

PUBLIC REGULATION IN FOOD AND AGRICULTURE: GOALS, CONSTRAINTS, POLICIES, INSTRUMENTS, AND TRADE

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Contents

1. Introduction
2. National Goals and Constraints
3. A Menu of Food and Agricultural Policies
4. Food and Agricultural Policy Objectives and Instruments
 - 4.1. Domestic Policies
 - 4.1.1. Natural Resources Policies
 - 4.1.2. Input Markets Policy
 - 4.1.3. Product Market Policy
 - 4.2. Trade Policy
 - 4.2.1. Tariffs
 - 4.2.2. Quotas
 - 4.2.3. Export Subsidies
 - 4.2.4. Voluntary Export Restraints (VERs)
 - 4.2.5. Non-Tariff Barriers
5. Agricultural and Food Policies When Trade Matters
6. The Uruguay Round Agreement on Agriculture
 - 6.1. The “Tripod”
 - 6.1.1. Market Access
 - 6.1.2. Domestic Support
 - 6.1.3. Export Subsidies
 - 6.2. Non-Tariff Border Measures
 - 6.3. “Non-Trade” Concerns
 - 6.4. Consideration for Developing Countries
7. Concluding Thoughts
- Glossary
- Bibliography
- Biographical Sketch

Summary

Without exception, all countries adopt policies to promote their own domestic agriculture and food sectors, and buffer them from policies taken by the rest of the world. On the menu are domestic policies that aim to change the environment within which agricultural production, processing, marketing, and retailing takes place within a nation’s border, and trade policies that deal with the external environment within which agricultural and food products are traded between nations.

Different domestic policies target different stages of the agricultural and food production, and marketing system that links farmers to consumers. Policies inside the farm gate deal with provision and conservation of land inputs, provision and pricing of other non-land inputs, and pricing of output. Policies beyond the farm gate target the activities involved in procuring raw farm products and transforming them into consumer goods.

The set of measures a nation adopts to deal with prices and quantities of products entering and leaving its borders, given its domestic policy objectives, constitutes its trade policy. Inevitably, one nation's policy instrument becomes another nation's policy constraint, and international disputes over both domestic and trade policies arise.

The World Trade Organization (WTO), created in 1995 by the Uruguay Round (UR) of negotiations, is now the only global international organization of trade where such disputes are resolved and trade policies discussed. The UR also resulted in the Uruguay Round Agreement on Agriculture (URAA). In it, member countries committed to a schedule of reductions in support and protection related to market access, domestic support, and export subsidies; and to resumption of further negotiations after an implementation period.

The accomplishments of the URAA are many, but challenges lie ahead. At the time of writing, member countries are back at the negotiating table for further talks about old and new issues until January 1 2005. Whether any agreements will emerge between now and then is hard to say. There are not only conflicts in priorities between countries; there are also differences in approaches. A conflict that will probably continue to shroud the negotiations is that between the anthropocentric view and the eco-centric view of trade liberalization. If nothing else, the ongoing WTO negotiations will, by offering a forum for all views, bring the world a little bit closer to open trade and ecologically sustainable allocation of resources.

1. Introduction

A food and agricultural policy refers to all means by which a country regulates food and agriculture to achieve objectives subject to political, economic, social, and technological constraints (see "Farm price and income support mechanisms," EOLSS on-line, 2002). With so many countries in the world, each with its own set of policies, means, objectives, and constraints, it would not only be daunting to discuss them all for each country, but diminishing returns would also set in early in the discussion. The reason is that most policies, means, objectives, and constraints are generic and overlap across countries. Therefore, the incremental gain in insight about elements of food and agricultural policies would not justify the incremental cost of discussing those elements for each country.

Take farm income policy as an example. If the objective is to stabilize farm incomes, that objective is generic whether it is being pursued by Pakistan or the United States. The same holds true for an instrument like a price guarantee or a constraint like the national budget. The logical implication is that food and agriculture policies and their

various elements can be conveniently discussed and categorized into a generic analytical framework independent of countries.

