Critique for:

Seetharaman, P. B., Ainslie, A., & Chintagunta, P. K. (1999). Investigating Household State Dependence Effects Across Categories. *Journal of Marketing Research*, *36*(4), 488–500.

This paper examines households’ brand choice behavior across five product categories as a function of households’ intrinsic brand preferences, marketing variables and state dependence effects. Based on some previous research and psychological theories, the authors propose the objective of this research, that is, to answer five research questions including: 1) Are households that are relatively more inertial than average in one product category also relatively more inertial in other categories? 2) What is the relationship between a household's sensitivity to marketing variables (price, display, feature) and its level of state dependence? 3) Does a household's state dependence in a category decrease as the time until its next purchase in the category increases? 4) What is the influence of household variables on state dependence? 5) What is the influence of category variables on state dependence?

In the model, each response parameter (intrinsic brand preferences, marketing mix effects, and the state dependence effect) is depended on household characteristics, category characteristics, and unobserved components that explicitly account for unobserved heterogeneity across households. The paper constructs the model in two steps: developing a single-category model of dynamic brand choice and extending it to a multiple-category framework. When developing single-category model, the authors adopt a latent utility model that is derived from Heckman's (1981) first-order Markov model of discrete choice. State dependence, wear-out effect, and the effects of marketing variables such as display, feature, price are incorporated in the single-category model. Next, the authors develop the multiple-category model by establishing distributional assumptions on the error term in the single-category model, and using a hierarchical error components formulation to allow each response parameter to vary across households and across categories. At the end of model formulation section, the authors discuss estimation of the multiple-category model.

The paper uses ACNielsen scanner panel data on household purchases of brands in five product categories: ketchup, peanut butter, stick margarine, toilet tissue, and canned tuna. The estimation results answer all five research questions proposed in introduction section. Besides, the authors also address five additional questions of interest to choice modelers in marketing. The main findings of this paper are 1) households display similar state dependence across categories, 2) lower sensitivity to the marketing mix is associated with greater inertia in brand choices, 3) the longer the household waits to make its next category purchase, the less inertial is its behavior, 4) household demographics such as income and family size have little influence on state dependence, 5) four categories show positive state dependence, whereas the fifth (canned tuna) shows no state dependence. Based on these findings, corresponding managerial implications are also proposed.

At the last part, the authors draw conclusions and show some directions for further research, including investigating possible causal relationships between variables, investigating differences in underlying mechanisms across categories, and employing richer models of variety seeking.

The strengths of this paper are: 1) Allow the effects of state dependence to vary over time, and incorporate wear-out effects in model. 2) Study state dependence as well as wear-out effects across categories. 3) Interesting and attractive in the form of paper. Use the way of coming up research questions and building model to answer questions. 4) Use figure to help understand the state dependence between categories.

The weakness of this paper is: 1) Estimate lots of parameters and coefficients but only present some of them in tables. This makes the empirical results part seems a little complicated and confused. 2) Lack of some mathematical derivations.

Possible future extensions are: First, a structural model rather than a reduced-form approach can be used to get more prediction and explanation power. Second, using other datasets to test the conclusions in this paper may be fruitful. Third, better simulation method can be used to generate better results.