How Consumers Respond to Stimulus Payments

BY LOUIS SEARS

Using rational expectations models, some economists have suggested that households with substantial savings and investments will gradually adjust, or "smooth," their spending when their earnings rise or fall in the short term. Households do this by cashing out some of their investments during a recession, and saving more during good times. Their behavior should become even more stable as their net worth increases. In fact, in some models, only those with little or no wealth will dramatically alter their spending because of income changes.

Greg Kaplan of the University of Pennsylvania and Giovanni Violante of New York University test this theory by looking at data from 2001, when a tax rebate, as part of a longer-term tax cut, occurred during a recession. They find that there were not enough poor households to explain the large aggregate increase in consumption that followed the rebate. They also find that this increase was not made smoothly over time after the announcement of the rebate, but instead occurred abruptly following the actual receipt of rebate checks. The authors propose a model that differentiates between liquid and illiquid assets held by households, and find that many wealthy households live "hand to mouth," consuming only from their income each period, rather than using their wealth to smooth consumption.

"A Model of the Consumption Response to Fiscal Stimulus Payments." Greg Kaplan and Giovanni L. Violante. National Bureau of Economic Research Working Paper No. 17338, August 2011.

The authors argue that consumption patterns are largely determined by the composition of net worth among households. Many wealthy households store their wealth in illiquid vehicles such as retirement accounts and real estate. These investments generate high returns over time on average, but a substantial amount of their value would be lost or foregone if households were to liquidate them prematurely. As a result, many households that are wealthy on paper have barely enough liquidity to pay their current bills, and would prefer not to access their less liquid assets. Accordingly, the authors hypothesize that they would behave similarly to families with low net worth.

Kaplan and Violante construct a model in which households can either hold their earnings as cash to spend on consumption, or invest their earnings in illiquid assets, minus a fixed transaction fee to either deposit or withdraw. They base the return on investments on the historical growth rate of real estate, savings bonds, equities, and other investments since 1960. They then divide the households into 15 subgroups based on different levels of holdings in each type of asset, as well as their overall level of net worth, and calibrate the proportions of each subgroup to match the data. Finally, they simulate households' responses to a tax rebate at different points during their lifecycle.

By varying the fixed cost of accessing savings, the authors are able to produce results that match the data from the 2001 rebate. They also provide an account of how these costs affect consumption in general. As expected, when transaction costs are high, households are less likely to draw upon their illiquid investments, and live hand to mouth, consuming more of their new income, including their rebates. They find that a per-transaction cost between $500 and $1,000 produces behavior matching the data from 2001. While higher fixed costs increase the share of the rebate that households consume, this share grows slowly after costs reach beyond $1,000. Finally, the authors find that the net worth of those with the largest response to the rebate was similar to those with the smallest. Both groups were comprised of some of the highest earners, suggesting that illiquidity can essentially negate the effects of wealth on consumption smoothing.

Kaplan and Violante's study has potential implications for fiscal policy, particularly during recessions. First, the authors find that a tax rebate as part of a longer-term cut in taxes significantly increases the immediate consumption response of hand-to-mouth households. Under these circumstances, households view themselves as wealthier in the long term, but since accessing their investments is expensive, the rebate is the cheapest way to consume out of their future income. Second, the authors find that recessions increase the consumption response to new income. For households with high net worth but little access to it, a drop in their current earnings has a more severe impact than if they were better able to smooth consumption. In fact, the combination of tax reform and recession, which occurred in 2001, sharply increased the average consumption response to the rebate.

Kaplan and Violante's model allows policymakers to anticipate consumption responses with more accuracy by distinguishing between households with different levels of liquid wealth. It also emphasizes the need to understand how the costs of accessing wealth can affect consumption. Although the model is simplified in only allowing for one type of illiquid asset with a fixed transaction cost over time, it opens the door to further research on different sources of illiquidity and how they can constrain consumption. **RF**