This is the approach taken by most policy-related textbooks. Some focus on developing countries, others on developed countries. Some emphasize domestic policy, others trade policy, or both. With such a large pool of ideas in the literature, it is beyond the scope of this writing to encapsulate and discuss them all in any depth. Rather, a short and hopefully useful synopsis from representative references (Ellis, 1992; McCalla and Josling, 1985; Houck, 1986) is provided in order to establish the scope of the more in-depth topics of this theme in EOLSS on-line.

2. National Goals and Constraints

Food and agricultural policy goals in any country are a subset of a larger set of broader and overarching national goals. Economists frame the policy problem facing a nation in the same way as that of any optimizing economic unit. That is, a nation's objective is to choose instruments in ways to maximize an objective function subject to constraints. The national objective function is thought of as consisting of different national goals with equal or varying weights.

Most nations will give priority to expansion of the national product and its distribution between competing sectors and sub-sectors of the economy, and to pursuing stability in income, growth rates, and prices. Nations will also be compelled to make choices subject to both domestic and international constraints. Domestic constraints can be economic (such as the level and quality of physical and human capital, state of technology, fiscal resources, and foreign exchange reserves), or socio-political (such as political balance of power, or economic philosophy in the continuum between statism and *laissez-faire*). International constraints are shaped to a large extent by the degree to which a nation is open and has access to trade, capital flows, and beneficial transfers of goods, capital, and technology.

Broadly speaking, the weight assigned to agriculture in the national objective function depends on the country's stage of development. All else being equal, one would expect that the larger the contribution of agriculture to national product and the larger the proportion of consumer income devoted to food, the more weight agriculture receives. But not all is equal, especially the political clout of the farm sector. In the United States and Europe, for example, the historically declining share of agriculture in total national product did not diminish the weight agriculture receives in the US and European national agendas.

3. A Menu of Food and Agricultural Policies

Regardless of the weight assigned to food and agriculture in the national objective function, all countries choose from a menu of policies to achieve certain goals deemed important to their respective food and agricultural sectors. Some policies are domestic, others are international. A policy is domestic in the sense that it serves domestic objectives. A policy is international in the sense that it serves domestic objectives by buffering the domestic food and agricultural sector from international markets.

Different domestic policies are used to intervene at different stages of the food and agricultural system that links farmers to domestic and international consumers. The most common domestic policies at the first stage, which involves production of raw agricultural products and ends at the farm gate, are those related to natural resources, and input markets. In the second stage, which starts at the farm gate and ends within the border, the most common policies are those related to procurement and pricing from the farm gate to retail.

However, effectiveness of domestic policies in achieving national goals is not independent of what happens in the rest of the world. Virtually all countries have trade policies that, in addition to serving several other objectives, are designed to intervene at the border in order to buffer domestic agricultural policies. For example, a country with a price policy designed to support domestic prices above their international level, cannot sustain that support without controlling imports. Or, a country with a rural policy designed to locate industries in rural areas, may decide to protect those industries from competition at their infancy. Houck (1986) lists other reasons that shape a country's trade policy as follows:

Protecting high-cost infant or established industries from foreign competition, protecting national security by supporting industries that produce essential raw material for national defense—agriculture being among those industries, protecting the public from potentially injurious imports, protecting domestic markets from unfair trade such as “dumping,” where imports are priced below their cost of production, protecting the country's balance of payments by restricting imports, improving its terms of trade when the country is large enough to influence prices through exerting market power, and generating revenue, especially in countries where it is administratively costly to collect income and profit taxes.

4. Food and Agricultural Policy Objectives and Instruments

Most agricultural policy instruments can be conveniently categorized as taxes, subsidies, quantitative restrictions, price ceilings, or price floors. The five instruments are also referred to in the literature as “government-imposed market distortions.” When economists speak of distortions they have a benchmark in mind. That benchmark is a free competitive market where buyers and sellers respond to prices that are determined by forces of supply and demand. A distortion arises when a government applies an instrument that either drives a wedge between the prices consumers pay and producers receive, or creates a shortage or a surplus.

