

NONTRADE CONCERNS: RECONCILING DOMESTIC POLICY OBJECTIVES WITH FREER TRADE IN AGRICULTURAL PRODUCTS

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Since the conclusion of the Uruguay Round of trade negotiations in 1994, there has been increasing debate about the implications of freer trade for domestic or “nontrade” objectives in agriculture. These range from traditional concerns, such as food security and rural development, to more recent issues such as the relationship between agriculture and the environment, and the effects of agricultural practices on human health and animal welfare. For countries reluctant to reduce agricultural protection, a key issue is the extent to which domestic policy objectives would need to be sacrificed under freer trade. For countries espousing trade liberalization, the issue is whether domestic policy objectives will be used as a guise to undermine freer trade in agricultural products.

In this paper, we focus on two areas of concern that are stressed by rich, developed countries—the linkage between agriculture and the environment, and animal welfare. Environmental issues are prominent in Asia, Europe and, increasingly in North America, while animal welfare is a major issue in Europe. It is generally acknowledged that agricultural support, provided through implicit consumer taxes and direct subsidies in developed countries, generates much of the distortion in global agricultural trade. The more than \$300 billion of agricultural support that is provided annually by OECD countries, disadvantages developing country exporters and causes distortions in importers. Ensuring that there are effective disciplines on trade-distorting forms of support will be vital to the suc-

cess of the current Doha round of WTO negotiations.

Noncommodity Outputs and Attributes and Policy Choice

It is increasingly recognized that agricultural production can generate positive and negative externalities, and that agriculture’s use of the land may yield public good benefits that are local in nature. Positive contributions may include the provision of wildlife habitat and recreational space, and the cultural heritage embodied in landscape. Negative contributions can include soil degradation, atmospheric and water pollution, the destruction of wildlife habitat, and the provision of unaesthetic landscapes. The role of agriculture as provider of a range of public goods and services, jointly produced with commodity outputs, is captured by the term “multifunctionality.” A central issue is whether trade liberalization would lead to a suboptimal supply of these jointly produced positive noncommodity outputs. Further, since many noncommodity outputs are not traded in organized markets, a second issue is to identify policy measures to correct for missing markets and market failure.

The industrialization of agriculture, in particular the transformation of animal agriculture into a large-scale, capital-intensive activity, has led to growing concern about the impact of production practices on the well-being of animals. In Europe, animal welfare is just one aspect of broader public concern about food and agriculture (Blandford et al.). Animal welfare is often bound up with public perceptions about issues such as food quality and safety, and new technologies, such as genetic modification. Animal welfare can be viewed as an attribute of commodity production, but one which is linked more closely to the production of particular commodities (e.g., meat) than are some other noncommodity

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outputs of agriculture, such as environmental services.

The Economic Issues

Economic theory provides pointers to policies to internalize the effects of externalities or public good attributes of noncommodity outputs. If we subsidize the positive externalities and tax the negative ones at their marginal social value and cost, respectively, we obtain the welfare-maximizing Pigouvian outcome for internalizing external benefits (e.g., Baumol and Oates, Boisvert). While this solution may seem simple, its implementation presents significant challenges. At a minimum, we would require some measure of the marginal benefits and costs associated with each noncommodity output, as well as knowledge about the joint production relationship between noncommodity and commodity outputs.

Assigning monetary measures to the benefits or costs associated with nonmarket goods is a challenge. Research into the valuation of nonmarket goods is largely the domain of environmental economists. Much of their work is based on contingent valuation methods (CVM), discrete choice modeling, and more recently on experimental economics.¹ There are several reasons why valuation is particularly difficult for agriculture's noncommodity outputs and attributes.

The first challenge is the difficulty of identifying what should be valued. For example, although the public may be willing to place a subjective value on landscape, what exactly is viewed to be of value? Is it a particular pattern of land use, small fields, for example? Is it that there are particular crops in the fields or that the fields are interspersed with wooded areas that provide wildlife habitat? Is it simply that there is open space or that access is provided to that space? Would the value placed on the landscape differ if land use were to change, for example, if the fields were enlarged, or if existing crops were replaced with grass and livestock? These are important issues, since it is difficult to assess what policy instruments might be appropriate to ensure an optimal supply of landscape attributes if those attributes are unclear.

