

## FOOD SECURITY AND GOVERNMENT INTERVENTION

### **Samarendu Mohanty**

*Assistant Professor, Department of Agricultural and Applied Economics, Texas Tech University, Lubbock, Texas, USA*

### **E. Wesley F. Peterson**

*Department of Agricultural and Applied Economics, University of Nebraska-Lincoln, USA*

**Keywords:** Food Security, Interventions, Taxes, GATT, Tariffication, Market Access, Developing Countries, India, China, Food Supply and Demand, Exchange Rate, Value Added, Simulation Models, Agricultural Trade, Specific-Factor Trade Models.

### **Contents**

1. Introduction
  2. Forms of Government Intervention
    - 2.1 Price Policies
    - 2.2 Import and Export Policies
  3. Agricultural Intervention and Food Security
  4. Food Security and Macro Policy
  5. Conclusion
- Bibliography

### **Public Policies and Farming Business**

#### **1. Introduction**

All human societies must solve a set of problems related to food. The first of these is to procure edible plants and animals through some form of production process. Early humans relied mainly on hunting, fishing, and gathering all of which are still practiced in the modern world. About 10,000 years ago, certain plants and animals were domesticated giving rise to new methods to produce food. Crop production and animal husbandry generate the bulk of the food consumed in the world today. However, the products generated by farming and livestock systems around the world are of little use without resolution of a second set of problems related to the transformation of edible plants and animals into food and the distribution of this food across space and time. In traditional agricultural societies, most of the processing, storage and final food preparation is done by the farm household itself. As modern systems of agriculture have developed, the transformation of raw commodities into food and the distribution of consumable food items throughout society increasingly take place beyond the farm gate. Modern food systems rely on complex production, transportation, processing, storage, marketing and distributional components to assure the supply and distribution of food and its associated nutritional elements.

The performance of a national food system can be judged in relation to its effectiveness at generating adequate amounts of food that are distributed equitably among the entire

population. Other indicators of good performance include the nutritional health of the population, the sustainability of the food production and distribution systems, and the safety of the food supply. The concept of food security covers all of these performance criteria. According to the Food and Agriculture Organization (FAO), food security means that all individuals have secure “access to adequate safe and nutritious food to maintain a healthy life.” (FAO, 1996) This definition specifically recognizes the need for adequate amounts of food that is safe and nutritious and suggests that food security would be compromised if access to food were limited to only a part of the population or if the food were produced in a way that is likely to lead to severe environmental degradation. An unsustainable food system would not guarantee secure access to food over time.

The governments of virtually every country on the planet attach great importance to achieving food security and a wide variety of mechanisms have been developed to realize this goal. The first issue governments face in achieving national food security is the problem of insuring that adequate amounts of food are available to the resident population. Some governments have set goals of food self-sufficiency, which means most if not all of the food available in a country comes from the domestic farming system. However, food security does not require food self-sufficiency because countries can import food items not easily produced within the country. Agricultural products are, after all, highly sensitive to climatic, topographic, soil and other conditions that tend to vary around the world. Even countries with extremely productive agricultural sectors (e.g. the United States, Canada, France, Australia, Brazil, etc.) are not fully self-sufficient in all food items. The United States, for example, depends on imports for its supply of coffee, tea, bananas and other tropical products. In general, the problem of assuring adequate food supplies is solved by relying on both domestic production and imports.

It must be noted, however, that there can be constraints on a nation’s ability to insure adequate food supplies from sources other than domestic production. In order to purchase imported food, a nation has to export something to earn the foreign exchange needed to pay for the imports. In most low-income countries, agriculture is still the primary economic activity and agricultural exports may be the main source of foreign exchange. It may seem paradoxical that a country could stand a better chance of achieving food security by selling some of its domestic food production on the world market than by reserving all of its domestic production for home consumption. However, the paradox disappears when we remind ourselves that different kinds of food are produced in different countries. A low-income country may be able to complement its domestic rice production with imports that are financed by exports of its surplus bananas. On the other hand, if a country is unable to earn enough foreign exchange through its exports, whether they are industrially transformed goods, commodities from the agricultural or mining sectors, services, or a combination of these items, it may not be able to import enough food to realize national food security.

The kinds of issues raised in the preceding paragraphs show why governments are intensely interested in both domestic agricultural production and trade. In striving to achieve food security, governments may wish to promote domestic production, encourage imports and/or exports and generally oversee the functioning of food

markets. To this end, a wide range of policy instruments has been devised. In addition, governments cannot afford to lose sight of the other performance criteria discussed above. Thus, a concern for poverty and hunger may cause the government to devise policies that lower food prices in an effort to assure access to food for those with low incomes as well as for those who are better off. If the government notices that agricultural production is causing severe soil erosion, it may also establish regulations and policies to overcome this problem. Government intervention may also prove fruitful in helping to insure that individuals understand enough about nutrition to be able to adjust their diets for better health.

As a general proposition, the opportunities and constraints faced by developing countries differ from those found in industrialized countries. One consequence of these differences is that the policy responses of the governments in low-income countries differ from those in higher-income countries. An obvious difference concerns the budgetary resources available in the industrialized countries of Western Europe, North America, Japan, Australia and New Zealand. Governments in these countries can more easily pursue national food security through the provision of financial subsidies to producers and consumers than is the case in many developing countries. There are many other significant differences that shape the policy environment in different countries. The farm population in most industrialized countries is relatively small but produces large quantities of agricultural commodities because of its access to modern technologies, energy and capital. In the United States, for example, farmers make up only about two percent of the total population but generate such extensive output that about forty percent of U.S. agricultural output is exported. These agricultural exports have become an important source of rural income without which the U.S. farm sector would contract quite dramatically.

