

Agricultural Trade Liberalization, Globalization and Rural Economies

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The Agreement on Agriculture (AoA), which resulted from the Uruguay Round of trade negotiations under the General Agreement on Tariffs and Trade (GATT), created a major change in the international policy environment for agriculture. The signing of the Agreement in 1994 effectively meant that domestic agricultural and trade policies were brought under international discipline for the first time since the creation of the GATT in 1947. Under the AoA various forms of agricultural protection used around the world were replaced by tariffs and reductions in these tariffs were established; levels of access for imports to domestic markets were agreed; limitations were placed on export subsidies; and reductions were specified for levels of domestic subsidies. The new round of trade negotiations, the Doha Development round, currently in process under the auspices of the World Trade Organization, is focusing on further reductions in import barriers, export subsidies and trade-distorting domestic support, and increases in market access for agricultural products.

The possibility of further agricultural trade liberalization, plus the trend towards the increasing “globalization” of food and agricultural markets, has raised concerns about the future for rural economies, particularly in countries that have typically sought to shield agriculture from international competition. Will agricultural trade liberalization exert major pressures for change on the rural sector in such countries? Will these pressures occur whatever happens in the WTO? Will trade liberalization and globalization (the closer integration of markets around the world) mean the end of agriculture in many rural areas? How can social dislocation be prevented, and how can valuable social assets, such as cultural heritage or the environmental contribution of agriculture, be preserved?

The changing role of agriculture in the economy

Agriculture has undergone enormous changes in recent years, particularly in the countries of Europe and North America. In 1960, for example, agriculture generated 9 percent of national income (gross domestic product or GDP) and 21 percent of total civilian employment in the fifteen countries that now make up the European Union. At the beginning of the 21st century, agriculture generated less than 2 percent of the EU’s national income, and accounted for roughly 4 percent of total employment. The Organization for Economic Cooperation and Development (OECD) estimates that in the ten-year period between 1986 and 1996, the number of full time farmers in the EU-12 fell by roughly 25 percent, and the number of farms declined by 20 percent (OECD, 1998). Those farms that remained became larger – the number of farms over 50 hectares increased, the number of smaller farms declined. The OECD also notes the declining economic importance of agriculture and related industries in rural areas. As early as the late 1980s, the contribution of the agri-food sector to total employment in regions identified as “predominantly rural” was generally less than 20 percent. The number of such predominantly rural regions is declining rapidly (OECD, 1994).

These substantial structural changes took place, despite the protection provided to agriculture through government policies. Through the direct provision of various types of subsidies, and barriers to trade that kept domestic prices higher than world market prices, governments in many OECD countries sought to shield farmers from international competition. Since 1986, government subsidies

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for the commodities monitored by the OECD (major grain, oilseed and livestock products) have typically averaged 35-40 percent of the farm value of production in the OECD countries as a whole. The OECD estimates that in 2000, total support to agriculture amounted to US\$ 327 billion or 1.3 percent of GDP in the OECD area. The size of these expenditures can be placed in perspective when one considers that agriculture generated only around 2 percent of total GDP in the OECD area (OECD, 2001). Yet, despite such large and persistent expenditures on support, the pace of change that we have witnessed in the structure of agriculture, in its contribution to the general economy, and in its role in the economies of rural areas has continued unabated.

The Forces Driving Structural Change

Developments in consumer demand and technical change are the two major forces driving structural change in agriculture and related industries.

The total demand for food is increasing fairly slowly in developed countries. As incomes grow, the per capita consumption of food increases very little, although consumers may change their food consumption patterns. Typically, richer consumers demand more diversity in their diets. This leads to increased demand for novel foods, or foods that are differentiated in some way, for example, by place of production. They may also demand higher value products, such as fruit and vegetables, rather than basic staples, such as bread, rice or pasta. They may also demand more “value-added” food, in terms of more prepared or ready to cook items for consumption at home, or consume more meals outside the home. However, higher incomes do not necessarily equate with better nutrition, as the growing problem of obesity in many industrial countries shows.