The distinguishing characteristic of the preceding set of instruments is that they are measurable and their qualitative and, to a lesser extent, quantitative impacts can be assessed. Another set of instruments involved is in the form of institutions established to change the environment in which food is produced, marketed, and consumed. Examples include farm production and marketing co-operatives and marketing boards for buying or selling agricultural products abroad.

The next two subsections discuss respectively objectives and instruments of broad domestic agricultural and food policies, namely, those related to natural resources, input markets, and product markets, and those objectives and instruments of border or trade policy.

4.1. Domestic Policies

4.1.1. Natural Resources Policies

Natural resources policies encompass those concerned with the provision and conservation of natural resources or limiting inputs in agricultural production: the first stage of the food and agricultural system. Growth, equity, sustainability, and food security are often the main goals for provision of limiting inputs to agriculture.

The main policies concerned with provision of natural resources include irrigation policy and land reform policy. Irrigation policy would include not only provision of irrigation infrastructure, but different supporting instruments, including subsidies and rationing, to allocate the water resource between users and among competing uses.

Land reform as an agricultural policy is perhaps the oldest and most politically charged of all agricultural policies. Starting with Denmark in the 1700s, land reform aimed at consolidation of peasant holdings and/or creating supporting institutions for tenure security. Following the Russian revolution in 1917, state-run redistribution of land to achieve equity and economic growth became the mode not only in Russia, but in other countries in Latin America, Asia, and the Near East. Redistributions were supplemented by protectionist policies to insulate domestic reforms. But the policies would soon become unsustainable. That, in combination with the political unpopularity and high cost of land redistribution, lack of tenure security, and the demise of the socialist ideology in the 1980s, led most countries to revert to market-oriented policies.

However, the political developments in southern Africa, the dismantling of the former Soviet Union, and persistence of large land holdings in South America have revived interest in land reform, especially with regard to the importance of tenure security through titling. What the research points to is that titling is not effective without correcting for market failures in credit, land, and labor markets .

Policies concerned with conservation can be as narrow as conserving soil and water and as wide as instituting farming practices consistent with what the concept of sustainable development or “development that lasts.” The idea is that farming practices should not only be economically efficient, they should also be environmentally friendly and socially desirable.

According to Legg (no date), economic efficiency relates to the ability of the food production system to “maintain sufficient potential production capacity to meet current and future demands for agriculture and food through using resources efficiently (producing the maximum output from a given set of inputs).” Environmentally friendly practices are those that “maintain sufficient natural resources (especially land and water), while reducing the harmful and enhancing the beneficial environmental effects of

agricultural activities.” Socially acceptable practices relate to equitable distribution of income within agriculture, distribution of income and employment opportunities between agriculture and the rest of the economy, and “fair” prices to producers and consumers.

The degree to which agriculture in a particular country is being channeled toward sustainable development hinges on that country’s stage of economic development and, thus, demand for environmental services. It follows that the set of instruments used in natural resource policies instituted (and implemented) in the industrialized countries, for example, would be different from those in industrializing ones. In industrialized countries, where only 4 percent of the labor force is engaged in agriculture, and food surpluses abound, reforms are underway to discourage intensive use of chemicals and fertilizers by reducing output and input-linked subsidies, making direct payment to farmers for producing environmental amenities, and instituting cross-compliance measures, which require farmers to comply with specific environmentally friendly measures to qualify for government support. In developing countries, where agriculture is still the largest employer of the labor force, and food security concerns are highest, input-linked subsidies are sometimes needed to induce resource-poor farmers to increase production.

