Econ 613 Reading Note #4
Peilin Wang

When analyzing people's consumption decisions over time, it is inevitable to think about the relationship between current, past, and future consumption. Since several papers have concluded that there exists consumption's inconsistency between the empirical evidence and intertemporally separable preferences, previous literature has stated the importance of habit formation for consumption which implies time non-separable. However, it still has limitations. One is the lack of empirical microeconomic evidence in the dataset. The other is insufficient control for time invariant unobserved heterogeneity across households (fixed effects), which may lead to spurious results. So, this paper fixes these limitations and focuses on three non-durable goods: food, transport, and services. Through analyzing, the authors have concluded that it's necessary to control unobserved time invariant heterogeneity. After controlling it, the result from the MRS shows that there exists evidence of habit formation for food consumption and services; the Euler equation reveals only the habit formation in food.

This paper relies on previous research and models conducted by Meghir and Weber (1996). It assumes that each household maximizes the present discount value of utility, which is subject to liquidity constraints. The authors aim to estimate the relationship between two goods in the same period by using MRS and to analyze intertemporal effects by using the Euler equation for each good. Since only MRS is robust to the liquidity constraints, it is possible to distinguish liquidity constraints and intertemporal dependence between MRS and Euler equation. Moreover, the authors also consider demographic, labor supply, and stochastic variability: expectational errors and preference shocks. In order to estimate MRS and Euler equation with two equations: food versus services and transport versus services, the generalized method of moments (GMM) has been used.

The data set comes from ECPF which has information on consumption for each household. Compared to other available data sets, it has some advantages. Firstly, it reports information on not only consumption but also demographic and other variables. Moreover, it interviews multiple times and includes the household's information for a maximum of eight consecutive quarters. To reduce bias, the research selects the household with at least five consecutive quarters' information and eliminates households with low income and zero expenditures.

To analyze the relationship between habit formation and consumption, the authors firstly estimate coefficients using the MRS and Euler equation without controlling the time invariant unobserved heterogeneity (fixed effect). The result is similar to it in previous literature in which preference is intertemporally separable. However, it is biased because the Sargan test shows that this result may be influenced by misspecification. So, the authors control the fixed effect. The result from MRS indicates that consumption in food and services can form habits, but the result from the Euler equation is different, which shows that only food consumption has habit formation. In this case, the Sargan test indicates that the correlation between the instruments

and the error terms has not been detected, which presents the significance of controlling the fixed effect and the result. Finally, the authors check if the liquidity constraints bind or not. They focus on households with head younger than 40. Under such a situation, the separability appears in the MRS while the Euler equation indicates non-separable preference. So, it is obvious that the result will be different between MRS and Euler, which implies the liquidity constraints do bind such a group of households.

In conclusion, the main statement of this paper is that when analyzing the habit formation in consumption decisions, it is important to take the time invariant unobserved heterogeneity into account. When controlling it, there is habit formation for consumption behavior such as buying food and getting service. However, there are some possible limitations of this paper. For example, the data set comes from households' interviews. The selection bias may exist. Also, some other factors may influence consumption behavior. They should be considered in equations.