

Economic Policy Program

Agriculture

Summary: Agriculture sectors in the United States (U.S.) and European Union (EU) are among the most heavily protected sectors of the global economy, but are increasingly confronted with the pressures of globalization, including ongoing trade policy reform that imposes stricter limits on subsidies and tariffs. Factor immobility, farm size, and the powerful political influence of farm lobbies are among the aspects of agricultural production that are in conflict with a rapidly changing economic environment, one characterized by market opening as well as technological change and increasing food safety concerns. Policymakers in the U.S. and EU therefore face a real challenge in preparing policy options for farmers that can help them adjust to reductions in asset values, respond effectively to market signals, and decrease their reliance on subsidies in order to ensure a sustainable future.

Policies for Agricultural Adjustment in Developed Countries under Trade Policy Reform

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Globalization requires businesses and workers to adapt rapidly to changes in competitive conditions. Challenges and opportunities will increase if there is a successful conclusion to the Doha Round of the World Trade Organization (WTO) negotiations since agricultural sectors in many countries will face reductions in tariff protection and tighter limits on subsidies. Sectors in countries that have provided protection from international competition will face pressure to adapt.

In most industrial countries there is little emphasis on helping farmers adapt to changes in competitive conditions. As in many other countries, the primary focus of U.S. farm policy has been on providing price and income support. The 2002 Farm Act increased subsidies substantially. At the same time, expenditures in areas that contribute to increased competitiveness, such as research and development and infrastructure improvement, have been declining. The Trade Adjustment Assistance Reform Act of 2002, designed to help U.S. firms and workers adapt to import competition, introduced a program for farmers but

this is not oriented to adjustment. It provides additional income support if domestic prices are depressed by import competition.

The basis for adjustment policy

Agriculture operates in a dynamic economic, technical, institutional, and political environment. Farmers and farm households face constant pressure to adapt to changing economic conditions. Some adjustment pressures are simply the product of long-term trends, such as the cost-price squeeze caused by technological advances and low price and income elasticities of demand for agricultural products which has long been a major driver behind the decline in farm numbers, increase in farm size, and out-migration of agricultural labor. There are also the effects of short-term shocks, such as animal disease outbreaks, weather, human health scares, and political events, like wars and regime change. Finally, there are internal life-cycle pressures underlying generational change in farm households. As a result, agriculture is in more-or-less a constant state of flux.

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Reforms in agricultural and trade policies are just one more source of pressure to adapt.

How does agriculture adjust?

The most common ways in which farm household-firms respond to the changing economic environment are through:

- Varying the mix of activities and enterprises on the farm and the intensity of production (use of variable inputs);
- Altering production methods, particularly through innovation and the adoption of new technology;
- Contracting for some or all of the production and marketing functions;
- Modifying business structure or institutional form;
- Varying the allocation of farm household factors (particularly labor) between on-farm and off-farm activities;
- Adjusting the area of land farmed, through enlargement or contraction and through purchase/sale or leasing;
- Changing who manages the farm through inter-generational transfers of assets and entry/exit.

Is there anything special about adjustment in agriculture?

Firms in all industries are subject to pressure to adapt their economic activities. But there are three particular aspects of agricultural production that merit consideration:

Factor immobility. Age structure, specific skills, lack of experience in other occupations, and relatively low levels of formal education are reasons why farmers can have difficulty in transferring to other activities. Many of these characteristics are highly correlated. Remoteness from alternative economic opportunities and costs of relocation add to immobility.

Importance of small household-firms. The majority of farms in the Organization for Economic Co-operation and Development (OECD) countries are unincorporated businesses in which the farmer and other members of the household supply much of the labor. Response to price and cost signals that exert pressure on income may be muted. The reaction

may be “belt tightening”—i.e. continuing to operate the farm business despite lower income—rather than making major adjustments.

Stickiness of economic change. While adjustments are made by the existing cohort of farmers, major shifts typically occur when there is a change in the principal operator—often through inter-generational transfers of farm property. Significant adjustments include changes in size, major enterprise and—perhaps most important—the decision to operate the farm as a full-time or part-time activity.

