the tax credit at all. This finding suggests that simplifying the way government benefits are described on websites or in pamphlets could lead to increases in participation rates.

Policymakers would face certain tradeoffs if they implement any of the above changes. For example, an alternative argument to this analysis is that the administrative barriers and hassle costs of applying for government benefit programs are designed to discourage those who do not truly need government benefits from applying. According to this logic, households with less need for benefits place more weight on hassle costs than households with greater need when making their specific cost-benefit decisions. If this is true, alleviating those hassle costs would lead to an increase in the number of households on government benefits among those who least need them. Second, there would be an increased administrative cost if a government agency decided to send reminders to qualifying households, especially as the evidence suggests these reminders would have to be repeated on a yearly basis (Guyton et. al 2016). Third, an increase in participation would lead to a corresponding increase in

program costs, as each additional person would, of course, need to be administered benefits (GAO 2005). Last, reducing complexity by updating government websites or pamphlets would also impose an administrative burden on the managing government agency.

CONCLUSION

Behavioral economics provides a useful framework through which to analyze the nonparticipation of low-income households in government benefit programs. Empirical research suggests that a nudge policy—in the form of a reminder—may be useful to increase participation, especially among those qualifying for the EITC. However, such a policy would not likely lead to sustained, long-term learning. Reducing complexity may also lead to gains in participation rates, especially among the poorest Americans. Lastly, hassle costs may play a more significant role than previously theorized by economists and government actors, which suggests reducing hassle costs could also help increase participation rates. However, policymakers should consider the tradeoffs involved before implementing any of these changes. Government actors should be especially wary about crafting and administering new policy in this area, as they can be prone to the same behavioral biases as those applying for government benefits. In conclusion, increasing participation rates among low-income households by implementing any of the above changes is an important policy goal, especially as such households already have less resources at their disposal and little support to manage multiple responsibilities.

REFERENCES

- Bertrand, Marianne, Sendhil Mullainathan, and Eldar Shafir. “A Behavioral-Economics View of Poverty.” *The American Economic Review* 94, no. 2 (2004): 419–423.
<http://www.jstor.org/stable/3592921>.
- Bertrand, Marianne, Sendhil Mullainathan, and Eldar Shafir. “Behavioral Economics and Marketing in Aid of Decision Making Among the Poor.” *Journal of Public Policy and Marketing* 25, no. 1(2006): 8–23. <https://doi.org/10.1509/jppm.25.1.8>.
- Bhargava, Saurabh and George Loewenstein. “Behavioral Economics and Public Policy 102: Beyond Nudging.” *The American Economic Review* 105, no. 5(2015): 396–401.
<https://doi.org/10.1257/aer.p20151049>.
- Bhargava, Saurabh, and Dayanand Manoli. “Psychological Frictions and the Incomplete Take-up of Social Benefits.” *American Economic Review* 105, no.11 (2015): 3489– 3529.
<https://doi.org/10.1257/aer.20121493>.
- Center on Budget and Policy Priorities. *Greenstein: Census Data Show Largest Two-Year Income Gain in Five Decades, Progress Against Poverty in 2016*. 2017.
<https://www.cbpp.org/sites/default/files/atoms/files/9-12-17pov-statement.pdf>.
- Chetty, Raj, and Emanuel Saez. “Teaching the Tax Code: Earnings Responses to an Experiment with EITC Recipients.” *National Bureau of Economic Research Working Paper* 14836, 2009.
<http://www.nber.org/papers/w14836.pdf>.

