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Reading Note on "Consumption and Habits: Evidence from Panel Data"

Previous researchers have paid attention to habit formation in consumption, which can help to explain a number of issues in economics, such as the relationship between savings and growth. However, there is a lack of microeconomic evidence. The authors employ a large panel data set with an adequate set of instruments, sufficiently ruling out time invariant unobserved heterogeneity. It is shown that controlling for fixed effects is indeed crucial in the analysis of consumption decisions with time non-separabilities. Once fixed effects are controlled for, the relationship between current and past consumption turns out to reflect habit formation rather than heterogeneity.

To figure out whether dependence on variables results from liquidity constraints or intertemporal non-separabilities, the authors consider multiple commodities: food at home, transport and services. Each household is assumed to maximize the present discounted value of a lifetime utility, with budget constraints and liquidity constraints. The utility function is modified to allow for time non-separabilities and preference shocks. The model includes demographic and labor supply variables, as well as two stochastic terms, namely expectational errors and preference shocks. The authors estimate the within period MRS between goods (robust to the presence of liquidity constraints), and also the intertemporal Euler equations. The comparison between the two representations of the first order conditions helps to distinguish intertemporal dependence from liquidity constraints. Estimation is performed by the generalized method of moments. The authors employ the Continuous Family Expenditure Survey from Spain, through 1985 to 1995. This data set allows the authors to follow a household for up to eight consecutive quarters, and contains a wide range of characteristics. Only households with enough income and nonzero expenditure that report full information for at least five consecutive quarters are selected. Lags and leads are taken to estimate the Euler equations in differences. The same sample is used in all cases.

Based on MRS and Euler equations in levels, preferences are intertemporally separable. Without accounting for individual heterogeneity, this result can be biased due to spurious dependence. Indeed, there is evidence of misspecification according to the Sargon tests. With time invariant unobserved heterogeneity taken into account, MRS suggests habit formation for food and service, and intertemporal separability for transport. On the other hand, Euler equations suggest habit formation for food, and intertemporal separability for services and transport. There is hardly evidence for liquidity constraints once labor market status is accounted for, and there is no significant correlation between the instruments and the error terms. The authors compute the degree of habit formation as the fraction of past consumption that explains current consumption. The degree is 0.72 for food, 0.14 for services, and 0.01 for transport.

In conclusion, it is truly crucial to account for time invariant unobserved heterogeneity when analyzing the existence of intertemporal non-separabilities in consumption decisions. Only when controlling for fixed effects can we obtain significant parameters for habit formation. One limitation of the paper could be that the authors only consider three goods, so the results may not be relevant for other goods.