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Food Safety and International Trade

Theoretical Issues

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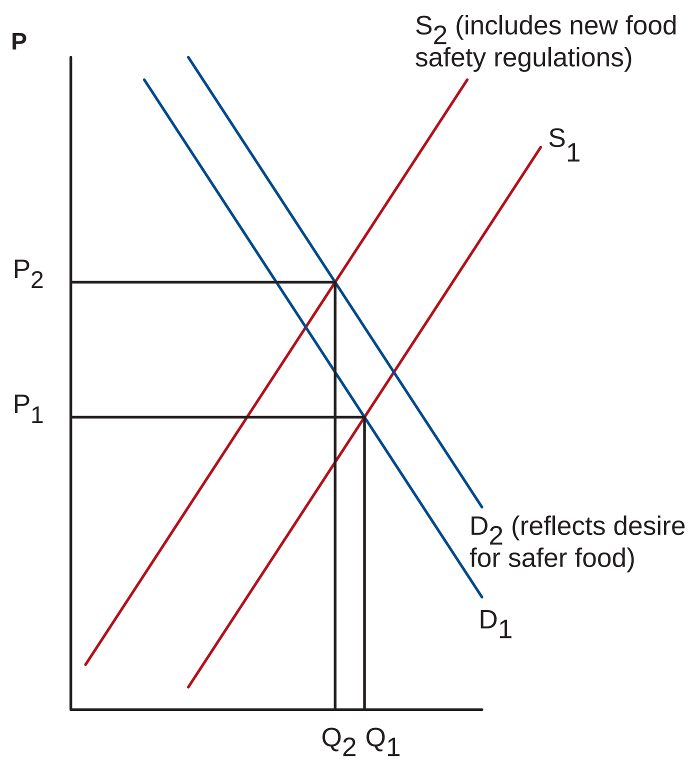
Issue: International food trade is growing, as consumers take advantage of lower prices and greater seasonal availability of some foods abroad. Most countries have regulations governing the safety of food production. Conflicts over differences in food safety standards between trading partners can stifle trade. Countries receive benefits from international food trade, but they also receive benefits from strong food safety regulations. Countries with differing safety standards, however, have several different alternatives for resolving their conflicts.

Background: The market has incentives to provide some degree of food safety, as firms depend on their reputations for repeat sales. However, the market generally does not provide the socially desirable amount of food safety for two reasons. First, consumers cannot determine how safe food is before buying it. Even when consumers purchase foods, they often cannot tell whether a particular food was responsible for making them ill or whether consuming it might have long-term health consequences. Consumers will not necessarily be able to assign the appropriate credit or blame to firms that provide safe or unsafe food. Their uncertainty about the safety of a particular type of food might even make them reluctant to buy it. Food safety measures can increase costs for firms, and this lack of consumer information reduces the incentives for a firm to provide safe food. Second, when consumers eat unsafe food and become ill, costs extend beyond consumers themselves to healthcare workers, employers, and family members. Consumers do not usually take such costs into account when they consume food.

Government regulation attempts to increase the level of food safety provided by the market, as the market alone will usually not provide the socially desirable level. Regulations can specify particular processes that a firm must use to produce food. For instance, a government might require manufacturers to seal food in plastic to prevent contamination with foreign matter. Alternatively, regulations can specify a level of quality for the final food product. For example, most countries have maximum allowable levels of pesticide residue that may be present on fruits and vegetables. This type of regulation allows firms to select the least expensive method of arriving at the desired product quality.

Regulations often raise costs for firms in an industry, as reflected in the new supply curve. Consumers are, however, often willing to pay more for safer food, as indicated by the new demand curve. However, firms that improve the safety of their food might be unable to communicate that improved safety to consumers, in which case they do not receive the higher prices indicated by the new demand curve.

A change in food safety regulations



When countries trade internationally, the same issues arise, with a few additional concerns. Regulations might differ across countries, as countries have different types of regulations, different levels of tolerance for food safety risks, and different costs of producing safer food. If a regulation imposed by the government of one country is more stringent, its firms will have higher costs and may be unable to sell their goods as cheaply as foreign firms not subject to the regulations. Consumers will pay more for safer food, but the firm's inability to communicate its food safety level — and the consumers' inability to take social costs into account — can leave the domestic firms at a disadvantage. Firms attempting to comply with their trading partners' regulations might incur higher costs if geography or climate make it more difficult to comply, or if they must take steps to assure their trading partners of their compliance. These regulatory differences can create conflicts across countries.

Findings: When countries disagree over trade safety regulations, several outcomes are possible. The outcome chosen should depend on the relative size of the benefits of trade versus the costs of altering or complying with food safety regulations.

- The domestic country could ban less regulated foreign foods. If the foreign producers really cannot provide the safer food as cheaply as domestic firms, consumers are better off with the ban, if the food safety benefits are high. The benefits from trade are low if the imported good is less safe. However, if foreign firms could provide food that is cheap and safe, consumers lose from a ban, as they lose the benefits from trade and do not gain added food safety.

- If the foreign firms decide that the value of the domestic country's market is high enough, the foreign firms can adopt the domestic country's costlier food safety regulations, either as regulations for exported goods or regulations for all production. If these regulations spread throughout the foreign country's industry, this can improve food safety for the foreign country's own consumers.

- The countries can negotiate a compromise solution, if both feel that the costs of altering their regulations or production practices are worth the benefit of maintaining the trading relationship. Third-party standards, such as those of the Codex Alimentarius, can also be adopted.

Information Source:
For full text, see Mitchell, Lorraine. "Economic Theory and Conceptual Relationships Between Food Safety and International Trade," chapter 2 in *International Trade and Food Safety: Economic Theory and Case Studies*. J. Buzby (ed.). USDA, Econ. Res. Serv., AER-828, Nov. 2003. www.ers.usda.gov/publications/aer828/