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FOREIGN DIRECT INVESTMENT AND PROCESSED FOOD TRADE

Edited By

Shida Rastegari Henneberry

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PRODUCT AND PROCESS STANDARDS: IMPLICATIONS FOR FOREIGN DIRECT INVESTMENT AND PROCESSED FOOD TRADE

Steven A. Neff and Margaret A. Malanoski

The paper reviews Uruguay Round accomplishments related to product and process standards' effects on trade and foreign direct investment (FDI) in processed foods, concluding that more was achieved to reduce the use of product and process standards as technical barriers to trade than on investment barriers. Three directions for empirical research are identified: (1) the prevalence of product and process standards as trade barriers, (2) harmonization versus mutual recognition, and (3) case studies on the effect of product and process standards on trade versus FDI decisions.

Introduction

The result of the Uruguay Round negotiations of the General Agreement on Tariffs and Trade (GATT) points to a freer international arena for foreign direct investment and trade in the processed food industry. With nontariff barriers gone and tariffs scheduled for reduction, industries seeking protection are likely to focus more on the remaining available avenues to protection: technical barriers, which are inappropriate use of product and process standards, tied trade, and marketing restrictions, all of which are examples of the more encompassing area of competition policy. This discussion focuses only on technical barriers. The new trade policy arena prompts us to examine the institutions and motivations for technical regulations and standards that affect trade and foreign direct investment (FDI) in the processed foods industry and to identify policy challenges that flow from these developments.

The motivations for standards are not always transparent and legitimate. For instance, the Mexican government in November 1994 began to update its food safety standards. Among them was a requirement that fluid milk could not be offered for sale more than 48 hours after pasteurization. US milk bottlers in California, Arizona,

New Mexico, and Texas, who were already selling fluid milk in Mexico, considered the short shelf life protectionist because they knew that continuously cooled milk has at least a 10-day shelf life (Journal of Commerce). The devaluation of the Mexican peso has diminished the US milk shippers' commercial opportunity in the short run, but they objected under North American Free Trade Agreement (NAFTA) rules similar to World Trade Organization (WTO) rules that require that regulations have a scientific basis that is no more stringent than required to meet legitimate objectives.

Product and process standards have been easily and understandably neglected in agricultural and food trade negotiations for at least four reasons:

- (1) The major effort to reform trade in food and agricultural products was in tariffs and quantitative barriers on bulk products, which could stop trade decisively. Many technical standards are mere hindrances by comparison, but some can prohibit trade.
- (2) Compared to bulk commodities, processed foods are less homogeneous. This observation is so simple that it seems hardly worth mentioning, but what follows from this point is important. Billions of dollars of corn can be traded based on premiums and discounts to a single standard. Processed foods, by contrast, are more differentiated, requiring more standards and introducing a greater possibility that close substitutes will receive considerably different treatment.
- (3) Many standards-related issues that are important to a particular product are not important in the aggregate.
- (4) A large share of processed foods is purchased by consumers, whose decisions and quality determinations may be inconsistent from individual to individual. Perhaps standards for bulk products are better understood and quality is more easily determined because bulk products are aimed at processors or other industrial users who have professional procurement experience.

Product and Process Standards

In a general sense, product and process standards fall within the broad category of competition policy, other examples of which

include tied trade and marketing restrictions. In the language of the WTO, there are technical regulations, which are mandatory measures enforceable by law, and technical standards, which are voluntary measures. Governments and nongovernmental organizations such as industry associations can be involved in development of standards, depending on the institutional relationships in a particular country. Both technical standards and regulations specify that a product must have certain characteristics or that certain processes must be followed in the manufacture of a product in order to qualify for import and sale. A product or process may be covered by standards in labeling laws, packaging laws, standards of identity, certification and inspection rules, and food safety standards.