Overall these changes do not lead to large increases in the total demand for food. Total consumption may increase in line with population growth, with slightly higher growth rates for foods that are more sensitive to income growth. The consumption of many basic or bulk commodities does not grow rapidly and may even decline. Falling or sluggish demand puts downward pressure on agricultural prices, particularly when the second major force – technical change is taken into account.

Technical change in agriculture and the food system has been rapid and wide-ranging. Calculations by the OECD show that during the 1970s and 1980s, for example, productivity in agriculture increased at a more rapid rate than for the economy as a whole in the majority of the OECD countries. On average, the rate of increase was 50 percent higher (OECD, 1993). This high productivity growth has been associated with the “industrialization” of agriculture – the adoption of capital-intensive production methods and the displacement of labor. Many farmers have left agriculture, as noted earlier, particularly through retirement; farmers who have remained in agriculture and the members of their families have spent more time working off the farm; fewer hired workers are employed on farms. In the majority of OECD countries, farming contributes less than 50 percent of farm household income, even for households for which the primary occupation is identified as farming (OECD, 1998).

As the process of industrialization has unfolded, farmers’ share of the total value-added in the food delivered to consumers has declined. In the United States, for example, farmers now contribute less than 7 percent of the total value-added in the food system; the other participants - suppliers of the inputs used by farmers (e.g., machinery and chemicals), food processors, wholesalers and distributors, and retailers and food service companies – account for the other 93 percent. The ways in which agricultural products are marketed has also changed. The traditional model in which farmers or their agents sell products in auction markets is rapidly being replaced by a model in which farmers produce under contract for specific food processors or retailers. The spread of the new model has accelerated with increasing concerns about food safety, particularly in Europe. Processors and

retailers need to be able to trace the source of their products in the event of a problem. This is more easily achieved when those products are supplied under contract.

Technical change, combined with general economic growth and development, has also affected the structure, operations and location of industries linked to agriculture. The development of improved transportation systems, particularly roads, in many countries and lower costs associated with larger and more efficient processing facilities have resulted in the closure of many small and local food storage, handling and processing facilities. While processing facilities that handle bulk and low value commodities, for example, sugar beet, or highly perishable commodities, such as vegetables for canning or freezing, are often still located in rural areas, many others have moved closer to centers of consumption and into urban areas. Increasing concentration in input supplying industries, such as farm chemicals and machinery, has resulted in a substantial reduction in the number of farm equipment dealers and other suppliers of goods and services to farmers in rural areas.

The Contribution of Globalization to Structural Change

Structural transformation in agriculture and the food system has occurred without significant liberalization in international trade in agricultural products. As indicated earlier, agricultural markets were relatively untouched by efforts to liberalize trade through the GATT until recently, although regional trade liberalization, particularly the formation and expansion of the European Union and the creation of the North American Free Trade Area (NAFTA), has undoubtedly had an important impact on trade among the countries involved. Despite this, the most important force for change has been the international transfer of technology, know-how, and capital that has taken place despite, and in some cases because of restrictions on flows of agricultural products between countries.

Multinational firms have played a key role in the process of diffusion of new technology, production and marketing methods that have contributed to structural change. Particularly since the early 1980s, the process of diffusion has become increasingly important in the processing and service components of the food industry, as demonstrated, for example, through the spread of the outlets of major restaurant chains throughout the world. Between 1980 and 2000 investment in overseas operations by U.S. food processing companies increased from \$9 billion to \$36 billion. Globalization is now spreading to food retailing as major supermarket and retail chains develop an international presence. U.S. companies have been a major force in the globalization of the food system, but many European companies have also been extremely active. Thus, for example, investment by foreign companies in U.S. food retailing increased from roughly \$2 billion in 1982 to \$13 billion in 1999 (USDA, 2001).

An indication of the importance of globalization through investment flows is provided by the U.S. food industry. Protective import policies in other countries have contributed to only modest growth in U.S. exports of processed food since the early 1980s. In 2000, such exports amounted to around \$30 billion. In contrast, sales by subsidiaries or foreign affiliates of U.S. food processing companies were \$150 billion. These sales increased by roughly 280 percent between 1982 and 2000. Sales of foreign-owned affiliates in the U.S. food industry (from processing through to food service) amounted to \$176 billion in 2000. That figure had increased by more than 330 percent since 1982 (USDA, 2001).

