

Discussant's Comments for Selected Paper Session

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Introduction

The papers selected for the paper session entitled “*Food Demand, Food Policy, and Food Market Issues*” scheduled for the 1998 AAEA Annual Meeting in Salt Lake City, Utah, investigate issues in food demand, food processing, and food markets. The titles and authors of these papers are listed below:

“*The Effect of an Electronic Benefit Transfer (EBT) System on Food Expenditure of Food Stamp Recipients: Evidence From the Maryland Statewide Implementation*”, J. William Levedahl, USDA/ERS

“*Incorporating Nutrients in Food Demand Analysis*”, Jonq-Ying Lee and Mark G. Brown, Florida Department of Citrus; Rebecca H. Chung, University of Florida; and Frank F. Chiang, Institute of Fisheries Economics, National Taiwan Ocean University

“*A Dynamic Model of the Food Processing Sector in the New Market Economies of Central Europe*”, Robert Lyons, Gordon Rausser, and Leo Simon, University of California-Berkeley; Rachael Goodhue, University of California-Davis

“*Price Founded Tests for Market Integration: Fish Markets in France*”, Frank Asche and Rognvaldur Hannesson, Norwegian School of Economics and Business Administration; Daniel V. Gordon, University of Calgary

The first pair of papers listed above examines the demand side of the market for food. Levedahl looks at how a change in the method of payment by food stamp recipients affects food expenditures, while Lee, Brown, Chung, and Chiang look at how the nutritional value of various food groups affects the demand for food. The supply side of foreign food markets is examined in the last pair of papers. Lyons, Goodhue, Rausser, and Simon present a finite-horizon, linear-quadratic dynamic game between foreign firms and domestic firms of various sizes, efficiencies and debt levels. They evaluate the importance of the competitiveness and productive efficiency of the food processing sector in Central Europe for predicting policy outcomes. Finally, Asche, Gordon, and Hannesson discuss the relationship between traditional parametric tests for market integration of fish markets in France. A brief discussion of the authors’ findings follows.

Discussion

Levedahl

As current welfare reform legislation (August, 1996) requires every state to distribute Food Stamp Program (FSP) benefits using an electronic benefits transfer (EBT) system by the year 2002, the new system's impact on food expenditures by food stamp recipients has important policy implications. The success of maintaining the FSP as a federal entitlement is attributed to the program's ability to target food expenditure. Prior empirical evidence has measured food expenditure as greater when benefits are provided in the form of food stamps versus cash. With the implementation of the EBT system in the state of Maryland in 1992-93, Levedahl found that the link between food expenditures and food stamp benefits was weakened, and that the FSP's ability to target food expenditures has been reduced.

Specifically, the implementation of the EBT system led to a decrease in average food expenditures, food expenditures per household member, and household food share. Alternatively, the average number of shopping trips to the grocery store increased.

Levedahl also found that the implementation significantly reduced the marginal propensity to spend on food out of food stamp benefits by about ten percent, and that the marginal propensity to spend out of income was also smaller after the implementation of EBT.

As no information on food intake or food prices was collected, the source of the lower food expenditures is difficult to determine. Levedahl suggests that lower food expenditures may be attributable to lower food prices, and that this may be due to a broader base of stores accepting food stamps via the new electronic system. Lower prices in suburban grocery stores may have led to the recipients' willingness to go to suburban rather than urban grocery stores.

Although Levedahl does not explicitly incorporate the demographic characteristics of the sample population into the food expenditure equations, this may help explain the differences in food expenditures over time. For example, if the sample collected after the implementation of the EBT system consisted of significantly more females, food expenditures may be lower if females generally consumer less food than males.

Perhaps a more detailed study of the alternatives to purchasing food in grocery stores by geographic region and trends in prices over the two time periods may indicate why food expenditures in grocery stores decreased. The availability of low cost fast food or charity care as alternatives to purchasing food at grocery stores are examples of how the market for food may be changing over time.

Finally, although the stigma associated with paper food stamps may have been reduced with the implementation of the EBT system, problems with the operational aspects of the system should also be ruled out as a reason for recipients underutilizing their food stamp benefits. Program proponents need to ensure that the system was properly set up and running in all participating grocery stores and that food stamp recipients are comfortable with the new system, and that they know how to make use of it. Although these types of problems may have been worked out in previous pilot studies, they may need to be re-examined.