The WTO Defines Technical Regulations and Technical Standards in the Following Manner:

Technical regulation

“[a] document which lays down product characteristics or their related processes and production methods, including the applicable administrative provisions, with which compliance is mandatory. It may also include or deal exclusively with terminology, symbols, packaging, marking or labelling requirements as they apply to a product, process or production method.” (Jackson 1969, 156)

Standard

“[a] document approved by a recognized body, that provides, for common and repeated use, rules, guidelines or characteristics for products or related processes and production methods, with which compliance is not mandatory.” (Jackson 1969, 157)

Standards of identity provide typical examples of product standards, *i.e.*, products are required to be what they claim to be. For example, peanut butter has to be made from peanuts. Other examples include the Italian pasta purity laws and the German beer purity law, which strictly regulated the permissible ingredients in these products. In former times in Germany, beer could have only prescribed ingredients, and any other ingredients, such as

preservatives, would make it illegal to import and sell such a product. The beer purity law is now mostly voided as far as trade is concerned, but it stood as a product standard for more than 450 years.

Examples of process standards would include a ban on goods made with prison labor or a law against the importation of dairy products made of milk produced from cows treated with recombinant bovine somatotropin (rbST). At the time of writing, US dairy products are not banned from any foreign market on the basis of the use of rbST in the United States. If a ban existed, this would be an example of a process standard. Some environmental standards are process standards. That is, there is no objection to the environmental effect of the product itself. The objection is to the exporter's competitive advantage that the lower environmental standards create.

Effects of Standards on the Behavior of Food Market Participants

It is natural to consider food marketing companies first and foremost as having interest in how technical standards influence food trade because of their direct involvement in the international market. The interest extends upstream in the marketing chain with farmers and downstream to consumers.

Processed foods companies:

In the broadest terms, firms begin with the objective to maximize profits. If a company decides to enter a foreign market, one might imagine that the decision to trade or invest -- whether through new production facilities, acquisition of affiliates in the target market, licensing, or joint venture -- is the result of a calculation of the relative costs of product placement in the foreign market. The cost of product placement is a more appropriate concept than transportation cost because the former is a more encompassing term than transportation costs, transactions costs, or even delivery costs. It involves many other costs including the costs of

compliance with technical regulations on products and processes in the target market.

There are many considerations arising from product and process standards that affect a firm's decision to export or invest in foreign production. For instance, a firm can use any slack domestic production capacity to serve a foreign market. Presumably a firm has more and better information about production and marketing in its home market than in a foreign market. In a foreign market there may be a question of transparency, *e.g.*, information about product and process standards may not be readily available or may change frequently or without notice. Some firms are quite protective of proprietary technology and formulations that a foreign government may require to be disclosed for ostensible safety reasons in order to be certified as eligible for import. A country may specify a minimum share of local content, which encourages domestic processing and the use of domestic materials in production.

Difficulty in meeting product and process standards for imports can lead a firm to buy manufacturing facilities in the foreign market it wishes to enter rather than attempt to export into the foreign market. In a 1994 survey of multinational firms' decisions on export versus FDI (Vaughan, Malanoski, West, and Handy, 1994), economies of scale and delivery costs relative to the value of the product were cited most frequently as decisive factors, but respondents also mentioned the following considerations that are included under product and process standards: inspection, certification, and risk.

Farmers:

Even though most of the burden of compliance costs fall on food manufacturers, farmers in some cases are affected. The production agriculture subsector can be affected by product and process standards in at least two ways. First, the utilization of domestic agricultural products in processed foods is an important component of the demand for these products. Second, farmers are concerned with compliance costs of process standards because they increase production costs. For example, the existence of high standards may result in greater consumption of US food products if the

standards help to create a perception of higher quality in the final products. The latter effect may or may not fully offset the higher costs of complying with standards.