A major driving force behind globalization is the search for lower costs, expanded market share, and higher profits. The margins (profits per unit of sales) are often very small for participants in the food system. In the United States, for example, the combined pre-tax profits of all the companies involved in the processing and marketing of food accounted for only 4.7 percent of the value of food sold in 2000 (USDA, 2001). In an effort to increase sales and profits, many companies have looked outside their home countries to develop new markets. Globalization has been reflected in the food and

agricultural system by flows of international investment rather than through flows of agricultural and food products. Firms have taken the opportunity to grow in size through international mergers, acquisitions and joint ventures and to transfer business models that have proved to be successful domestically to other countries. Frequently they have taken advantage of their “brand capital” – the perceived value of their products among consumers, to expand internationally. The globalization of the farm equipment industry and the global spread of the “fast food” industry are two examples of these developments from opposite ends of the food system.

The supply of agricultural inputs has become increasingly concentrated globally as a result of mergers and acquisitions. Thus, for example, the manufacturing of agricultural machinery is now dominated by a small number of international firms. One is the US company, AGCO, which developed from the Allis-Chalmers Company in 1990. AGCO acquired Massey Ferguson in 1993 and Fendt GmbH in 1997. Headquartered in Georgia, it has manufacturing operations in four European countries, Brazil and Mexico, in addition to the United States. The Fiat group, headquartered in Turin, has also become a major global player in agricultural machinery through its CNH global division, which owns the Case and New Holland brands. CNH has manufacturing facilities in seven European countries, Australia, Brazil and India, in addition to the United States and Canada. The development of such large global companies has been replicated in other areas of the input supply component of the agricultural system, such as the production of agro-chemicals. Continued changes in agricultural technology, for example, the development of biotechnology seem likely to accelerate the trend towards concentration and globalization in this area.

At the other end of the spectrum, globalization has affected food distribution, most dramatically through the development of a global “fast food” industry. Thirty years ago, the operations of restaurant chains such as Burger King and McDonald’s were largely confined to North America. Today, McDonald’s operates in 121 countries. Its first restaurant in Europe opened in the Netherlands in 1971, as did the first one in Japan. McDonald’s now has over 5,000 restaurants in Europe and over 7,000 restaurants in Asia. In the first quarter of 2002, 47 percent of McDonald’s total sales of \$9.7 billion were outside North America, and those operations accounted for over 60 percent of the corporation’s revenues of \$3.6 billion (McDonald’s, 2002). Burger King opened its first European restaurant in Madrid in 1975. It now operates in 57 countries and roughly 30 percent of its more than 11,000 restaurants are located outside the United States. In 1989, a European company (Grand Metropolitan) acquired Burger King, again showing that investment in the food industry is fluid across international boundaries.

The international success of food companies, such as McDonald’s, reflects the strength of their business model and the impact of changing consumer preferences, lifestyles and behavior. Fast food restaurants have spread around the world because of the ease of duplicating a standard operation, delivering standard products at competitive prices, often relying on local capital for growth through franchising. Changing tastes, particularly among the young, have driven the popularity of the products sold. This has been a major factor in the global diffusion of well-known retail outlets for a range of food, clothing and other products. McDonald’s alone spends over \$13 billion annually on the raw materials for its products (primarily food and paper). Volumes of purchases such as these cannot fail to have an important impact on the food and agricultural system of which such companies are a part.

Globalization has affected the structure and operations of other parts of the food system. Multinational companies are a major force in food processing. Large supermarket chains, based in Europe, North America and elsewhere, are becoming increasingly important in food retailing.

As indicated earlier, the globalization of the food system has occurred largely through the movement of capital internationally, rather than the movement of goods. The current WTO negotiations, particularly the part of the negotiations directed towards agriculture, focus on barriers to trade in agricultural products. What are the implications of such reductions in barriers to trade for agriculture and for rural areas?