None of these factors is exclusively confined to agriculture and apply to other sectors characterized by small, family-run businesses. What makes agriculture unique is the combination of the importance of these factors with the political weight of the sector. It is this political element that often makes adjustment in agriculture an issue of public concern.

What is the rationale for adjustment policy for agriculture?

There are three major arguments for the use of specific adjustment policies for agriculture:

Efficiency—imperfections in factor markets, particularly the inability for agricultural resources to be reallocated rapidly in the face of changing economic circumstances leads to a loss in total output and consumption (reduction in total economic welfare). These losses can be avoided or reduced by facilitating more rapid economic adjustment.

Equity—the distributional implications of economic change (that there will be both losers and gainers even if the overall gain is positive) makes it important to compensate the losers.

Political economy—losers are likely to block reforms that lead to an overall gain for society. Compensation or adjustment aid must be provided so that this does not happen.

In wealthy countries agriculture now accounts for a very small proportion of Gross Domestic Product (GDP). Any efficiency losses associated with adjustment are likely to be modest. The major arguments for adjustment policies are therefore equity and political economy considerations.

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What adjustment policies do governments use?

The extent to which agricultural policies impede or assist change is important, but there are many other policies that have implications for agricultural adjustment. These include measures relating to the taxation of property (annual and on disposal or inheritance), those governing land use (including the use of land for non-agricultural purposes), and social security policies.

Traditional agricultural policy mechanisms—intervention in the market to support producer prices—have impeded economic adjustment in agriculture. By keeping prices higher than market conditions would dictate, farmers have been shielded from the economic pressures that would have forced them to adjust. But high prices may also have stimulated certain types of response, for example, promoting investment in capital-intensive farming systems and inducing technological change. A shift towards direct payments in many countries has tried to weaken the link between support and resource allocation decisions, but decoupling is not complete. An enduring link between support and higher land values affects the long-term ability of agriculture to compete internationally.

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Some governments have tried to promote agricultural adjustment, although usually with fairly modest financial expenditures. The European Union has had a catalogue of interventions aimed at promoting the exit of elderly farmers and the entry of new ones, the modernization or diversification of agricultural holdings through the provision of capital grants or low-interest loans, increases in scale through the amalgamation of land parcels, improvements in the processing and marketing of farm products, and

enhancements in the skills of farmers through the provision of advice and training. Such special schemes have been less prevalent in the United States, but some of the same objectives have been pursued through the farm credit system at the federal level and through extension programs at the state level.

Beginning in the 1950s, many developed countries introduced policies to facilitate adjustment in a range of industries that had become uncompetitive internationally. Early schemes focused on trying to restore industry competitiveness by providing compensation for scrapping existing equipment and subsidies for new investment. Subsequent schemes focused on dealing with firm closures and the relocation of workers. The mechanisms adopted were a mix of compensation payments to individuals who lost their jobs, investment in human capital to improve factor mobility, and the reduction of transactions costs (through, for example, investment in infrastructure) to make markets work better.

The implementation of formal adjustment policies in several countries was directly associated with trade liberalization. Trade Adjustment Assistance (TAA) has been an enduring characteristic in the United States since the 1962 Trade Expansion Act. The current Trade Adjustment Assistance Reform Act of 2002 provides supplemental unemployment compensation to workers displaced by international competition and assistance for retraining and relocation. There is a modest program of assistance for firms. The Act also contains a program for farmers run by the U.S. Department of Agriculture (USDA). In keeping with the focus of existing agricultural policies in the United States, the farm program provides supplementary income support but there is no active adjustment component. Consultation through the extension service is required, but no specific action—e.g. a change in existing activities, a switch to alternative activities, or additional training—is mandated as a result of that consultation.

Adjustment policy for U.S. agriculture

Current U.S. agricultural policies do not address key issues that arise from trade liberalization, despite the fact that they involve significant financial transfers. Support to farmers is provided directly through government payments and

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indirectly through measures that raise consumer prices or lower production or marketing costs. According to OECD estimates, the total cost of support linked to individual commodities has varied from \$40-\$53 billion in recent years.