Difficulties in valuation are further compounded if several noncommodity outputs are jointly produced. Hoehn and Randall, and Carson, Flores, and Hanemann indicate that problems can arise if net social benefits are estimated by summing individual values of nonmarket goods, each derived independently using conventional CVM or other valuation procedures. By ignoring joint production and policy interactions, such procedures will systematically overstate benefits or understate costs.² Recently, Randall has proposed a strategy for addressing these issues within the context of multifunctional agriculture, but to date, no empirical work has been attempted.

The geographic scope or extent of positive and negative attributes poses another challenge. Empirical CVM results are often based on data derived from small-scale studies at the local or regional level. The goods valued are narrowly defined. For these reasons, it is difficult to apply the results to national policy analysis. The extent to which nonmarket values elicited from respondents at a given location can be applied elsewhere or aggregated to larger regions is the subject of the "benefits transfer" debate in the environmental economics literature (Brookshire and Neill).

A final valuation issue is demonstrated by animal welfare, where at least in theory markets can be created through appropriate labeling. In this case, there are often substantial differences between what the general public expresses as their willingness to pay for particular attributes associated with agricultural production, and what they reveal they are willing to pay in the marketplace.³ Contingent valuation studies have generally concluded that European consumers would be willing to pay a substantial price premium for "welfare-friendly" livestock products, but it has proven difficult to extract such a price premium for such products in the marketplace (Blandford et al.). Whether this might hold for attempts to price environmental services provided by agriculture is an open question.

The second major challenge stems from the difficulty of establishing an unambiguous joint relationship between commodity production

² Carson, Flores, and Hanemann note one particular disturbing aspect of valuation efforts: "... the observation that if one summed the public's estimated values for individual environmental amenities, the sum may exceed disposable income." (p. 314).

³ Since attitudes to animal welfare are related to ethical values and beliefs, some have difficulty with the concept of placing a monetary value on this type of attribute.

¹ Mitchell and Carson document the contingent valuation method and its numerous applications to valuing a diverse range of public goods.

and the supply of noncommodity outputs. For example, how exactly does a particular farming system contribute to the supply of the positive attributes that are associated with landscape? Are these uniquely associated with a particular combination of inputs or mix of commodity outputs? Are they uniquely related to existing production methods and pattern of land use? In the policy debate on multifunctionality, the inference often appears to be made that a fixed proportional relationship exists between commodity supply and noncommodity outputs in agriculture, but this is extremely unlikely (Boisvert, Blandford and Boisvert). A given noncommodity supply is likely achievable with various factor proportions and intensities, alternative commodity output mixes, and under a range of production practices. The desired supply may even be achievable without any agricultural production whatsoever; for example, through land idling or conversion to forestry.

While the theory of joint production is well understood, most interest in the subject has been directed toward its implications for estimating complete systems of agricultural supply and factor demand (Shumway, Pope, and Nash; Leathers). The focus of these studies has been exclusively on commodity outputs, in part because data on noncommodity outputs are and their values are not available. Without such data, it is difficult to assess the effectiveness of policies in achieving their intended objectives.

Toward A Workable Solution

Faced with these substantial obstacles, how can we ever hope to formulate policies to achieve a socially optimal supply of noncommodity outputs? In reality, we probably cannot expect to do so. However, a workable solution would be to specify conditions and actions that are likely to lead to the desired supply of noncommodity outputs or attributes, for example, a set of production standards that will result in improved animal welfare or standards for the maintenance of a certain area of wildlife habitat on farms. Regulation, monetary incentives, or some combination of the two could then be used to achieve the desired standard.⁴ While

the choice will be driven largely by the political process, in particular, the ability of farmers to extract payments from taxpayers, the provision of monetary incentives could take account of international obligations to be minimally distorting. It is unlikely that payments to achieve target levels of supply for noncommodity outputs and attributes will ever be entirely nondistorting; any feasible instrument will likely have some impact on production and trade (e.g., Peterson, Boisvert, and de Gorter).