4.1.2. Input Markets Policy

Economic theory predicts that when a farmer is driven by profit maximization, the optimal level of an input (such as fertilizers, chemicals, seeds, etc.) he or she will use is determined at the point where the value of applying one additional unit of an input is equal to its price. Underlying this prediction is the assumption that the farmer has perfect knowledge of the input/output technical relationship and the state of nature between the time the input is applied and the crop is harvested. It is also assumed that the farmer has the cash to pay for the input, and can secure the needed amount of inputs from the market. If none of the assumptions holds, a farmer may over-utilize, under-utilize, or not utilize an input at all, and productivity suffers.

Governments intervene in input markets to increase productivity by providing information on application of an input in combination with other inputs, subsidizing an input to make it affordable to farmers, and regulating the input distribution system to make sure the input reaches its target.

Intervention in input markets also takes the form of easing access to credit and lowering production expenses through subsidized credit. According to Ellis, credit intervention in developing countries with many small (peasant) farmers, is motivated by:

Emerging ideas about efficiency of small farmers, their output potential with new technology, their lack of cash during critical periods in the crop or livestock season, their lack of collateral for loans, and the exploitative behavior or monopolistic behavior of private money lenders.

(Ellis, 1992)

So, the specific objectives are to make cash available for farm investment in small equipment, replace money lenders with a more modern rural financial system, provide working capital to encourage adoption of new technology, and subsidize credit to offset the impact of unfavorable economics policies.

Even in countries with well organized financial markets, like the United States, intervention in agricultural credit has also been motivated by “perceptions that private lenders were not adequately, efficiently, or fairly supplying credit to farmers.” This kind of help has been and continues to be used as a major component in the overall financial safety net provided to farmers, including assistance to the least creditworthy ones.

4.1.3. Product Market Policy

Product market policy is the course of action a government takes to influence prices at the farm gate and beyond. There are many considerations that prompt governments to intervene in the farm product market, but the most common are:

- to expand or contract output
- to affect income distribution
- to stabilize farm prices and incomes
- to influence the role of agriculture in the general economy.

Governments can influence product prices through domestic instruments like taxes, subsidies, price ceilings, price floors, and direct intervention.

Taxes can be imposed on a per unit basis, like a sales tax, or on lump sum basis, like a property tax. A per unit tax drives a wedge between the price paid by the buyer and the price received by the seller. Buyers end up paying a higher price and sellers a low price relative to what would have prevailed under a no tax situation. The tax generates revenue for the government, but results in losses for buyers and sellers. However, under certain conditions, the government can obtain the same tax revenue by imposing a lump sum tax on consumers and producers without driving a wedge between the buyer price and the seller price. Subsidies also drive a wedge between the price sellers receive and the price buyers pay, but with consequences opposite of those of taxes. Since sellers receive a higher price and buyers pay lower prices, both gain. Proceeds to cover the subsidy are a loss to taxpayers.

Governments may also set price ceilings below the market price to provide relief to buyers from rising prices, or price floors above the market price to provide relief to sellers from declining prices. Under a price ceiling, quantity demanded is larger than quantity supplied, causing a shortage. Under a price floor, quantity supplied is larger than quantity demanded, resulting in surplus if producers know the government steps in to buy the surplus. This is the essence of price supports used to protect farm income from swings in prices. Surpluses are disposed of in a variety of ways, including subsidizing exports, food aid, etc. Persistent surpluses, however, call for other quantity reducing measures, such as producer quotas or land retirement. If the government does not step in to buy the surplus, producers adjust production to only satisfy the quantity demanded at the price floor.

Direct intervention may involve control of price and quantities at every stage of the food-marketing channel. For strategic foods, such as wheat, a government may decide on how much to procure from farmers, what price to pay for wheat, what price to charge consumers for flour, and what margins are acceptable for millers, bakers, and retailers.

Governments can also influence prices by devaluing exchange rates to make their products cheaper abroad, or by using instruments like tariffs and quotas. Such instruments plus others are discussed next under trade policy.

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Biographical Sketch

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