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Reading Note 4
Econ 613

Reading Note: Consumption and Habits – Carasco, Labeaga, and Lopez-Salido (2005)

Due to a divergence in empirical results and model predictions that assume intertemporally separable preferences, many influential papers have created a swath of seemingly irreconcilable problems. In an attempt to partially solve a few of these problems, some authors contribute to a growing body of literature that emphasizes the importance of allowing for habit formulation which enables the smoothing of consumption growth. Two main issues exist with the previous literature. Firstly, most empirical work uses aggregated data, thereby introducing many well-known aggregation problems. Secondly, the extent of microeconomic data used in consumption research is minimal; the ones with more consumption information, such as the Consumer Expenditure Survey (CEX), only have data for a relatively short period of time. This paper overcomes these issues and addresses the importance of including time-invariant unobserved heterogeneity when examining the existence of habit formulation in household consumption decisions with panel data.

This paper looks at three non-durable goods: food (at home), transport, and services. After establishing standard household preferences, the paper identifies the form of the equations to be estimated for the Marginal Rate of Substitution (MRS) between two goods and the Euler equation between the numeraire[1] and the non-numeraire[2] goods. The paper also uses a standard assumption that households maximize the present discounted value of lifetime utility[3]. The paper's two models consist of two equations, food versus services and transport versus services, and it uses a Generalized Method of Moments approach to estimate these models.

The paper uses over a decade's worth of data from the Spanish Continuous Family Expenditure survey which allows it to create a model that rules out fixed effects and obtains consistent parameters. By the rotational nature of the available survey data, the paper can track a household for, at most, two consecutive years which is much longer than previous research that uses similarly available data. Due to the attrition bias common in panel data, the paper uses the unbalanced panel in its estimation process. The paper ultimately selects households that: report complete information for at least five consecutive quarters, are married coupled whose head is between 25 and 60 years of age, have a monetary income of at least 300 euros, and spend money on the three non-durable goods. This subset ultimately leaves the paper with 2,606 observations of 1,499 households.

The paper has four main findings. It first finds evidence that preferences are intertemporally separable when time-invariant unobserved heterogeneity across households is not considered; these results are obtained from both the Euler and MRS equations. The paper also finds that, after controlling for fixed effects, there is evidence of habit formation for food and services, but the results for transport are not statistically significant. From the intertemporal Euler conditions, the paper also finds evidence of dynamics for food. Finally, when specifically

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[1] In the paper, the numeraire good is services.
[2] In the paper, the non-numeraire goods are food and transport.
[3] The inputs to this utility function include a vector of goods, a discount factor, and a third vector that incorporates family characteristics.

looking at households whose head is younger than 40 (but still at least 25) years of age[4], the paper finds no dynamics in the MRS equation; interestingly, non-separability does appear in the Euler equation. This is, ultimately, consistent with the presence of liquidity constraints for younger households.

   This paper demonstrates the importance of accounting for time-invariant unobserved heterogeneity across households when analyzing the existence of intertemporal non-separability in household consumption decisions. An interesting extension of this work could be to see if there is evidence of habit formation in other countries with potentially different cultures and customs. Suppose a similar survey like the CEX could take place over at least two years (if not more). In that case, similar estimation techniques could be done to see if some cultural (or regional) aspects could lead to variations in evidence found in favor of habit formation in these three non-durable goods compared to those found with the Spanish panel data. Also, looking at other non-durable goods and the evidence of habit formation could also be another worthwhile extension.

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[4] The paper argues that this group of people are more likely to be constrained.