Consumers:

Obviously prices, quality, and safety of food are all very important to consumers. As a recent example of consumers' interest in food regulations, the Nutrition Labeling and Education Act of 1990 (NLEA) became effective on May 8, 1993 for regulation of health claims and on May 8, 1994 for regulation of nutrition labeling and nutrient content claims. The strict rules imposed by the NLEA may impose a substantial burden on foreign firms selling into the US market that they may not have to meet in any other market. Aside from nutrition labeling, consumers want adequate standards to ensure food safety and quality, and, for a given quality, they want to pay as little as possible. Consumer interests in food safety and food prices are not always congruent.

Motivations for Product and Process Standards

There are many motivations for standards, leading to considerable ambiguity surrounding standards. One motivation can be thought of as overall national concerns, including sovereignty, welfare, and distribution. Perhaps these are the core types of motivation, or basis for concern, and the standards all arise as results of the basic motivations. Sovereignty has arisen as a concern during the Congressional debates on the GATT Uruguay Round and the North American Free Trade Agreement. Some groups believed that US laws, including standards for foods, should be outside the influence of pressure from other nations. Distributional issues at a national level would include the effect of a new technology on farm structure. Welfare concerns include consumer protection and information issues such as labeling and food safety. Sanitary and phytosanitary (S&P) issues surrounding processed foods include pesticide residues and microbial contamination, e.g., the US Hazard Analysis and Critical Control Point (HACCP) system for meat inspection.

Due to food safety concerns, new technologies may result in new process and product standards. They raise the question of the degree to which the technologies change the essential character of the product. In the case of recombinant bovine somatotropin (rbST), studies by the US Food and Drug Administration (FDA) have found that the milk from untreated cows is identical to milk from cows treated with rbST. As a result, FDA has sharply restricted the wording that dairy foods marketers can use in labeling the product with respect to the use of rbST. The label cannot claim or imply safety or nutritional advantages for the no-rbST product. In the case of hormone implants in US beef animals, a long-standing trade dispute has existed between the United States and the European Union (EU), which bans the use of hormone implants that have withstood rigorous tests of safety, quality, and efficacy in the United States. In this instance, the EU does not claim that the meat is unsafe for human consumption, but objects to the process by which the beef was produced. Food irradiation presents another example of a technology that has generated some controversy based on process. If a product with exactly the same food safety characteristics as an irradiated food could be produced without being irradiated, there would be no objection to the product.

Another motivation for standards is to facilitate commercial developments. For instance, standards of identity, also known as product definitions, are defined by the FDA primarily for food safety purposes. Standards also facilitate trade by product description, lower transactions costs, and improve market efficiency. Other standards serve commercial concerns including protection of geographical indications (*i.e.*, denomination of origin) and brand names.

Finally, product and process standards can be motivated by trade protectionism. As discussed in the next section on institutions, the Uruguay Round strengthened rules against the use of product and process standards as instruments of trade protection in the Agreement on Sanitary and Phytosanitary Measures and in the Agreement on Technical Barriers to Trade. In brief, the Uruguay Round outcomes insisted that standards be based on scientific evidence and appropriate risk analysis, that standards be transparent to other members, that standards are harmonized

through international institutions where possible, and that members' standards, even if different from each other, be considered equivalent if the exporting country can demonstrate that the importing country's legitimate objectives are achieved by the exporting country's standard.

Out of a desire to protect their citizens, countries may inadvertently create an unjustifiable trade barrier. The Delaney Clause, which mandates zero tolerance for residues of pesticides that contain known carcinogens, is an example of a standard that could be challenged for not being based on appropriate risk assessment or appropriate science. For some known carcinogens, there is a "no observable effect level" (NOEL), below which scientists cannot detect any harmful effect.

Institutions

Product and process standards are not all governed by a single global body of rules. There are GATT rules, GATT precedents (case law), the Codex Alimentarius Commission, industry standards, and national institutions and laws whose jurisdictions overlap and contradict each other. The common functions of standards institutions are establishment of the standards, harmonization of standards across national and other administrative jurisdictions, enforcement of standards, and arbitration of disputes when members disagree on the application of standards. Of all the institutions performing these functions, the WTO has the greatest scope.