This issue is important, because, as noted above, the Uruguay Round agreement on agriculture limits the permissible set of domestic policy measures to those that are minimally production and trade distorting. However, the identification of preferred policy instruments may involve a trade-off between efficiency in achieving the desired supply of a noncommodity output or attribute and effects on commodity production and trade. On these grounds, Blandford has argued that a direct output subsidy is likely to be preferable to price support in ensuring a flow of environmental services associated with a given commodity output. Blandford and Boisvert argue that a land-use payment is likely to be preferable to an output subsidy when the supply of services is linked to how land is used.

Noncommodity Outputs and Attributes and the WTO Negotiations

The proponents of freer trade might argue that the main issue with nontrade concerns is their potential to undermine the WTO negotiations. Given the substantial difficulties in formulating policies to address such concerns, it is easy to see how they might divert attention from the central focus of the negotiations—the reduction of tariffs and increase in market access, the elimination of export subsidies, and the elimination of trade-distorting domestic subsidies. Some countries may place particular stress on nontrade concerns in order to justify existing forms and levels of protection. Nevertheless, it seems clear that some attempt must be made to accommodate nontrade concerns if the negotiations are to be successful. The main issue is how to internalize externalities and ensure the supply of public goods in a way that can be accommodated within rules that govern the use of trade measures and domestic subsidies. To highlight the extent to which this can be done, it is helpful to provide some illustrations.

⁴ Baumol and Oates emphasize the fact that regulatory agencies such as the U.S. Environmental Protection Agency often adopt standards as a way to ensure appropriate levels of environmental quality.

To begin, there would seem to be little difficulty, in principle, in internalizing a negative externality from domestic agricultural production in a way that would be nondiscriminatory. For example, overuse of fertilizer leading to pollution of water supplies could be addressed through the imposition of a consumption tax on all fertilizer, whether produced domestically or imported. This would disadvantage domestic agricultural producers if foreign competitors do not pay such a tax, but the desired domestic outcome would be achieved if fertilizer use and the pollution associated with it decline. However, inasmuch as domestic welfare is influenced by the impact of production practices in foreign countries, there could still be a problem. One case in point would be where a river crosses an international boundary downstream from where agricultural chemicals are released into the water. Another is global climate change, where it is acknowledged that emissions from animal agriculture may contribute to global warming. If a tax is imposed on domestic animal agriculture to internalize this externality, but a similar tax is not imposed in a trading partner, the net effect might simply be a relocation of production rather than an overall reduction in emissions. In this case, it would be necessary to develop a multinational approach to limiting the externality directly, rather than attempting to tackle the problem through trade measures.

Similarly, the imposition of a higher standard of animal welfare could be achieved through regulation. This may increase production costs. If domestic producers cannot extract a price premium for their animal products, they would be at a competitive disadvantage relative to foreign suppliers who produce under lower standards. The desired domestic outcome would be achieved, in that domestic production practices would be improved. However, if nonconforming imported products are available, consumer utility could decline if these are indistinguishable from domestic products.

Current WTO rules do not permit the use of import bans or taxes to address these issues. Article XX of the GATT places strict limitations on the use of trade restrictions, requiring that these should not “constitute a means of arbitrary or unjustifiable discrimination between countries where the same conditions prevail.” Accordingly, restrictions or taxes imposed unilaterally on the grounds of differences in production standards could violate this requirement in that they might be applied

to products from some countries but not others.⁵ Article III.4 of the GATT specifies that imports “be accorded treatment no less favorable than that accorded to like products of national origin.” Article 2 of the Agreement on Technical Barriers to Trade (TBT agreement) applies this equal treatment stipulation to the preparation, adoption, and application of technical regulations by governments. Even if environmental or animal welfare standards differ among countries, the resulting products would appear to be “like products,” so that unilateral import restrictions would appear to violate Article III. Technical regulations and standards that discriminate against “like products” from different production systems would also be illegal.

