DISEQUILIBRIA . . . *when things don't fit and other thoughts*

Edward I. Reinsel on Agricultural Data

They Remain Obsolete

Lauren Soth's recent commentary in CHOICES raised several legitimate concerns about the enchantment of economists with mathematics. Honest translation he feared would reveal "little substance behind the diagrams and equations." A related problem only indirectly alluded to by Soth is the conceptual quality of the data that underlies many policy decisions, as well as some applications of sophisticated analytical techniques.

To their credit, several agricultural economists have expressed concerns about the quality of the data. Almost from its formation the American Farm Economics Association, now the American Agricultural Economics Association (AAEA), had an interest in data issues.

Concepts vs Reality

Early concerns focused largely on the need for more data. In response, the availability of some state and local agricultural statistics was improved. However, by the late 1950s Philip Raup raised a more fundamental issue—an inconsistency between data concepts, such as the farm and reality. He said:

It is becoming increasingly difficult to give a succinct answer to the question: "What is agriculture?" We have already seen how the concept of the farm in agriculture is blurring and losing analytical usefulness, in the form which our present statistics report it . . . In a broader sense, the entire concept of "agriculture" is losing distinction . . . We have only the foggiest notions about the extent of total economic activity devoted to the provision and distribution of our supplies of food and fiber products.

By 1972, the recently formed Economic Statistics Committee of the AAEA expressed its doubts concerning the "crumbling" data system. The Committee saw the system as being in "deep trouble" because of fundamental structural changes which had "transformed agriculture and rural life."

The concerns went even further. The committee noted that much data was conceptually obsolete. Continued use of conceptually obsolete data systems, they worried, would make agricultural economics research and analysis less relevant, despite highly developed theory and use of sophisticated analytic techniques. Unless more resources were devoted to solution of these problems, they feared the profession itself could decline.

While people questioned the validity of the concepts on which our data systems were built, economist's analytical tools became more versatile and sophisticated. Developments in economic theory, application of constructs from other disciplines, greater use of more powerful statistical techniques, and the increasing use of computers suggested new and challenging lines of work which could potentially utilize large masses of data.

Pushing ahead with "research" clearly held more fascination of many professionals than did working for improvements in the data systems. Major conceptual improvements such as were suggested by the 1972 Economic Statistics Committee are yet to be realized. For example, they raised concerns about statistics on farm population, but we still estimate the farm population about as we did then.

In themselves farm population estimates are not harmful. However, data users sometimes treat them as if they were counts of members of families operating farms—a correspondence which was essentially valid many years ago. But today the farm population includes people working exclusively in nonfarm jobs. And it doesn't count those who live in town but travel to their farms to operate them.

We still count as farms those places from which $1,000 or more of agricultural products were sold or normally would have been sold during the year. But given the heterogeneous agriculture we have in the 1980s, what is a farm? Is it the sterotype we brought from childhood? Or is it a large integrated broiler operation?

Deciding What to Measure

Some people are largely concerned with units engaged in production of food and fiber while others would like more information on people and their socio-economic situations. Can we reach a consensus on what we want statisticians to measure? Or do we keep trying to force the real world into a mold of concepts that were once appropriate but have by now become outmoded?

Agriculture has been experiencing severe difficulties recently. Clearly, those difficulties cannot be attributed to data problems alone. But, a different set of data focused on the finances of households relying heavily on agriculture could have alerted us much earlier to the present financial crisis. And what of the future? Will our continued adherence to concepts that were appropriate to the situation at the end of World War II bring an increasing mismatch between available information and analysis and that needed for policy choices?

Improvements Require Time and Effort

Even given agreement on the extent and depth of the data problems and on what to do about them, new statistical programs would need to be funded and could take several years to become established. Making changes in the concepts on which agricultural and rural data are based will require input and work from a wide spectrum of interests.

Translating the new statistics into new programs and policies will require an even longer term. Users of data, especially those whose policy recommendations can greatly affect the sector, must recognize the need and their role in the process. We could enter the twenty-first century with improved data and be better able to anticipate events and the effects of alternative policy options. But improvements will come only if data users, including those relying on sophisticated models, take an active interest and work toward realization of a data system that describes reality rather than perpetuates outmoded concepts. ■

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