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DISCUSSION OPENING—*Stephen J. Hiemstra* (Purdue University)

I would like to know more about the type and quality of the data analyzed. We were not given the size of the sample nor an indication of its representativeness. We were told that it was a national survey and that the data came from seven-day recall of household expenditures on food in the previous week. This type of data can be quite reliable, in my experience, but I would like to know more about the way it was collected and the time period spanned in collection. For example, is potential seasonality a problem with the data?

We were told, in a footnote to the paper, that food items without reported nutrient values and standard quantity measures were excluded from the analysis. How many foods were eliminated for these reasons? Rice is not a problem, but the data for starchy vegetables and some fruits may contain serious omissions. We found, for example, in our own study in Liberia, that many foods—vegetables, fruits, cassava, fish, and some meats—were sold in piles or by count rather than by units of weight simply because the villages had no scales. Deriving prices and implied quantities in a meaningful manner for purposes of measuring nutrient content thus becomes difficult. (Further, some of the foods we found did not have known nutrient composition.)

Since prices were derived from cross-sectional expenditure data grouped at the district level, some aggregation problems can be expected. I am surprised that the model avoided a high degree of multicollinearity. Was this problem dealt with? Cross-sectional data yield value weights rather than true prices specified in the theoretical model. Perhaps that is why the three groups selected were significant—they probably had quite different values per pound. How does one interpret the results of a price elasticity of a single commodity, such as rice, for example, on the consumption of total calories. One needs to reorient ones thinking to take account of the importance of the commodity in question in relation to the total consumption of all foods. I would prefer to see price elasticities of a commodity measured with respect to the quantities of that same commodity.

In terms of the findings, I was surprised at the low levels of the elasticities with respect to the household size groups. As I understand them, they should average near 1.0 over the three groups of people, rather than around 0.2, if people at the margin are going to eat anywhere near the average amounts of food.

Finally, I find it hard to rationalize the positive relationships between expenditure elasticities with respect to food energy and protein between the two.

GENERAL DISCUSSION—*Philippe Burny, Rapporteur* (Faculté des Sciences Agronomiques de l'État, Belgium)

In reply to the discussion opener, Jensen said that we can be confident in the data because the sample is large and the representativeness is good. The interviews were seriously undertaken and the questions were clear. However, the problem of seasonality still remains. The prices are aggregated ones.

One participant asked about the decision to study nutrient consumption instead of consumption of the different products. Jensen replied that it is a way to aggregate many commodities. What is important is to know quantities of calories and proteins consumed, whatever commodities they come from.

In conclusion, Jensen pointed out the following findings of the study: (1) low-income households are more sensitive to rice prices than higher income households, and (2) expenditure elasticities increase when income goes up (in fact, a shift from traditional staple foods towards animal products—meat, dairy products—occurs).

Participants in the discussion included I. Soliman.