Food security

Food is a fundamental biological need. Unlike most other goods such as medicine, everyone must consume a certain amount of food everyday to maintain physical well-being and daily functioning. Moreover, without enough food, societies become prone to unrest and instability. Hence, the state is mandated to ensure adequate supply of food for its people to promote public welfare, social and political stability, and to sustain economic growth.

But while consumption must be assured on a daily basis, food production takes time, e.g., several months from planting to harvest. Storage is therefore essential to ease the time constraint. It is also necessary to be able to maintain a reserve in cases of natural calamities since agricultural production is prone to risk and uncertainty. Another way to protect against this risk is to obtain food from multiple sources such as from different places and countries.

Food security: what it means

Food security, as defined in the 1996 World Food Summit, is “when all people, at all times, have physical, social, and economic access to sufficient, safe, and nutritious food which meets their dietary needs and food preferences for an active and healthy lifestyle.”\(^1\) In order for households to meet their dietary needs, there are existing systems for food production and distribution. One must understand how the system works in order to understand the food security issue.

Since most households are net buyers of food, the food system may be conceptualized as a market consisting of supply and demand (Figure 1). The quantity supplied (graph S) per period depends on the price; in general, the higher the price, the greater the quantity available. The quantity demanded per period also depends on the price (graph D). In general, the higher the price, the lower the quantity demanded. The price established by a free market is effectively a compromise between incentives for suppliers and requirements of households; this is where quantity supplied equals quantity demanded, i.e., P₁ in Figure 1 which corresponds to food production (and demand) of Q₁ per period. There is no “shortage” of food or “surplus,” for that matter, in the sense that the amount buyers want at a given price is actually available and the amount sellers want to sell at a given price is actually sold. The market is thus in equilibrium.

However, there may be other standards of gauging “shortage.” For example, society may have a standard for dietary intake (e.g., 300 grams of rice per day), which a market equilibrium may not correspond to. Consumers may consume more or less than the standard, based on their preferences in relation to food prices, prices of other goods, and household income. Whatever standard is adopted, the basis for adoption should be biology, social norms, and household behavior.

Dimensions of food security

Given the above considerations, food security can be described according to the following dimensions: availability, accessibility, utilization, and stability. Availability pertains to the proximity of the population to food sources, i.e., adequacy of domestic production, stocks, and net trade (exports less imports) at the

\(^1\) Food and Agriculture Organization. 2008. An introduction to the basic concepts of food security.
national level. Assuming that "adequate" supplies or stores of food are in the country, households are not, however, automatically assured of access to that food—for instance, poor households may be constrained by low purchasing power. Meanwhile, utilization pertains to the human body's ability to benefit from nutrients in food that households are able to access. The quality and quantity of energy and nutrient intake by individuals is affected by feeding practices, food preparation, diversity of the diet, individual health, and intrahousehold distribution of food. Lastly, food security requires that food be available, accessible, and utilizable at all times, which is the stability dimension. Stability may be affected by natural calamities or economic events such as sudden price increases, as what happened in the recent food crisis.

**Government interventions: some pros and cons of their likely effects**

While the operation of the food market is largely a private sector activity, government, in pursuit of its social mandate, may adopt various interventions in the food market to safeguard food security. These interventions may be broadly classified as: (1) market and trade policy measures; (2) safety nets; and (3) producer-oriented measures (FAO 2008).

Focusing on the first set of interventions, one may consider how they affect the various actors in the food market. Food security in the Philippines, for instance, is strongly associated with food self-sufficiency, especially in rice. Hence, importation of rice is subject to a high tariff of 50 percent. The food security mandate is primarily vested on the National Food Authority (NFA), which is tasked to stabilize prices for both producers and consumers as well as to regulate rice marketing, warehousing, and processing. By virtue of its import monopoly (provided by law), the NFA is also able to enforce a quantitative restriction on the amount of rice imported. The NFA also has a large rice distribution program wherein it retails its stocks to consumers at below-market prices.

Normally, the NFA controls importation of rice in order to protect farmers from cheap imports. What is the likely impact of this protectionist policy?

In a scenario where no international trade exists, the equilibrium price for rice at the domestic market may settle at a level higher than the price of rice at the world market. Now if there are no restrictions on foreign trade and given the lower price of rice available in the global market, then the equilibrium for the domestic market would be at a price equivalent to that in the world market but with a lesser quantity of domestic production that would leave room or allow for a certain level of importation to fill in the rest of the demand.

However, if the country pursues a 100 percent rice self-sufficiency policy (protectionist policy) in the name of food security, it may decide to ban all importation of rice and the domestic equilibrium will then settle at a price higher than that in the world market but which will encourage a higher domestic production.

Hence, for the farmers, said policy is good because they are able to enjoy a higher price for their rice harvests. Consequently, this leads to a higher supply of production.

On the other hand, however, for the consumers, this means that they pay a higher price than what they could have paid had the rice been acquired at the lower world market price or through rice imports. Consequently, the tendency is for them to consume less. Said protectionist policy then leads to a situation where rice becomes less affordable for consumers and thereupon reduces their household food consumption.

**Conclusion**

Food security is a complex, multidimensional condition with multiple causes and effects. Precisely because of this, government should be cautious about its intervention in the food market. Some policies may lead to outcomes that are opposite to their intended effect. As such, in addressing the issue of food security, government needs a comprehensive perspective incorporating human behavior, economics, and policy options which may lead to a better set of interventions.

**References**
