

Public agricultural research: Is it trade distorting?

I am convinced that elephants show-up in the “living rooms” of nearly all professions at sometime or other. And, every so often the elephant grows so large that society won’t let the offending profession be in denial any longer. Recent examples are major Wall Street brokerage firms and The Big Whatever-The-Number-Is-Now Accounting Firms. In the agricultural policy analysis arena (i.e. living room) one of the largest elephants concerns the question of which policies count as market interventionist and therefore are price distorting and which are not.

For years the conventional wisdom has been that all that is needed to free agricultural markets from government intervention is to eliminate commodity programs. The implication being that commodity programs are the only ones that bring about significant government caused deviations in the positions of the free-market supply and demand curves of agricultural products. Thus, any “dead weight” loss, to use the economists’ lingo, is caused by set asides, price supports or some other commodity program. So it is no surprise that, aside from tariffs and import quotas, commodity programs have been identified as the main trade-distorting villains in eyes of the World Trade Organization (WTO). But are commodity programs the only way in which governments affect supply/demand balances, or more precisely, the positions of agricultural supply and demand curves?

For now let’s just consider supply. For crop agriculture, supply has two components: acreage and yield. Of the two, commodity programs usually affect acreage. Acreage could be reduced with an acreage reduction program or affected by the level of price or income supports. Price and income changes resulting from commodity programs may affect input-use per acre and therefore have a limited impact on yields. Generally though, it’s the impact of commodity programs on acreage that receives the most attention.

The interesting thing is that over the long haul, say a half-century, total acreage devoted to the eight major crops has not changed all that much (263.9 million acres planted in 1950 and 251.4 million acres planted in 1999). Of course, production has increased nearly three-fold over last fifty years. Virtually all that increase in agricultural production has come from increased yields. Hence, the major shifter of agricultural crop supply is yield per acre which, in turn, is due to technological advances. What would you say if I asked you, “What are the major sources of the basic research that have enabled the yield-increasing technological advances?” I am willing to bet that at the top of your list, or not far down the list, would

the agricultural experiment stations or agricultural research service. Remember now, these research entities and their educational counterparts, the extension services and land-grant universities, are supported by the public via tax collections.

So if we agree that 1) yield increases have been the greatest source of change in crop supply over time and 2) a large share of that increase is due to publicly financed research and education, then it follows that commodity programs are not the only source of government intervention in agricultural markets nor are they even the major source. Acknowledging this more pervasive source of public-policy market intervention requires broader applications of analysis frameworks than customarily used by welfare economists and trade analysts when evaluating agricultural policy.

As surely as publicly sponsored productivity advances are enormous interferences in crop markets, it would be just as unquestionably unwise to eliminate them, even though that indeed would be the free market thing to do. In our view, advancing agricultural productive capacity, note the word “capacity,” is an important and commendable function of government. Hence, just as eliminating publicly sponsored research and extension would be short-sighted and unwise, so is making sweeping policy recommendations based only on calculations of commodity-program market disruptions while ignoring the dominant government market intervention: supply expansions via publicly-supported yield enhancing productivity advances. Even today as private research levels take a larger role in productivity advances, we must remember that this research is built on the foundation of past and present public research.

Food is different. Economists’ narrow use of welfare and trade analysis techniques (that may be appropriate for analyzing market distortions in non-food industries) inadequately reflects the complex ways that the public sector intervenes in agriculture markets. The first step is to acknowledge that the elephant exists. A logical next step would seem to be to re-evaluate domestic and trade policy prescriptions that were made in the presence of the elephant.

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