Economic Evaluation of Commodity Promotion Programs in the Current Legal and Political Environment

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Edited by:
Jennifer L. Ferrero
Cynda Clary

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Branded and Generic Promotion in a Complex Carbohydrate Demand System: A Structural Latent Variable Approach to Promotion Evaluation: Discussion

Michael K. Wohlgenant

I want to compliment the authors of Branded and Generic Promotion in a Complex Carbohydrate Demand System (Richards, Gao, and Patterson) on developing an innovative approach to estimating the effects of promotion on commodity demand. It is clearly important, as they have done, to distinguish between the influence of information and taste on consumer's utility on the one hand, and the influence of promotion on information and taste on the other. The econometric framework they develop allows for incorporation of different variables that can influence consumer utility and it permits a more general interpretation of the factors influencing consumer demand for a commodity, including the influence of generic and branded advertising as well as other promotional activities. Indeed, the application to demand for potatoes and potato promotion indicates other factors related to demand for convenience have played a more important role in shifting demand for potatoes than promotion has.

While the results generated seem quite plausible overall, I have a few areas of concern to discuss. First, although women's participation in the workforce, wider participation in leisure activities, and longer workdays are things that can influence commodity demand for potato and related products, I would hardly characterize them as representing "taste change." In a broader sense, these factors are best viewed as endogenous, being the outcome of joint allocation decisions of consumers and household members between goods, leisure, and other time-intensive activities. Among other things, by viewing the consumer's allocation problem in this way, the econometric model would change in that wage rate (or other suitable proxy for opportunity cost of time) would appear as an additional variable in the demand function. Also, "full income" should be the relevant income variable so that change in length of workday would affect demand through changes in income.

Second, more care needs to be taken to account for constraints imposed by the data. The USDA's per capita consumption values are not retail consumption amounts *per se*, but are disappearance amounts constructed from production

amounts of the primary products. In other words, what is being estimated is not a "pure" demand function in the sense that retail quantities are being correlated with retail prices, but rather something more akin to wholesale quantities being correlated with retail prices. Thus, what is being estimated is more of a hybrid between consumer demand and derived demand for the commodity in question.

What are the implications of this for the model estimated? First, it suggests that there could be other variables reflecting costs of final distribution, packaging, etc. that should be in the model. The model may already capture many of these effects now, but it is incorrect to attribute all of these effects to taste changes.

Another implication of using per capita disappearance amounts is that use of a "representative" consumer demand model, such as the AIDS model, is strictly inappropriate because it is not simply consumer behavior being modeled. This implication suggests using a more general functional form than the one employed, and being careful not to impose such restrictions as symmetry and homogeneity without careful scrutiny.

I also have a problem with estimating a conditional demand system, whereby "total complex carbohydrate expenditures" are taken as exogenous. As LaFrance has shown, this variable need not be exogenous econometrically, and if not, a statistical bias will be imparted to the parameter estimates and elasticities. Clearly, suggesting that some of the commodities (fresh and frozen potatoes) are inferior goods should call this assumption into question.

In addition, and perhaps more significantly, the conditional demand model used assumes that carbohydrates are weakly separable from all other food and nonfood commodities. If this assumption is incorrect, structural change may be falsely indicated by the econometric results. A more general specification would replace expenditures on carbohydrates with total consumer income (or disposable income) and price indexes to represent the impact of all other prices on consumption.

Finally, should demand be specified in quantity or price dependent form? No discussion was offered on the nature of the supply structure, but it clearly has implications for how demand equations are specified and estimated.

In summary, the authors should be commended for approaching commodity evaluations in an innovative way. However, I encourage them to evaluate their results more carefully in light of the constraints imposed by the data used in the econometric analysis.