World Trade Organization

The United States has participated with other nations in the eight rounds of multilateral trade negotiations since the inception of the General Agreement on Tariffs and Trade (GATT) in 1948. This section reviews GATT Uruguay Round accomplishments related to trade and foreign direct investment in processed foods. While Vaughan and others (1994) found in their interviews that government policies were not the major factor in most of the firms' decisions on the method of entering a foreign market, international

trade rules changes are likely to boost both trade and foreign direct investment in the processed foods industry.

The 117 GATT members completed the latest round of negotiations, the Uruguay Round, in December 1993. The signing was in April 1994, the agreement was ratified by the United States and other members of GATT, and it became effective on July 1, 1995. One of the most visible results of the Uruguay Round agreement was the transformation of the General Agreement (treaty) among nations known as contracting parties, into a full-blown international institution, the World Trade Organization (WTO). For the sake of consistent terminology, the discussion will refer to the WTO to mean either the WTO *per se* or to the GATT.

In addition to multilateral negotiations, the United States has completed complementary regional trade agreements: US-Canada, US-Israel, and the North American Free Trade Agreement (NAFTA). Of the three, the NAFTA among the United States, Canada, and Mexico is the most significant because the US-Canada agreement is subsumed in it and the US-Israel agreement covers a smaller amount of trade. The NAFTA negotiations began after the start of the Uruguay Round and finished before its conclusion. This shaped NAFTA to the extent that negotiators did not want provisions that would lead to direct conflict with provisions of the anticipated multilateral agreement.

WTO Principles

The primary principles of the WTO are most-favored nation (MFN) and national treatment, which were Article I and Article III, respectively, of the original agreement. A third principle, transparency, has grown over time and is quite important to processed foods trade, especially for products of limited shelf life. The general statement of MFN requires that "goods of any contracting party be given no less favorable treatment than that given any other contracting party" (Jackson 1969, 255). MFN prevents, for example, the United States from giving Germany import preferences over the United Kingdom. The idea is to create a liberal trading environment that avoids creating trade distortions. Regional trade agreements are an exception to MFN, allowing trade

preferences within a trade agreement that includes substantially all trade. MFN does allow for preferential treatment of developing countries, the best example being the special access granted by the European Union under the Lomé Convention to a designated list of African, Caribbean, and Pacific nations growing out of former colonial status.

National treatment obliges countries to give the same treatment to imported products that have cleared customs as is given to domestic goods. Taxation and regulation are two obvious areas that could be abused. Jackson's examples are apt:

An internal tax can be a protectionist substitute for a tariff if it discriminates against imported goods. Likewise, internal government regulations can operate to protect domestic goods - *e.g.*, a ban on the internal sale of an imported product is more effective than a tariff in keeping the product out of a market. Subtle devices, such as labeling and packaging requirements, and special "health" or purity regulations applying only to imports can operate in the same manner (Jackson 1969, 274).

National treatment confers obligations on national governments, which must ensure that state and local governments also do not discriminate against imported goods. Local products may be favored or disfavored by business practices and consumer preferences, but these are not subject to WTO rules.

Transparency is a general requirement that a country make available to foreign companies and governments the requirements and changes in requirements for access into the country. The transparency requirement attempts to improve predictability and steadiness in import requirements. For processed foods, the importance of transparency may be obvious. If a shipment of frozen food with a definite shelf life is met at the border by customs agents who reject the shipment because a new license is required or a different label or a different package or reinspection of the plant that produced the product, the exporting company may suffer losses due to spoilage or delay. Transparency essentially requires that there be no hidden barriers or changes in import requirements without notice.

The exemptions to the basic obligations under WTO rules are contained in Article XX, which allows countries to use measures to protect public morals or to protect human, animal or plant life or health, etc., so long as the measures are not employed in an arbitrary or discriminatory manner. The Uruguay Round agreement clarifies, as discussed below, that such measures must have a scientific basis and rest on appropriate risk analysis.

