Agriculture and Trade Analysis Division
Economic Research Service
United States Department of Agriculture

Staff Report # AGES870928
1988

Trade and Development

Shane, M., ed.

Proceedings of a Meeting of the
International Agricultural Trade Research Consortium
December, 1986, CIMMYT, Mexico City, Mexico

IS THERE A ROLE FOR PRODUCER AND CONSUMER
SUBSIDY EQUIVALENTS IN TRADE NEGOTIATIONS?

Nancy E. Schwartz[1]

The U.S. Department of Agriculture's (USDA) calculations of producer and consumer equivalents, termed PSE's and CSE's consist of two components.[2] Indirect and direct budget transfers to farmers, or what might be called the budgeted subsidy effect are the first kind of components. Indirect means of raising farm incomes through border measures, which put a price wedge between domestic and world prices, are the second kind. Calculated this way, the absolute value of these transfers to farmers approximates producer surplus without the deadweight welfare triangle. The CSE approximates consumer surplus.

One suggestion for possible strategies in the current round of General Agreement on Tariffs and Trade (GATT) talks is to negotiate a reduction in PSE's and CSE's, among all participants. Before such a strategy is adopted, negotiators need to be aware of potential limitations of the statistics that could prevent their use. This chapter reviews some of those limitations, focusing on PSE's.

There are some general limitations for which it is difficult to correct but which are not sufficiently large to prevent the PSE's from being used as negotiating tools. First, the policies of certain countries have a spillover effect on other countries. Perhaps the most obvious example of this effect is the U.S. loan rate. The loan rate represents a floor price to the rest of the world, and, therefore, effectively subsidizes foreign production. The effect is magnified, as we have seen in the past 5 years, when the U.S. dollar is overvalued internationally. Foreign expansion is less risky but more profitable provided that the loan rate is higher than the free-market world price (the price that would prevail in the absence of the loan rate). In a broader sense, the measures fail to take into account any large-country price effects on the world reference price. All countries are assumed to be price takers. Therefore, changes in border prices or budgetary expenditures are assumed to have no effect on the world reference price. In reality, however, a major policy change in a large country will probably affect the world price.

Second, the PSE's and CSE's have to be measured in a common currency to measure the wedge between domestic prices and a world reference price. For example, the reference price, expressed in dollars must first be translated into a domestic currency amount. PSE's and CSE's are therefore sensitive to changes in the value of countries' exchange rates compared with the dollar. As the dollar appreciates, it reduces other countries' PSE's and CSE's because it raises the world reference price. Countries that do not change their domestic programs therefore will appear to be subsidizing less if their currencies depreciate against the dollar. Even when the measures are corrected for certain types of exchange rate policies, the basic problem remains.

Third, PSE's and CSE's are subject to volatility from year to year because of changes in supply and demand, even if a country's policies do not change. For example, a bumper crop in a small country might increase the value of cash receipts relative to transfers. If the price wedge were small in comparison to budgetary expenditures, the PSE would tend to fall. By contrast, a crop shortfall might increase the PSE.

---

[1]The author is an economist, Agriculture and Trade Analysis Division, Economic Research Service, U.S. Department of Agriculture, Washington, DC. These comments are a summary of a paper delivered at the winter meetings of the International Agricultural Trade Research Consortium held in El Batan, Mexico, Dec. 13-18, 1986.

[2]Except as noted, my comments are restricted to USDA numbers. The PSE's and CSE's calculated by the USDA are not always consistent with the Organization of Economic Cooperation and Development (OECD) calculations. Nor are all the OECD numbers calculated in the same manner.

In sum, the measures will vary from year to year as world prices fluctuate, as exchange rates change, and as supply and demand rise and fall about trend. This volatility suggests that negotiators will need to agree on the base year as well as on the measure. Despite these limitations, the OECD countries did agree on a base year for their trade liberalization study. Therefore, it is reasonable to expect that these measurement problems, while serious, are not insurmountable obstacles to the negotiations.

Other problems are likely to present more difficult obstacles to using the current PSE and CSE formulations in the negotiations. First, some key policies have escaped inclusion due to political or measurement problems. Export credits, for example, are excluded. Excluding such programs sends a signal that these are nondistorting programs or that these kinds of programs will not be subject to international scrutiny in the trade negotiations. Since export credits do not show up as line items in Government budgets, they signal the wave of future subsidies. Countries may infer that any program effectively subsidizes farmers without adding to the Federal or State budget (or otherwise raising the PSE) will be sanctioned, regardless of its trade effects.

A minor related point is that the measures include some expenditures such as research costs, which should be left out. The largest countries expenditures on research, in fact, have substantial beneficial spillover effects onto other countries.

The second and most serious problem with the USDA transfer measures is the weighting system. For example, the USDA measures as currently calculated, do not take supply management effects into account. In broader terms, the measures do not weight expenditures by their trade effects. Specifically, they do not weight expenditures by how much the policy package induces new production, in the case of PSE's, or shrinks consumption, in the case of CSE's. Were the current PSE's to be negotiated, a $10-million cut in research expenditures for a given country would have the same effect on the value of a PSE as a $10-million drop in deficiency payments. Trade-weighted or "effective" PSE's are needed if the negotiations are to result in meaningful cuts in subsidy levels.[3]

If PSE's and CSE's are to be used in negotiations, participants need to agree on certain technical issues. They must reach consensus on which policies should be included and, possibly, on which methodology should be used to calculate the trade, or additionality effects. For example, countries will have an incentive to undervalue their own-price supply and demand elasticities, and to assume that their elasticities of substitution are infinity.

The principal value of PSE's and CSE's is that they helps identify which policies are the major sources of protection in each country. They also determine where changes ought to be made. First, however, an effective measure or an alternative negotiating strategy that addresses the issue of additionality is needed.

Even "effective" PSE's and CSE's may not be tractable negotiating tools. Can we assume, for instance, that after comparing PSE's, individual countries will be willing to swap changes in what are essentially domestic policies for changes in another country's border measures? We are still a long way off from anticipating that outcome at the GATT trade negotiations.

---

[3]Although none of the USDA numbers have been trade-adjusted, some of the OECD numbers have been. OECD transfer measures therefore are not strictly comparable across countries.