In contrast, 72 percent of India's population in 1999 was rural and its agricultural population made up 55 percent of total population (FAO population estimates from [www.fao.org](http://www.fao.org)). Despite impressive yield increases during and after the Green Revolution, Indian rice yields in 1999 were only about 3 metric tons per hectare compared with 7 metric tons per hectare in the United States while European Union wheat yields were more than twice those recorded in India (see the FAO statistical database at [www.fao.org](http://www.fao.org)). The fact that most developing countries have large farm populations would seem to suggest that the policy orientation in these countries would favor farmers. As noted famously in the 1986 issue of the World Bank's *World Development Report* (Oxford University Press, Oxford, 1986), however, it turns out that most developing countries have pursued cheap food policies designed to lower food prices for urban consumers while it is in the industrialized countries that subsidies directed at farmers are the greatest. One consequence, as noted in the World Bank report, is that the highly subsidized farmers of the industrialized countries generate large food surpluses that are often sold with export subsidies on the world market while the low farm prices in developing countries result in lower production and food shortages. Mancur Olson explained this apparent paradox by noting that it is generally easier for smaller special interest groups, such as farmers in industrialized countries or urban consumers in developing countries, to organize effective rent-seeking activities than is the case for larger, more disperse groups such as farmers in developing countries or consumers in industrialized countries (Allen Maunder and Ulf Renborg, Aldershot,

1986).

As noted earlier, government intervention in agriculture may target a wide variety of objectives. The policies that result in high subsidies to producers in industrialized countries and the cheap food policies of developing countries may primarily be responses to powerful special interest groups but they are also motivated, at least in part, by important social and economic concerns. In North America and Europe, the income of farm households historically lagged that of urban households and price supports and other forms of financial assistance were originally put in place to offset this disparity. In developing countries, there are many people with limited incomes for whom high food prices would be disastrous as governments in low-income countries generally lack the resources needed for the establishment of social safety nets. From an economic perspective, many of the policies adopted in both developing and industrialized countries appear to be misguided because the inefficiencies they create are costly and slow the development of both the rural sector and the overall economy. This suggests that there may be better ways to accomplish policy objectives than the methods most commonly practiced in the past. And, indeed, there does currently appear to be a fairly widespread effort to change the nature of farm policy. Many developing countries are opting for more market-oriented policies and traditional farm policies have been eliminated in some industrialized countries (New Zealand) or reduced or substantially modified in others (United States and European Union). In many cases, decisions to change the direction of food policies in developing countries have been made under pressure from the World Bank and International Monetary Fund (IMF). The cheap food policies in these countries were often based on overvalued exchange rates, direct subsidies for food or agricultural inputs, and other methods that drained government budgets and reduced foreign exchange earnings. Over time, the financial situation in these countries became increasingly precarious and recourse to assistance from the IMF became ever more frequent. Eventually, the IMF and World Bank began insisting on policy reforms, known as structural adjustment programs, as a condition for continued assistance with countries' financial problems.

For the industrialized countries, pressures for policy change have come about primarily as a result of the realization that historic farm policies have been costly and that, in general, the original problem of low farm incomes has largely disappeared. For political reasons, many governments in industrialized countries have found it convenient to use an international forum, the World Trade Organization (WTO), as a mechanism for achieving a more generalized policy reform. It may be easier to sell subsidy reductions to a country's farmers if they know that farmers in other countries will be subjected to the same treatment. The Uruguay Round of trade negotiations began in 1986 and lasted eight acrimonious years. Although agriculture was not the only item on the Uruguay Round agenda, it was one of the most contentious. Agriculture had not been included in the original agreement, the General Agreement on Tariffs and Trade (GATT), largely because the United States feared that trade agreements on agriculture would interfere with its farm programs. A major accomplishment of the Uruguay Round was to bring agriculture under the discipline of the newly created WTO. Throughout much of the Uruguay Round negotiations, many of the developing countries remained on the sidelines as the United States and several other agricultural exporting countries (the Cairns Group) wrangled with European Union, Japanese and Korean negotiators. The

posture of the developing countries is likely to change in future trade negotiations as they become more aggressive in promoting their perceived national interests.

In addition, issues related to food safety and nutrition, environmental sustainability, and the relationship between agricultural production, poverty and hunger have become increasingly prominent in the context of both international trade negotiations and national political debates. The chapters included in this section of the *Encyclopedia* address many of these issues in greater detail. In the rest of this introductory chapter, we will describe the main themes dealt with in these chapters and conclude with some general observations on government interventions to achieve food security.

The first chapter provides a discussion of how countries in different stages of their economic growth intervene in their agricultural sectors to accomplish varied objectives. It provides a comprehensive review of price policies, import and export policies, and taxation policies and shows that countries are adopting more market-oriented farm policies to fulfill the commitments that they made in the context of multilateral trade agreements (GATT/WTO).

-  
-  
-

TO ACCESS ALL THE 14 PAGES OF THIS CHAPTER,  
Visit: <http://www.eolss.net/Eolss-sampleAllChapter.aspx>

#### **Bibliography**

FAO 1996, *The Sixth World Food Survey*, Rome, Italy.

Allen Maunder and Ulf Renborg, Aldershot 1986, "*The Exploitation and Subsidization of Agriculture in Developing and Developed Countries.*" by Mancur Olson in *Agriculture in a Turbulent World Economy*, London, pp. 49-59.