Uruguay Round Agreement

Three of the fifteen sections of the Uruguay Round Agreement are technical barriers to trade (TBT), trade-related investment measures (TRIMs) and sanitary and phytosanitary standards (SPS). These areas dealing with technical barriers impact directly on international commerce in processed foods. In combination with a stronger dispute settlement mechanism in the World Trade Organization, the strengthening of rules on TBT, TRIMs, and SPS should yield trade expansion and potentially alter decisions on whether to enter foreign markets through FDI or trade. In addition to the areas above, the Agreement on Agriculture is important to the processed foods industry.

I. Technical Barriers to Trade (TBT or Standards Code)

The Agreement on Technical Barriers to Trade (*i.e.*, Standards Code) was initiated in the Tokyo Round (1973-1979), setting out principles that were strengthened in the Uruguay Round. The main drawback to the Standards Code before the Uruguay Round Agreement was that it had no binding enforcement mechanism. The establishment of the Dispute Settlement Body in Uruguay Round is intended to remedy this lack. The Uruguay Round also brought process standards under the TBT agreement, whereas the Tokyo Round covered only product standards.

The TBT agreement deals with such areas as packaging and labeling requirements, inspection, and certification procedures in order to protect the public and avoid deceptive practices. It encourages countries to adhere to international standards when such standards already exist, to publish their standards, and to base standards on scientific evidence and appropriate risk assessment.

II. Trade-Related Investment Measures (TRIM)

The TRIM agreement applies only to investment measures related to trade in goods. There appears to be little that is new in the TRIM Agreement that applies to FDI or trade in processed foods. The TRIM Agreement applies mainly to imports tied to re-exports in terms of value, foreign exchange, or quantity and to laws on local manufacture, local content, or local equity in the firm.

III. Sanitary and Phytosanitary Standards (SPS)

The Agreement on the Application of Sanitary and Phytosanitary Measures (SPS) rules apply to human, animal, and plant health and safety arising from diseases, pests, additives, contaminants, and toxins. As with the TBT agreement, the SPS rules encourage the development and use of harmonized international standards to facilitate trade. The SPS agreement names the Codex Alimentarius Commission, the International Office of Epizootics, and the International Plant Protection Convention as the international standards agencies. In cases of different standards in two countries, the importing country is required to accept the exporting country's standard if the exporting country demonstrates the equivalence of its own standard. In other words, the importing country accepts the product if the sanitary or phytosanitary protection afforded by its scientifically-based standard is met by a different procedure in the exporting country.

The SPS rules may appear to be more of a problem for agricultural commodities than for processed foods because SPS deals with the risks of plant and animal disease transmission between countries. National agencies, such as the FDA, specify how foods must be treated in processing (*e.g.*, at what temperature and for how long) to ensure that diseases and microbes are not viable in the food product. The question of what rules are adequate without being too restrictive gives rise to differing interpretations of SPS rules for processed foods. The second reason why SPS rules may apply to processed foods is the degree of processing. For instance, fresh packaged seafood is considered processed even if

little or nothing has been done to ensure that the seafood is not contaminated.

IV. Trade-Related Intellectual Property issues (TRIPs)

The main provisions of the TRIPs agreement deal with patent and copyright protection, which apply to branded food products. The agreement builds on existing institutions including the World Intellectual Property Organization (WIPO), a UN agency founded in 1967. The agreement establishes minimum standards to which countries must adhere. Alleged violations are subject to the WTO Dispute Settlement Body. The most obvious ways that international commerce in the food industry is facilitated by TRIPs are in brand protection, geographical indications, and protection of proprietary information such as processing technology and recipes.

The TRIPs agreement protects food brands in the same way as for the more publicized cases of software piracy or counterfeit clothing. A company such as Kellogg's, for instance, does not want another company offering Kellogg's Corn Flakes in any country because immediate profits may be lost and because Kellogg's reputation for quality may be injured if the other company's product is inferior. The TRIPs agreement protects brand names by including seven articles on trademarks, which are renewable indefinitely.