The Impact of Agricultural Trade Liberalization on Agricultural Markets

The Uruguay Round negotiations were protracted; launched in 1986, they were not completed until 1994. The Agreement on Agriculture was important in that it provides a framework for the reduction of barriers to agricultural trade, but its actual impact on such barriers was modest. With the full implementation of the agreed reductions in tariffs, for example, the average applied tariff on agricultural imports will still be over 40 percent; compared to an average tariff for industrial products of around 4 percent. Some commodities that have traditionally been highly protected, such as dairy products and sugar, were barely affected by the AoA.

The current WTO negotiations are focusing on further reductions in trade barriers and export subsidies. If substantial progress were made in reducing these, what would be the impact? Economists in the U.S. Department of Agriculture has made some estimates of the effects of the complete elimination of tariffs, export subsidies, and trade-distorting support (Burfisher, 2001). They calculate that world prices for many commodities would rise with the reduction in barriers and the resulting increase in trade flows, but the price effects would not be dramatic. Averaged across all the major commodities, prices on international markets would increase by around 12 percent. The impact would be greater for commodities that are relatively heavily protected. Thus livestock products would experience an estimated 22 percent average increase, according to the USDA estimates. In Europe, domestic prices of many agricultural commodities, particularly grains, have come much closer to world market prices, with changes made to the Common Agricultural Policy (CAP) since the early 1990s, so the impact of further trade liberalization on the production of commodities would probably not be great. The impact on livestock products, including dairy products, and sugar would be much more significant, since EU prices for these commodities would decline with freer trade.

Changes in the CAP have seen some shifts in the form of agricultural support away from market price support towards direct payments. Countries were required to reduce trade distorting or “amber box” support as part of the AoA and market price support falls in the amber box category. The compensatory payments that were introduced by the Union in the 1990s were temporarily exempted from reductions in the AoA. These payments were classified as “blue box” supports – i.e., support linked to production controls. They were also temporarily exempted from potential trade actions by other countries; countries could not impose countervailing duties on imports of blue box commodities on the grounds that the payments were trade-distorting. That exemption expires in 2003. The Union has also increased its use of “green box” subsidies. These are supposed to be minimally production or trade distorting. Examples are payments made to farmers for the adoption of “environmentally-friendly” production practices. Green box payments are exempt from reductions under the AoA. While it is clear that payments that have the strongest link to production decisions, and are therefore likely to be the most trade distorting, are likely to be subject to the greatest scrutiny in the current WTO negotiations, other forms of support for agriculture, particularly blue box payments, may not be exempt from future reductions in a new agreement.

Impacts of Trade Liberalization on Agriculture and Rural Economies

If significant reductions in trade barriers and trade-distorting subsidies were to result from the WTO negotiations, what would be the implications for agriculture and rural economies? The answer to this

question depends to a great extent on the current structure of agricultural production in a given region and relative price levels. Regions that focus on the production of commodities that are not heavily protected would not experience increased competition as a result of trade liberalization. Such regions could benefit if subsidized competition in other areas was reduced. Market opportunities may increase and prices may rise as a result of a general increase in demand for their products. The current WTO negotiations are focusing on trade liberalization in a number of sectors, not just agriculture. Broad-based global trade liberalization tends to raise global income, and this leads to an overall increase in the demand for food and agricultural products, particularly in lower income countries. Rural areas that are competitive internationally in the production of agricultural products are likely to experience an increase in demand for those products as a result of general trade liberalization.

In contrast, rural regions whose production is heavily concentrated in protected commodities would experience increased competitive pressure as a result of trade liberalization. Domestic prices would fall, as trade barriers were reduced and domestic markets were opened to increased competition. In Europe, this would mean that regions dominated by dairy or sugar production would be most affected. Other subsidized commodities, such as low-quality wine, beef and rice would also be affected. Products that are protected by seasonal tariffs, such as fruits and vegetables, would face greater competition.

Lower market prices would translate into lower revenues for farmers. High cost producers would reduce production, and industries that depend on that production would also be affected. One of the clearest cases where this will be an issue is the sugar industry. In some parts of Europe it would be difficult to continue to produce sugar profitably, even if a reduction in the protection of sugar around the world causes international prices to rise significantly. Local production of sugar beets in high cost areas would probably be eliminated and beet-processing plants would close.

