Discussant Comments for 1998 AAEA Selected Paper Session

Demand Analysis in Asian Countries

Henry Kinnucan

Auburn University

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These papers are important in that they address consumer demand behavior in Japan and China, two countries of vital interest to the United States in terms of trade and agricultural policy. Before discussing specific points for each paper, I have three comments that pertain more or less to all four papers.

Overall:

1. Since demand estimates are known to be fragile, it would also be useful to test results for robustness. For the studies involving time series data, this could be done by estimating the model twice, once with the first 90% (say) of the observations, and again with the complete sample. For the study involving cross section data (the China study) this could be done by re-estimating the model with another 10% sample drawn from the original sample of 65,000 observations. Also, it would be helpful if regression diagnostics (e.g., tests for normality, parameter stability, and specification error) were provided to determine model adequacy.

2. With the exception of the China study, the studies utilized conditional demand systems. The problem with conditional demand systems is that the elasticities are conditional. Conditional demand elasticities, unfortunately, have limited policy relevance. Thus, consideration should be given to augmenting the demand systems, either by adding an "all other goods" category in the specified systems, or by estimating a two-stage system.

3. It would be useful to know how the elasticity estimates found in the present studies compare to previous findings. For example, Chern has estimated income and price elasticities for a broad range of food products using SSB data. It would be useful to know whether the current estimates from the China study are consistent with Chern's estimates. Similar

comparisons could be made for the meat, wheat, and fats and oils studies.

<u>Specific:</u>

Paper 1: *A System-Wide Approach to Analyzing Japanese Wheat Import Allocation*

***Decisions*, T. G. Schmitz and T. I. Wahl.**

1. Be clearer about hypotheses tests. For example, the positive own-price effect for US hard winter wheat and negative expenditure effect for Australian white wheat are not significant. This is not brought out in the discussion.

2. Given the relatively large number of "insignificant" price and expenditure effects, i.e., coefficient estimates that are less than twice their standard errors, some attention should be given to multicollinearity problems. For example, since U.S. and Canadian Durum wheat combined accounts for less than 2% of Japan's imports, perhaps these could be included in the Other category. This would reduce can be reduce the size of the system from 8 to 6, providing a significant increase in degrees of freedom given the small number of observations.

3. Since wheat is an input, not a consumer good per se, some attention perhaps should be given to the distinction between primary and derived demand. A paper by Davis and Jensen looks at this issue, using a cost function approach to develop input demand functions for differentiated products.

Paper 2: *Impact of Health Information on Demand for Fats and Oils in Japan*, S.-R. Kim,

W. S. Chern, and E. Jones.

1. The relationship between the two-equation system for soybean oil and rapeseed oil and the 7 equation "complete" system needs to be spelled out in more detail. Also, it is not clear why the health information index should be insignificant in the two-equation system.

2. Without standard errors for the complete system, it was difficult to assess results. For example, the sensitivity of some parameter estimates to serial correlation correction might be a sign of model weakness, or simply the reflection of imprecision in the point estimates.

3. The positive relationship between health information and butter consumption is counterintuitive and contradicts Chang and Kinnucan's findings for the United States. But perhaps the estimated coefficients are not significant.

Paper 3: *Separability of Inverse Demands: An Application to Japanese Demand for Fish and Meats.* **J. Eales and I. Pena.**

1. Some intuitive discussion of the separability condition given in equation (11) would be helpful. (I believe Moschini, Mora, and Green do an especially good job of this.) Relatedly, the justification for using a conditional demand specification needs to be spelled out. As pointed out by MM&G, in testing for separability, in general one would want to start with a complete demand system (e.g, meats, fish, and all other goods).

2. The categorizations for the high, medium and low quality fish given on p. 7 are somewhat arbitrary. For example, one might argue that salmon and scallops belong in the high quality category. To determine whether the categorization affects results, it might be useful to redo the tests with all fish combined into a single group.

3. The estimated flexibilities are used to distinguish between the two models, yet no tests are provided to indicate whether the differences are real or simply due to sampling error. Given the fact the separability tests are marginal in that rejection occurs at the 5% but not the 1% level, it is rather important to know whether the flexibilitities are truly different in a statistical sense.

Paper 4: *Rural Household Fruit and Vegetable Consumption in China.* **T. Han, T. I. Wahl, and R. C. Mittlehammer.**

1. Interest in the study could be enhanced if a theory were advanced to indicate the interplay between home production and a household's sensitivity to prices and income. One possibility is Becker's household production model. Intuitively, the demand for market food would be inversely related to the supply of home-produced food, which, in turn, is inversely related to a household's opportunity cost of time (since home food production is time intensive). Thus, households with low opportunity cost of time should have a lower demand for market food, ceteris paribus.

2. The implicit price elasticity for Group 2 consumers (consumers who produce but who do not purchase fruits and vegetables) needs to be discussed. How is it computed, and what does it mean?

3. The elasticities in Table 3 could be made more intelligible if tests were provided to indicate whether the Group-specific estimates differ from the national average. Many are sufficiently small to suggest that they are due to sampling error.