Geographical indications (also known as denomination of origin) is a contentious area. The product label must say where the product originates and may not present itself in a misleading manner, *e.g.*, a soy sauce boldly proclaiming Canton Soy Sauce should be from Canton Province in China rather than from Canton, Ohio. Perhaps the best known example of geographic indications is the case of champagne. France insists that only sparkling wine produced in the Champagne region of France can be properly known as champagne. Some other countries counter by saying that champagne is a type of product produced in many places, but known everywhere as champagne. Some countries and firms accept that the name belongs to a specific region of France and that sparkling wine from other places should be designated with "methode champenoise" if it is made by the same process used in France.

The requirement to disclose proprietary information is a means used by some countries to acquire technology or formulas that have been developed elsewhere. This distorts firms' decisions on how best to enter a foreign market, *i.e.*, whether to export a product or invest and produce it in the destination country. For example, a beverage company may prefer to manufacture in the destination country because it would not be paying to transport water. A company such as Coca Cola may decide to export if the destination country requires that the formula for Coca Cola be disclosed to the government of the destination country. The TRIPs agreement protects proprietary information by requiring member countries to keep secret any information of commercial value that is submitted to the government in order to gain approval for marketing.

V. Agreement on Agriculture

The Agreement on Agriculture has been discussed thoroughly elsewhere (Josling 1994, USDA 1994, and Hathaway and Ingco 1995), but the main outlines and implications for processed foods bear mention. The Agreement on Agriculture is important to the processed foods industry because many processed products are traded in bulk after a first stage of processing. For instance, grain mill products - soybean meal, corn gluten feed, wheat flour, etc. - and vegetable oils fit in SIC-20 (food and kindred products) rather than SIC-10 (agricultural products).

The main outcomes of the Uruguay Round Agreement on Agriculture were (1) a reduction in export subsidies by 21 percent in volume (tonnage) terms and by 36 percent in terms of expenditures; (2) a commitment to improve import access by reducing existing tariffs, maintaining current access opportunities, and expand import opportunities where access was low or non-existent; and (3) a reduction of 20 percent in the Aggregate Measure of Support (AMS), the trade-distorting agricultural support programs overall, not commodity by commodity. The disciplines imposed by the agriculture agreement reduce governments' scope for distorting bulk trade in food and agricultural products. In addition to liberalizing trade, the

agreement creates an incentive for countries desiring protection to use other means including product and process standards.

VI. Dispute settlement

The Dispute Settlement Body (DSB) was created in the Uruguay Round to provide a stronger means of settling disputes than had existed before. Until the implementation of the Uruguay Round agreement, the defending party could deny the GATT jurisdiction, avoid timely settlement, and block adoption of dispute panel rulings.

A member is required to enter consultations within 30 days when another member brings a complaint to the WTO. If there is no resolution 60 days after the complaint is registered, the member bringing the complaint can ask for a panel to consider the complaint. If the parties to the dispute cannot agree to membership of the panel, the Director-General appoints a panel. A timetable is laid out, including an appeals process if necessary, that leads to resolution within 14 months of the original complaint. If a member succeeds in the dispute and the losing party refuses to implement the decision, the winner is entitled to compensation or to withdraw concessions.

Adequate enforcement changes the behavior of firms and institutions. In the case of NAFTA, Mexico wanted to improve access to the US market for its avocados. USDA's Animal and Plant Health Inspection Service (APHIS) was reluctant to comply based on its traditional scientific procedures, which aim to prevent importation of harmful organisms. In the case of Mexican avocados, APHIS was not convinced that there was no threat from insects. APHIS is reconsidering its position with prompting from US apple industry representatives, who contend that reciprocal treatment from Mexico following such a precedent could diminish US apples' access to Mexico.