Often when government subsidies for agriculture are discussed, the assumption is made that farmers would be forced out of business if these subsidies no longer existed. There is a tendency to overlook the possibilities for adjustment in agriculture. When subsidies are eliminated, the relative profitability of different commodities changes. Farmers respond by altering the mix of production. Very few farmers are locked into the production of a single commodity, such that the removal of subsidies for that commodity would make it impossible for them to continue farming.

There are very few real-world examples of the removal of agricultural subsidies that can be examined in order to determine what the effects might be. As indicated earlier, OECD countries continue to spend heavily on subsidizing their agricultural sectors. However, there has been one relatively recent example that provides useful insights into what may happen when subsidies are removed. This example is New Zealand.

In 1983, government subsidies to New Zealand's farmers were equivalent to 33 percent of the value of agricultural output (Sandrey and Reynolds, 1990). Subsidies affected the structure of output, for example, leading to the production of more wool and lamb than could be sold profitably on world markets, and promoting farming on environmentally unsuitable hill land. Support increased land prices, and farmers often borrowed against the already-inflated value of their land to expand the size of their farms. Farmers paid high prices for fertilizer, and for transportation and processing of their products. The service sector had little incentive to control costs and extracted part of the government support to farmers by charging higher prices. Farmers over used fertilizer and over invested in equipment. They were insulated from international prices and did not respond to changes in those

prices by varying production. Agriculture gradually became less and less efficient (Bell and Elliott, 1994).

In 1984, as the result of a general economic crisis, New Zealand embarked on a series of wide-ranging reforms that resulted in the virtual elimination of subsidies to agriculture. By 1990, subsidies had fallen to 3 percent of the value of production. The New Zealand reforms involved more than the elimination of agricultural subsidies. Taxation policies, regulatory policies, and macroeconomic policies were changed; there was a substantial reduction in government intervention throughout the economy. Many observers, particularly farm groups, predicted that the reforms would drive large numbers of farmers out of business, and that a substantial proportion of the agricultural industry and the rural economy would be destroyed.

What actually happened? As might be expected, farm incomes declined, at least initially. In comparison to the average for 1983-84, the average net income of sheep and beef farms in 1988-89 was over 20 percent lower, after adjusting for inflation. Dairy farmers fared somewhat better; their average incomes fell by less than 5 percent. Employment declined, particularly in the industries that supply agriculture, such as fertilizer and machinery, as farmers cut back on purchases of these items. Farmers adjusted to the lower real price of production (the price including subsidies), by reducing the intensity of production, and economizing on production expenses. The removal of subsidies, coupled with deregulation, forced the agricultural services and processing industries to become more efficient, and employment fell in those industries. There was a large impact on land values. As subsidies were withdrawn and speculative purchases of land declined, farmland values fell. They declined by 55 percent between 1982 and 1989.

Since the reforms, however, the agricultural sector has become more competitive and farm incomes in New Zealand have increased. For example, the pre-tax income of the average dairy farm at the end of the 1990s was roughly 80 percent higher than at the beginning of the decade, after adjusting for inflation. The increase in income for the average sheep and beef farm was even more dramatic. This roughly tripled after adjusting for inflation.² Farmers have increased their incomes by expanding sales, controlling costs, increasing the size of farms, and by increasing stocking rates. Higher farm profitability has been accompanied by a recovery in land prices. It is generally acknowledged that New Zealand's farmers have become much more market oriented and pay much more attention to the management of the farm business than they did under the subsidy regime.

The rapid pace of reform in New Zealand placed considerable pressure on agriculture and rural communities. The government provided some assistance to farmers, mostly through debt restructuring. Roughly 20 percent of the debt of the farm sector was written off. As a result, less than 5 percent of the farms went out of business; generally the land was sold to other farmers. The government partially funded a "Rural Coordinator" service that worked with communities to find ways to restructure local economies. Part of the role of this service was to help local communities to develop non-farm activities. Prior to the reforms, most of the rural population in New Zealand was involved in farming or in providing services to farming. Roughly one third of the rural population is now employed in other activities, such as tourism and small business.

