

Reading Notes 4

Xin Lin

Consumption and Habits: Evidence from Panel Data

by Raquel Carrasco, José M. Labeaga, and J. David López-Salido

Previous works that assume time-separable preferences have made predictions contradicting the empirical findings. This paper improves by introducing habit formation as an approach to model time dependence in preference. Specifically, this paper tests for the presence of habit formation in consumption of food, transport, and services by estimating the within-period MRS and Euler equations and uses household panel data with eight consecutive quarters to control time-invariant unobserved heterogeneity. Its main findings reveal the existence of intertemporal dependence of preferences for food and services and the importance of accounting for time-invariant unobserved heterogeneity across households.

This paper uses a panel data set from the Spanish Continuous Family Expenditure Survey from 1985 to 1995. The data set contains 3,200 households who are followed for a maximum of eight consecutive quarters. This Spanish households panel data has important advantages over the data sets that have very limited information on consumption or follow the households for a shorter time. It is a longer panel so that the authors can account for time-invariant unobserved heterogeneity across households, transform the model to rule out fixed effect, and use an adequate sets of instruments to obtain consistent estimates of the parameters.

Based on Meghir and Weber (1996), the authors compute within-period MRS and intertemporal Euler equations by maximizing households' present discounted value of lifetime utility to investigate the existence of consumption habits. In addition, the authors validate the instruments variables by updating the error terms of MRS and Euler equations with household fixed effects. Then they estimate MRS and Euler equations by Generalized Method of Moments (GMM) in levels (without households fixed effects) and in differences (with households fixed effects).

As for the findings, the level estimates fail to reject the inter-temporal separability in preference of consumption, while the difference estimates provide strong evidence for the habit formation. This results indicate the importance of controlling for time-invariant unobserved heterogeneity across households.

Also, accounting for the fixed effects, the MRS results suggests that there is habit formation of food and services and the Euler equation result suggests a habit formation of food. Furthermore, the authors check whether the liquidity constraints are binding by comparing the parameter estimates from MRS and Euler equations. The results fail to reject the intertemporal separability in preference, which implies that, for young households (heads under 40) who are confronting life decisions, such as housing and child-bearing, the liquidity constraints are still binding. It again confirms the importance of accounting for the fixed effects.

To sum up, this paper adopts the strategy of estimating MRS and Euler equations with or without time-invariant unobserved heterogeneity across households to investigate the intertemporal non-separability in consumption decisions. It finds that the significant parameters reflecting habits can only be obtained when the fixed effects are controlled for, and then habits in food consumption and service persist. Nevertheless, a limitation of this paper is the sample selection bias as the authors only keep households with married couples that report full information for at least 5 consecutive quarters and earn monetary income greater than 300 euros. Households with stable income are more likely to have stable consumption behavior over periods than households who earn very low income (under 300 euros) and fail to sustain their daily expenses.