The dispute settlement mechanism may be the key to realizing the potential trade expansion in all the other areas of the Uruguay Round Agreement. If the Dispute Settlement Body operates in a way that ensures countries can get claims addressed in a timely, impartial, predictable fashion, then countries will have to

live up their obligations agreed to in the other areas of the agreement.

A well-functioning dispute settlement system serves to make WTO agreements into enforceable contracts. Countries will be more likely to bring disputes if they think they can win on the merits of the case, as opposed to the former situation in which countries could (and did) block the formation of a dispute panel or refuse to accept the outcome. Countries may also be more likely to comply with agreements because they know that other WTO members have more certain means to have rules enforced. The resultant positive effect on trade is derived from a decrease in risk to trading companies. Part of the decreased risk derives from a more objective treatment of product and process standards under WTO rules.

WTO and Standards

The WTO, as was also true for GATT before it, does not permit the use of technical standards as trade barriers, but Article XX of the GATT allows for general exceptions to the principles of most-favored nation and national treatment:

“No country should be prevented from taking measures necessary to ensure the quality of its exports, or for the protection of human, animal or plant life or health, of the environment, or for the prevention of deceptive practices, at the levels it considers appropriate, subject to the requirement that they are not applied in a manner which would constitute a means of arbitrary or unjustifiable discrimination between countries where the same conditions prevail or a disguised restriction on international trade, and are otherwise in accordance with the provisions of this Agreement.”
(GATT 1994, 138)

Members' obligations following the Uruguay Round are fairly extensive but have no measurable standard for compliance. Members are encouraged to

- o use existing international standards unless there are unusual circumstances;
- o participate in formulating new standards where there are none;

- o publish intent to create standards (where no international standard exists) so other countries have an opportunity to consult and suggest amendments before application of the standard;
- o give higher priority to performance of standards in producing acceptable products than to design or description;
- o accept other countries' standards that differ from their own as long as the objectives of their own standards are met;
- o give notification of the objective and rationale of new technical standards and allow consultation; and
- o give assistance to other members (particularly developing country members) that want to establish technical standards.

In addition, the TBT agreement contains a code of good practices for so-called conformity assessment procedures, which include the following:

“Any procedure used, directly or indirectly, to determine that relevant requirements in technical regulations or standards are fulfilled. Conformity assessment procedures include, *inter alia*, procedures for sampling, testing and inspection; evaluation, verification and assurance of conformity; registration, accreditation and approval as well as their combinations.” (GATT 1994, 157)

North American Free Trade Agreement (NAFTA)

NAFTA, the largest regional trade agreement to which the United States is a party, became effective on January 1, 1994. NAFTA is subject to WTO rules, which allow for regional trade agreements that cover substantially all trade within the region. For food and agricultural products, trade barriers between the United States, Canada, and Mexico are to be reduced and eliminated on a fixed schedule according to the type of product. Some products were deemed “sensitive” by each country, and those products were placed on a slower transition schedule. An example among processed foods is processed tomato products.

A critical provision of NAFTA for processed foods was strict rules of origin, which prevent transshipment of non-NAFTA products through one NAFTA country to another NAFTA country. For a food product to qualify for trade preference under NAFTA, a product has to be substantially transformed within a NAFTA country. In other words, a product could not be imported from

outside NAFTA at international prices, repackaged to show a NAFTA origin, and exported to another NAFTA country.

Some opponents to NAFTA argued that products from Mexico should not be allowed improved access to the US market because Mexico has less stringent environmental controls or enforcement and lower wages, which could give Mexican products a cost-of-production advantage. The argument runs afoul of the WTO national treatment obligation, which requires imported products be given like treatment to domestic products. Objection to Mexican (or other countries') products on grounds of environmental or labor standards falls in the category of process standards.