The experience of New Zealand shows that it is possible to wean agriculture from government support, although few countries would probably be prepared to experience the pain of adjustment associated with the rapid removal of such support. The New Zealand experience demonstrates that it takes time for farmers and local communities to adapt to change, and for the benefits of reform to

² Estimated from data provided by the Ministry of Agriculture and Forestry and the Reserve Bank of New Zealand.

start outweighing the negative effects. Governments can help the process of adjustment, for example, by focusing on debt restructuring and empowering local communities to restructure local economies. It is noteworthy that various government measures, such as grants or subsidized loans for infrastructural investment and rural development are already included in the green box category of support in the AoA, and that governments would therefore be able to respond to a need for restructuring in rural areas whose agriculture was negatively affected by trade liberalization.

Other WTO Issues of Importance for Agriculture and Rural Areas

Changes in agricultural protection resulting from further trade liberalization are not the only issues of importance for agriculture and rural areas in the current WTO negotiations. In some countries, increasing emphasis is being placed on the environmental contribution of agriculture and on the use of payments to farmers for their stewardship of the land. While many such payments are already exempt from reduction under the AoA, there are some disagreements about the types of payments that should be permitted, and whether total payments should be limited. Particularly contentious are payments that are viewed to be closely linked to existing production systems and levels of production, since they might be viewed to be trade distorting, and therefore outside the green-box category of permitted support.

In some countries, particularly in Europe, there are growing concerns about production methods and product standards, in agriculture and other sectors, and whether freer trade might undermine such standards. Some countries are imposing higher “animal welfare” standards upon livestock producers, for example. There are concerns that the competitiveness of their producers would be undermined if imports from countries that do not apply the same standards are allowed without restriction. Regional economies could be disadvantaged by such “unfair” competition. A related issue is whether genetically modified products should be freely traded among countries. Apart from any consumer or broader public concerns about the safety or desirability of such products, countries that do not allow their farmers to use GM products might find themselves at a disadvantage competitively, particularly if the products involved confer a cost advantage to the farmers that use them. This seems to be the case for bio-engineered plant varieties that are resistant to pests or to chemicals used to control pests and weeds. Finally, there is the question of the international status of products that are distinguished by place of production, e.g., regionally branded products. Will freer trade undermine the ability of producers to maintain the uniqueness of such products in the marketplace? These issues are of importance for farmers and rural economies, particularly if they rely upon products that are differentiated from those traded in international markets, either by choice or through regulations imposed upon them.

Such issues are not easy to solve. However, product differences can be addressed through labeling, so that the purchasers of the products are able to determine whether they meet certain standards or possess certain characteristics. The debate internationally focuses on whether labeling should be mandatory or voluntary, and how to ensure that labeling requirements are not implemented in such a way as to become an impediment to trade. Farmers and regions that rely upon differentiated products, such as special cheeses, wine or animal products, clearly have an incentive to maintain consumer recognition of those products through labeling, and to subscribe to international laws that prevent counterfeiting.

Conclusions

Rapid structural change in agriculture has important implications for the economies of rural areas. Structural change is being driven by the effects of technical progress and consumer behavior. Globalization, particularly the international transfer of technology, know-how, and investment is having important effects. This aspect of globalization in the food and agricultural system has been far

more important than any increases in trade in agricultural products stimulated by the modest trade liberalization resulting from the Uruguay Round Agreement.

Regardless of what happens in the current round of WTO negotiations, these fundamental forces for change will continue to exert their effects upon agriculture and rural areas. Further trade liberalization in agricultural will merely add to the effects by placing additional competitive pressure on high cost producers of undifferentiated agricultural commodities. Trade liberalization will also call into question the continued subsidization of agricultural production, although payments to farmers for other purposes, e.g., the supply of environmental services would still be possible. There are few examples of the removal of production subsidies, but the experience of New Zealand shows that successful adjustment is possible, particularly when the phasing out of subsidies is accompanied by measures to aid the adjustment process.

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