

# ECON613 Reading Notes #4

Yuanhang Zhao

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This paper verified the habit formation in consumption with panel data. Although previous literature has emphasize the importance of the habit formation, and verified it in many ways, there are still problems in the models. For instance, many models develop empirical models with aggregate data, in addition, the data used in current consumption literature has limited information on consumption, which in turn leads the inconsistent estimation. To overcome these problems, this paper 1. Use the data from ECPF (in which can identify the habit effects within the eight quarters in the survey). 2. With the ECPF data, estimate 3 non-durable goods with both intertemporal Euler equation and within period MRS between goods. The results shows that the habit formation cannot be ignored in both model using MRS and Euler equation.

The empirical structural model used in this paper derived from the life-time utility function with 3 non-durable goods and it also include variables that may influence the consumption. From the theoretical model, this paper analyse how there is substitution effects within period and the intertemporal effects, and accounts for the stochastic term. And the GMM regression is in 2 ways, both MRS and Euler equation. In data processing, this paper exclude all the zero observations and do the seasonal regression to verify the autoregressive effects, and in turn matched this effects in the structural model.

From the estimates in levels, this paper firstly tests the serial correlation, and the result shows that the serial correlation is not significant. In addition, the results shows that preference is intertemporal separated from the evidence in parameters of lag and lead variables. And the results from MRS and Euler equation are similar. From the estimates in differences, with a verified proper instrument, the differenced serial is significantly correlated. The results of structural model show that the parameters of food and service are significant in MRS model and the parameter of food is significant in Euler equation model, which indicates the presence of habit formation. Moreover, this paper analysed the elasticity of substitution and habit formation in 2 different ways.

Given the empirical results, this paper concludes that 1. The preference is intertemporally separable when there is existence of unobserved household heterogeneity. 2. there will be evidence of habit formation when controlling fixed effects. 3. The empirical results from MRS and Euler equation are similar. 4. In some cases, the intertemporally separable exists between MRS and Euler equation in empirical results.

In this empirical part of the paper, the author use several test and different critical value for many different cases, which inspired me to be more rigorous in econometrics analysis.