

Economic analysis at the farm vs. national levels

Even ignoring the impact of the current trade dispute with China, we are now in the 7th year of generally declining crop prices. In addition, significant trade adjustment payments and general farm program payments are not enough to stanch the flow of red ink across the financial records of most farm operations today. As a result, farm bankruptcies are increasing, and farm operator suicides are making the front page of newspapers large and small.

Why do we keep experiencing long periods of low crop prices when we have known about this problem for more than one hundred years? Why do we keep making the same mistakes in designing agricultural policy when it comes to writing a new farm bill?

The two of us have wrestled with this question for a long time. Our conclusion; it is a matter of the economic theory policy makers choose to use when they go about the business of designing farm bills. They are using neoclassical economic theory which is the dominant theory that has been taught in economics and agricultural economics classes for more than forty years and there is an important justification for that (there is also a but...).

When making decisions at the firm-level (in this case farm-level), microeconomics provides farmers with the analytical tools they need to maximize their profit or at least minimize their losses in a period like the current one. The farm management tools that students learn in their economics classes can make the difference between a well-managed farm and one that unnecessarily loses money. At the microeconomic level of the firm, neoclassical economic theory provides farmers with the tools that they need.

Though neoclassical economic theory functions reasonably well in the microeconomic analysis of firm-level profit and loss, it fails to provide an accurate macroeconomic or sector-level representation of the overall or national agricultural economy.

Based on a whole host of behavioral and parameter assumptions, many of which are not appropriate for agriculture, a set of elegant mathematical equations can be used to generate the general equilibrium portion of the theory that does not resemble how the agricultural economy operates at the sector level.

The measure of any economic theoretical framework ought to be how well it describes the way economic systems operate in the real world and not necessarily in the elegance of the equations used to construct the theory.

In the case of agriculture, the theory ought to lead to the design of policies that help the agricultural sector manage known problems like long periods of low prices punctuated by occasional years of higher prices. Since the characteristics of aggregate agriculture, including low price elasticities of supply and demand, are not fully representative, neither in our view are the results or the policy implications.

While economic theory does a great job representing how farmers make production decisions on their individual farms, there are two areas where microeconomic theory does not fully prepare farmers of the challenges they face—negative externalities and consolidation.

In the case of agriculture, negative externalities are costs that are created in the production of crops and animals that are not directly borne by the producer but are paid for by others. In many cases the cost of the loss at the farm level is less than the cost of preventing the loss. These can include soil loss, nutrient loss, farm chemical loss, the release of greenhouse gases, and the development of antibiotic resistant bacteria.

Depending on the technology used, those who seek to reduce these negative externalities through changes in their production practices may be imposing costs on themselves that are not borne by other farmers placing them at competitive disadvantage, It may take either regulations or changes in agricultural technology and practices to level the playing field between those who seek to reduce externalities and those who do not.

In the case of consolidation, individual farmers can find themselves at a distinct disadvantage in their purchase of farm inputs and their marketing of the products they produce. On the input side, the millions of farmers around the world are dependent upon a small pool of firms they can purchase from. Thus, they often have little bargaining power when it comes to their purchases of farm equipment, seeds, and farm chemicals.

In marketing their crops and animals, farmers are faced with a similarly limited set of firms, resulting in little bargaining power in determining the price they receive for their production.

When it comes to concentration, microeconomics provides farmers with little leverage when faced with a limited number of large firms with which to conduct their business. While cooperatives can provide some help in these situations, when compared to commercial firms, cooperatives are relatively small. Rather than microeconomics, the agricultural economics profession may need to return to its social science roots to address issues like market concentration.

Policy Pennings Column 1002

Originally published in MidAmerica Farmer Grower, Vol. 37, No. 248, November 15, 2019

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