Paradoxically much of this support does not translate into extra income for farmers. The transfer efficiency of support (the share of the costs imposed on consumers and taxpayers that actually translates into additional income) is substantially less than 100 percent, because of efficiency losses in production and consumption. More important, over time much of the support is dissipated by stimulating higher prices for fixed assets in agriculture, particularly land. Farmers, particularly those entering agriculture, do not benefit because support leads to higher costs of financing the farm business. The irony is that agricultural subsidies create a dependency culture in which continuing support is needed to cover the higher production costs that the support itself has created!

If the United States is to move away from this culture there will inevitably be adjustment costs. Reductions in support will ultimately affect the returns to fixed assets, particularly land, and the value of those assets. Those who own farmland will experience a reduction in wealth. The users of farmland are not necessarily the owners of that land, and the income of farm operators will be affected by how rapidly land rental rates adjust to reductions in land values. The wealth and income positions of those who own but do not operate land, farm operators that own much of their land, and farm operators that rent most of their land will be affected differently.

A key factor in the adjustment impact for each of these groups is the demographics of farmland owners, in particular their stage in the life-cycle and the relative importance of non-farm sources of household income and wealth. Adjustment will occur in the rate of entry and exit of farms and farm operators from the sector. For those wishing to remain in agriculture, some will need little or no assistance to remain competitive. Others may need to enhance their business skills in order to compete effectively in a more market-oriented environment. For those farm operators that decide to leave farming, or are forced to do so, the need for adjustment assistance clearly depends

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Essential components of adjustment policy

There are three key components to a policy designed to facilitate adjustment to reductions in domestic agricultural support: compensation for reductions in asset values, measures to improve the quality of human capital or to facilitate its reallocation, and measures to address the persistent poverty problem in agriculture.

Compensation for reductions in asset values

There is a precedent for the use of compensation for changes in U.S. farm programs. Holders of peanut quotas were compensated for the change in the peanut program in the 2002 Farm Act. Tobacco quota holders are being compensated as a result of the abolition of production quotas in 2005.

Using previous estimates of total support and transfer efficiency from the OECD, and the pass-through of government payments into land values, a rough estimate of the total capitalized value of the support generated by U.S. agricultural programs is \$109 billion. It should be noted

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that this includes all commodities, both those—such as corn and soybeans—for which direct government expenditures are the source of support, and dairy and sugar for which transfers from consumers through higher prices are the main support mechanism. This figure is roughly equivalent to 10 percent of the total value of U.S. farmland or the outstanding value of farm real estate debt. It is also fairly close to the total amount paid out by the U.S. government on price and income supports since 2001, or roughly twice the average annual value of total government support (including support through higher consumer prices) provided in recent years as estimated by the OECD.

The elimination of current price and income supports could be accompanied by a series of annual asset value compensation payments to land owners. These would be limited in time and amount. If experience elsewhere (e.g., Australia) is a guide, financial institutions would probably offer an up-front payment in exchange for the entitlement to future adjustment payments. Various options could be explored, but the simplest would seem to be to use one payment rate per acre for land in program crops, and a second for land devoted to other products. The area upon which compensation would be paid could be the base acreage established under current legislation for program crops, and the average area in production during a recent time period for other crops, such as sugar.

Compensation for the loss in value of the fixed assets of livestock producers, particularly dairy farmers, presents additional challenges since it is difficult to identify the area of land upon which compensation should be based. Given the difficulty of identifying the appropriate land base, it may be necessary to adopt a blended approach to compensation with part of the payment linked to the number of dairy cows and replacements for individual operators in a recent base period, and part based on land in pasture and forage production.

Labor adjustment issues

Greater market orientation will place new demands on the managerial ability of U.S. farmers. Some may need assistance in restructuring their farm operations to reduce costs and increase profitability. Research into the top-performing small farms in the United States shows that they are char-

acterized by competency in three critical areas of financial management: cost control, use of active marketing strategies, and effective management of cash and credit. This suggests a need for additional investment in financial and business management training for farmers in order to aid successful adjustment to economic change.

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Existing Federal activity in this area is funded through USDA. Farm and financial training courses are supported through the Farm Service Agency (FSA), and risk management education is provided by the Risk Management Agency (RMA). The FSA requires all borrowers to complete a farm and financial training course, unless they can demonstrate adequate knowledge and ability in the subject area. Some additional financial training is provided through the RMA under the authority of the Agricultural Risk Protection Act of 2000, but activities are limited to a few states, largely in the Northeast/Mid-Atlantic region.

