In an introductory textbook, Paul Samuelson defines a fallacy of composition as "a fallacy in which what is true of a part is, on that account alone, alleged to be also necessarily true of the whole."

For example, financial difficulties lead individual farmers to intensify their search for profitable alternative crop and livestock enterprises. Sometimes they turn to an enterprise that appears to have an alternative profit potential. However, if many farmers make the same decision, an oversupply of that product can occur, prices can drop, and the potential profits evaporate. While additional production of a specialty crop by one or even a few producers may help that farmer (i.e., provide positive profits), additional production by many farmers can leave all of them worse off.

Why is this the case? Either demand does not expand sufficiently over time to maintain prices for the increased production, or consumption expansion in response to lower prices is insufficient to maintain profitability. Thus, what could work for one or even a few farmers may not necessarily work for all farmers.

**A Long List of Alternatives**

Individual farmers have a long list of possible specialty crops they might grow to increase their income. They have shown widespread interest in horticultural crops such as tomatoes, peppers, and broccoli. Other possibilities include everything from cut flowers to Christmas trees to ginseng roots. There are fewer livestock alternatives to the production of beef cattle, hogs, or dairy. Sheep production is attractive in some areas, given the high price of lambs relative to cattle and hog prices. Other possibilities include honey and commercial fish production.

Informational programs sponsored by state departments of agriculture have encouraged farmers in a number of states to initiate and expand specialty enterprises. However, too often there is insufficient attention to what happens if a sizeable number of farmers go into a particular specialty enterprise. If institutions such as Colleges of Agriculture are to help farmers increase their incomes, both colleges and producers must be concerned about the aggregate implications of the decisions made by individual farmers.

Do not misinterpret. It is entirely appropriate for some producers to enter or expand production of specialty enterprises. But individual producers must keep a wary eye on how many other producers are doing the same thing and on what the effects will be for market prices.

Further, public institutions have a special responsibility to help individual producers understand the risks. In addition, while specialty enterprises can help some producers, specialty enterprises are not a panacea for large numbers of people.

**An Illustration**

A slightly tongue-in-cheek illustration comes from Kentucky. There, farmers are seeking alternatives to replace income from tobacco that may be lost as consumers quit smoking because of health concerns. A sheep enterprise is a possibility.

A 100 ewe flock generates a gross income of about 10 thousand dollars, roughly comparable to 2 acres of burley tobacco. Net income can also be very similar for a 100 ewe flock and 2 acres of burley tobacco, particularly if forages available on the farm have a very low opportunity cost—that is, if any value for other uses. (That's the argument often made with respect to labor in tobacco production).

Now suppose we wish to replace $800 million more-or-less in lost tobacco income in the state. This will require 80 thousand flocks of sheep, each with 100 ewes. There are currently approximately 100,000 farms in Kentucky, so if sheep production is to be as good an income generator for all farmers on the whole as was tobacco, sheep will clearly not do the Kentucky countryside.

The 80 thousand flocks represent 8 million ewes. They will produce 10 million lambs, each weighing about 100 pounds for a total production of 1 billion pounds of lamb. This represents 420 million pounds of retail weight.

The only problem is that this production represents nearly 2 pounds for every man, woman, and child in the United States, and current per capita consumption is about a pound and a half per person per year. Now if sheep producers could only get people to consume more lamb, they could solve their income problem. An analysis on Christmas trees along these lines is even more fun.

**Not For Everyone, But For Some**

It is obvious that specialty enterprises are not the answer for everyone. But they surely are for some people. Some people do make money growing Christmas trees; others make money growing catfish. Even soybeans at one time was a specialty crop.

Thus, it is important for individual producers to follow these rules: (1) assess costs accurately (this includes returns from other possible enterprises), (2) give special attention to marketing, (3) closely monitor information indicating how many other producers may be doing the same thing, and (4) project possible price effects due to increased production by other farmers.

Institutions serving a particular specialty enterprise have a special responsibility. Aggregate supply demand and price effects need to be assessed. Moreover, cost structures of competing producers—domestic and foreign—need to be studied, and this information needs to be communicated effectively.

Astuteness by individual producers, together with effective support by private enterprises, and public analysis and information are essential if individual producers are to avoid becoming the exception that proves the rule of the "fallacy of composition."