Featured Articles

- Congdon, William J., Jeffrey R. Kling, and Sendhil Mullainathan. *Policy and Choice: Public Finance Through the Lens of Behavioral Economics*. The Brookings Institution, 2011. https://www.brookings.edu/wpcontent/uploads/2016/07/policyandchoice_book.pdf
- Cunningham, Karen. *Reaching Those in Need: Estimates of State Supplemental Nutrition Assistance Program Rates in 2014*. Mathematica Policy Research, 2017. <https://www.mathematica-mpr.com/our-publications-and-findings/publications/reaching-those-in-need-estimates-of-state-snap-participation-rates-in-2014>.
- Currie, Janet. "The Take-Up of Social Benefits." In *Poverty, The Distribution of Income and Public Policy*, edited by Alan Auerbach, David Card, and John M. Quigley, 80–148. New York: Russel Sage, 2006.
- Currie, Janet, and Jeff Grogger. *Explaining Recent Declines in Food Stamp Participation*. Washington, DC: Brooking Institution Press, 2001. <https://doi.org/10.1353/urb.2001.0005>.
- Eissa, Nada and Jeffrey B. Liebman. "Labor Supply Response to the Earned Income Tax Credit." *The Quarterly Journal of Economics* 111, no. 2 (1996): 605 - 637. <http://doi.org/10.3386/w5158>.
- Falk, Gene, Alison Mitchell, Karen E. Lynch, Maggie McCarty, William R. Morton, and Margot L. Crandall-Hollick. "Need-Tested Benefits: Estimated Eligibility and Benefit Receipt by Families and Individuals." Congressional Research Service, 2015. <https://fas.org/sgp/crs/misc/R44327.pdf>.
- Goolsbee, Austan, Steven Levitt, and Chad Syverson. *Microeconomics*. New York: Worth Publishers, 2013.
- Guyton, John, Dayanand S. Manoli, Brenda Schafer, and Michael Sebastiani. "Reminders and Recidivism: Evidence from Tax Filings & EITC Participation Among Low-Income Nonfilers." *National Bureau of Economic Research Working Paper* 21904, 2016. <http://www.nber.org/papers/w21904>.
- Internal Revenue Service. "About EITC." Last modified April 11, 2017. <https://www.eitc.irs.gov/EITC-Central/abouteitc>.
- Laibson, David and John A. List. "Principles of (Behavioral) Economics." *American Economic Review* 105, no. 5 (2015): 385–390. <http://dx.doi.org/10.1257/aer.p20151047>.
- Meyers, Marcia, and Theresa Heintze. "The Performance of the Child-Care Subsidy System." *Social Science Review* 73, no. 1 (1999): 37–64. <https://doi.org/10.1086/515796>.
- Moffit, Robert. "An Economic Model of Welfare Stigma." *The American Economic Review* 73, no. 5 (1983): 1023–1035. <http://www.jstor.org/stable/1814669>.
- O'Brien, Doug, Kimberly Prendergast, Eleanor Thompson, Marcus Fruchter, and Halley Torres Aldeen. *The Red Tape Divide: State-by-State Review of Food Stamp Applications*. Feeding America, 1999. <https://www.issuelab.org/resource/the-red-tape-divide-state-by-state-guide-to-food-stamp-applications.html>
- Piketty, Thomas, Emmanuel Saez, and Gabriel Zucman. "Distributional National Accounts: Methods and Estimates for the United States." *Quarterly Journal of Economics*, forthcoming, 2018. Accessed January 18, 2018. <http://gabriel-zucman.eu/files/PSZ2018QJE.pdf>.
- Semega, Jessica L., Kayla R. Fontenot, and Melissa A. Kollar. 2017. *Income and Poverty in the United States: 2016*. US Census Bureau. Accessed January 18, 2018. <https://www.census.gov/content/dam/Census/library/publications/2017/demo/P60-259.pdf>.
- United States Department of Agriculture. "National and State-Level Estimates of Special Supplemental Nutrition Program for Women, Infants, and Children (WIC) Eligibles and Program Reach, 2011." 2014. https://fns-prod.azureedge.net/sites/default/files/WICEligibles2011_Summary.pdf.

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US Government Accountability Office (GAO). "Means-Tested Programs: Information on Program Access Can Be an Important Management Tool." 2005. <https://www.gao.gov/assets/250/245577.pdf>.

Viscusi, Kip W., and Ted Gayer. "Behavioral Public Choice: The Behavioral Paradox of Government Policy." *Harvard Journal of Law and Public Policy* 38, no. 3(2015): 973– 1007.
http://harvardjlp.wpengine.com/wp-content/uploads/2010/01/ViscusiGayer_4.pdf.



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