Other U.S. programs (primarily TAA) are of limited use. First, they are restricted to adjustments resulting from trade policy changes, whereas changes in domestic agricultural policies could be of much greater significance for agriculture. Second, they are designed for hired labor—the provisions for firm-level adjustment are weak. Finally, provisions for agriculture, which focus on supplementary income compensation, fail to address farm-level adjustment, a substantial part of which will require improved financial management and planning. There will also be a need to focus training for some farmers on enhancing skills for off-farm employment. Eligibility for TAA programs, in which financial assistance is provided for those undergoing retraining, would need to be changed in order to address this issue. Support for retraining would also be appropriate for farmers who are not of retirement age, but who choose to exit the industry. Farmers approaching retirement might be offered planning assistance. Many of these services have traditionally been provided through cooperative extension, and the network is generally in place to meet the needs.

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Additional Federal funding would need to be provided for program delivery, with the bulk of this being required during the early phase of policy reform.

The persistent poverty issue

Equity has long been cited as one of the principal justifications for U.S. agricultural policies. Numerous books and articles have been written over the years about the “farm problem,” i.e. the persistence of low incomes and high poverty rates among farmers. With growing diversification in the sources of income of farm households, in particular a large increase in the proportion of total income obtained from off-farm sources, these arguments carry less weight today. According to recent USDA data, 95 percent of the aggregate income of U.S. farm households in 2000 was derived from off-farm sources, and average household income was 9 percent above median U.S. household income. Over 90 percent of the roughly 2.1 million farm operator households in the United States have a net worth above that of the median U.S. household.

Nevertheless, the persistent low-income problem that characterizes certain parts of U.S. agriculture is unlikely to disappear. There may be a case for “safety net” payments to address this issue. Building on earlier work by USDA, an estimate can be derived of the cost of providing targeted income support payments for the roughly 130,000 farms that are characterized by both low income and low net worth. Use of a targeted minimum income level of \$30,000 for these farm households would require transfer payments of roughly \$13,600 per farm, or total transfers of \$1.8 billion (2002 data). This is not a large sum compared to the \$11-\$23 billion devoted annually in recent years to direct payments under existing farm programs, or the total OECD estimate of commodity-based support of roughly \$40-\$50 billion per year.

The use of targeted income support payments is only part of an approach that could be adopted for addressing the poverty issue in U.S. agriculture. In particular, there is a role for expanded human capital activities discussed earlier (managerial training, counseling for exit from farming, and retraining) in addressing the poverty issue.

Other policy issues

As noted earlier, a range of policies affect agriculture’s ability to adjust to economic change. Those with the most direct impact include research and development policies. Expenditure has tended to be flat, at best, in the United States in recent years. A strong case can be made for increased expenditure in this area as part of a policy to promote adjustment to trade liberalization.

International policy considerations

The Uruguay Round Agreement on Agriculture (URAA) established disciplines on domestic support. These focus on reducing forms of support that are considered to be the most trade distorting, the so-called “Amber Box” measures. The URAA also created a category of support that is exempt from restriction—the “Green Box” (Annex 2) measures. This category contains a range of provisions relating to adjustment policies. With respect to the proposals made above: payments made under training and skills enhancement programs; payments designed to facilitate the exit of producers, either through re-employment in other activities or retirement; payments made for restructuring current farm/household operations; and the payment of time-limited compensation (either linked to asset values or income foregone) would all fall under Green Box provisions. Direct income payments made under the poverty alleviation proposal would satisfy Green Box conditions, providing that they were not linked to any production requirement. Expenditures on research and development are also included under the Green Box. The policy approach outlined would therefore be consistent with moving away from trade-distorting domestic agricultural policies to policies that are minimally distorting.

Further reading

D. Blandford and B. Hill. *Facilitating Farm-Level Adjustment to the Reform of Trade and Agricultural Policies*. International Agricultural Trade Research Consortium. Trade Policy Issues Paper #4, 2005.

D. Blandford and B. Hill (eds.) *Policy Reform and Adjustment in the Agricultural Sectors of Developed Countries*. CAB International, 2006.