This does not mean that measures, such as labeling, could not be used to provide domestic consumers with information on environmental or other attributes of products in order to stimulate “appropriate” response. For example, after an attempt by the United States to ban imports of tuna from countries that did not respect its norms was ruled illegal by a GATT panel (Blandford and Fulponi), labeling was adopted by food processors to identify tuna caught with fishing methods that do not kill dolphins. In Europe, where there is sensitivity to food products that involve genetic modification, labeling to indicate the absence of such food ingredients is increasingly common. While mandatory labeling of imported products that do not meet domestic norms might be viewed to be discriminatory, there is ample scope for the use of labeling in a nondiscriminatory way.

Beyond these measures, possibilities also exist for multilateral agreement on standards that would avoid the difficulties posed for the GATT/WTO framework by a unilateral approach. Both the United Nations and the OECD have been active in this area for food and agriculture. Through the OECD, roughly 60 countries have established voluntary international standards for a range of products traded internationally. The Codex Alimentarius Commission, a joint effort of FAO and WHO, has focused on food safety standards

⁵ In the U.S. shrimp/turtle case, the panel did not deny the right to apply domestic process standards to imported goods, but that these would need to be applied on a batch-by-batch basis, rather than to all goods imported from a particular country. Bagwell and Staiger argue that countries could be allowed to impose domestic standards and use tariffs to offset the competitive disadvantage that these create, provided that they are also required to preserve previously negotiated market access.

and practices. While Codex uses “sound science” as the basis for standards, some have raised the possibility of including standards that are not uniquely science based and health oriented. Runge has suggested that the Codex could deal with issues relating to standards created by environmental issues.

A further issue is the use of subsidies to internalize a positive externality or to ensure the supply of a public good. The Uruguay Round agreement on agriculture identified a class of subsidies, the so-called “green box” measures that are permissible forms of support, since they are considered to have no or minimally distorting effects on production or trade. Annex 2 of the AoA specifies that a green-box measure must satisfy two basic criteria: (a) “(it) shall be provided through a publicly-funded government programme (including government revenue foregone) not involving transfers from consumers; and, (b) (it) shall not have the effect of providing price support to producers.” Payments that are part of clearly defined environmental or conservation programs that are linked to production methods are permissible, provided that these are limited to extra costs or loss of income caused by compliance. It is also permissible to use payments to remove land from production. What seems to be problematic is the use of payments that encourage production of a particular commodity, even if the positive externality or public good depends upon such production. The use of a direct payment would be preferable to price support from the perspective of trade liberalization, since the latter would create distortions in both production and consumption, and would require import protection. Interestingly, under current rules it might be possible to compensate producers for the costs of adopting higher animal welfare standards, if animal welfare were viewed to be a legitimate “green-box” objective.

The restriction on the linkage between payments and production is understandable if one assumes that any level of production in excess of that under free trade prices represents a distortion. It is less convincing if missing markets imply that the level of production under free trade would itself be distorted. Blandford has argued that one way to deal with this issue is to introduce a review and approval requirement within the WTO for all policies that involve government payments. Unlike the current dispute settlement procedure, in which the onus is upon countries who believe that they are affected by a particular policy measure to initi-

ate a review by the WTO, the new mechanism would put the onus on the country planning to implement a green-box measure, to prove that this will achieve the desired domestic outcome and be minimally trade distorting.

Conclusions

It would be inadvisable to ignore nontrade concerns in the current Doha round of trade negotiations on agriculture, despite the complexity that these concerns create for the trade liberalization process. In the wealthy countries that have a key role in international agricultural trade, the public is becoming increasingly aware of the noncommodity outputs and attributes associated with agriculture. Indeed, some might argue that these attributes, such as agriculture’s environmental role and methods of food production, are rapidly overtaking food itself as the key concern of the general public. It is clear that there is growing public concern in many countries about the food system and how it is evolving. This is indicated by the fact that some recent books on the subject have been best sellers (Humphrys, Schlosser), and by the increasing number of initiatives by food producers, processors, and distributors to address these concerns (Blandford et al.).

We argue that it is possible to address important nontrade concerns in ways that are consistent with the further liberalization of agricultural trade within the GATT/WTO framework. The aim would be to identify policy approaches that are less trade-distorting than those currently used as the mainstay of agricultural policy, in particular high internal support prices and import protection. This would have the advantage of improving global economic efficiency and permitting the gains from freer trade in agriculture to be realized.

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