Lee et al.

Lee et al. found evidence to support the argument that nutrients play an important role in the demand for food. Using an extended Rotterdam demand model to incorporate the nutritional value of various food groups, income elasticities were found to be positive and less than unity, own-price elasticities were negative, and cross-price elasticities were positive. Although the impact of specific nutrients on the demand for food groups was difficult to interpret, mineral

content had a positive impact on the demand for all five food groups and fat content had a negative impact on the demand for the meats group. No patterns consistent with dietary guidelines were present. The authors concede that aside from the more important factors of taste, smell, and appearance, nutrients may play only a partial role in the average American's diet. Aside from those foods whose nutritional content is highly advertised, such as the vitamin C in orange juice, calcium in milk, etc., the average consumer may not be aware of the nutritional content of the foods they eat. As the authors had aggregated food and nutrient groups in the analysis, the impact of certain nutrients on the demand for food remains obscure.

Lyons et al

Using a finite-horizon, linear-quadratic dynamic game between foreign firms and domestic firms of various sizes, efficiencies and debt levels, Lyons et al. evaluate the importance of the competitiveness and productive efficiency of the food processing sector for predicting policy outcomes. They also evaluate the performance of a sector under selected trade policies and other government interventions. Their findings support the conventional wisdom that protection provides a cushion for inefficient large firms, preventing restructuring and reducing domestic performance. Although the conventional wisdom is based on static intuition, Lyons et al. are able to explain this result by the dynamic effects of market power. They conclude that opening up the market to foreign competition results in all domestic firms being worse off if the large firms are sufficiently inefficient.

Lyons et al. then analyze the impact of competitiveness policies. If the government forcibly breaks up inefficient large firms, all firms remaining in the model are unambiguously better off. As prices rise and output declines, consumers and raw commodity producers are

worse off. The more inefficient the removed firm, the less forceful these results are. The opposite results hold if entry results after the removal of a large firm.

As a second category of competitiveness, collusive behavior is modeled. On one end of the scale, firms can behave as Cournot competitors and on the other end, as a cartel. As the degree of collusion rises, smaller firms' have an incentive to cheat and increase output. Their profits increase, until all of the small and medium firms cheat, resulting in lower output prices for all. The large firms experience a decline in profits that generally offsets the gain experienced by the smaller firms. Thus processing firms will not want to collude.

Asche et al.

Asche et al. define market boundaries for whitefish species and product forms within France, while exploring the relationships between traditional parametric tests and cointegration tests for market integration using prices. They conclude that traditional approaches like causality tests and tests for the law of one price (LOP) provide the same information as cointegration tests. They acknowledge the appropriateness of either approach, stating that if prices are stationary, LOP/causality tests should be used, while if prices are nonstationary, cointegration tests should be used. They specifically advise the use of the Johansen cointegration test as it allows hypothesis testing on the cointegration parameters.

Empirical evidence suggests that one whitefish market exists in France, allowing for both similar product forms made from different fish species, and different product forms made from the same fish species within the same market. They further conclude that the relative prices of the different product forms of cod (frozen, fresh and dried salted) are consistent with the Law of One Price. Together with Gordon and Hannesson's (1996) results, their conclusions support the hypothesis that there is a global market for whitefish.

Summary

In summary, although Levedahl found that Maryland's FSP was less effective in targeting food expenditures after having implemented the EBT system, he could not account for the recipients' lower food expenditures because of a lack of data on food intake and prices. Further information about the target population's food spending habits are needed before the program can effectively improve its operation.

Lee et al. conclude that nutrients may play only a partial role in the average American's diet. This result may be due to a general lack of knowledge regarding the nutritional value of food, and/or to modeling the nutritional value of food groups rather than specific food items.

Finally, Lyons et al. contribute to the existing agricultural policy models by modeling the dynamic structure of economies in transition. Asche et al. show that cointegration tests are a natural extension to the traditional parametric tests used to study market integration and conclude that one whitefish market exists in France.