Ratification and Implementation of Trade Agreements

The process of operationalizing a trade agreement does not end with the final international negotiations. In the United States, a completed trade agreement requires implementing legislation, which amends existing law to conform with the agreement. Recent trade agreements have been negotiated under "fast track" authority, which is approval from the Congress for the Administration to negotiate an agreement that, once signed by all parties to the negotiation, will be approved or disapproved by the Congress without amendment.

In the cases of NAFTA and the Uruguay Round Agreement, the implementing legislation, although not amending terms of the agreements, carried provisions not directly related to the agreements. NAFTA had side agreements on labor and the environment. The environmental aspects are discussed in Skully (1994), and the labor aspects merit some discussion here.

The necessity of a side agreement for labor stems from the fear that greater integration of markets will lead to migration of manufacturing capacity from regions with relatively high labor costs to regions with relatively low labor costs, resulting in loss of employment and downward pressure on wages and benefits in the high-costs region.

In the processed foods industries, the effect differs according to the product type, but is generally unimportant. Two

factors in the food industries tend to dampen effects that might be felt. First, much food processing occurs close to where the commodity is produced, and land is not a mobile factor of production. Second, many food products are perishable, with final processing located close to the point of consumption, and large population centers are not mobile.

Development of Industry Standards and Regional Harmonization

Codex Alimentarius and Other International Standard Organizations

The SPS agreement specifically names three international institutions that have jurisdiction for establishing international standards. National governments provide official representation in these organizations. The Codex Alimentarius Commission, headquartered in Rome, is the main body establishing sanitary and phytosanitary standards. It began in 1962 with joint sponsorship of the UN Food and Agriculture Organization (FAO) and the UN World Health Organization (WHO) to establish food safety standards. Other smaller institutions include the International Office of Epizootics (established in 1924 to handle animal disease standards, and the International Plant Protection Convention, established in 1953 for plant health standards.

The International Standards Organization (ISO) and Comité Européen de Normalization (CEN) are standards bodies operating on a regional or nongovernmental basis that can provide a competitive advantage to companies within the region where the standard is being developed. This is not to say that countries and companies outside of the organizations are being denied a voice in setting standards. The WTO rules call for members who are setting standards to provide opportunities for other countries to be consulted and given adequate time to comment before new standards are adopted and to comply when new standards come into effect.

There remains a potential for trade diversion whether intended or not. For regional standards bodies such as CEN, the

argument against regional harmonization as opposed to multilateral (*i.e.*, through the WTO) harmonization is similar to the argument against regional trade liberalization agreements. A regional grouping (*e.g.*, NAFTA, EU, or ASEAN) provides for common standards or mutual recognition within the trading group that may be preferential for members within the group, in which case an advantage is conferred to members and a disadvantage to nonmembers. Access for products coming from outside the regional grouping may not be positively impaired, but standards may be set by compromises among the regional group's membership that do not consider the interests of nonmembers. The result may be a standard that requires greater costs of compliance for nonmembers than for members, thereby affecting trade patterns. In principle there is no problem with WTO rules as long as the trade agreement meets certain criteria -- primarily, this means that the agreement covers substantially all trade -- and that the standards are not set or applied in a discriminatory or arbitrary way. After all, the prime objective of regional trade agreements is to stimulate economic growth by facilitating trade within the region.

ISO 9000: An Example of a Voluntary Standard-Setting Body

The ISO is located in Geneva Switzerland. ISO 9000 is a method of quality assurance by which companies become certified as following recognized best practices. Certification declares to the buyer that the manufacturer has met a high quality standard. ISO 9000 standards are voluntarily followed practices, not technical standards required by a government. For industry standards, the ISO-9000 is a system of quality assurance that can be used for food products, but is applied equally to products of other industries.

Widespread adoption of ISO 9000 standards could be followed by governmental recognition and adoption as minimum standards within a country or region and legally (or effectively) become an import standard, which would then be nondiscriminatory. It could be challenged as being a higher standard than can scientifically be shown as necessary. Bredahl and Zaibet (1994, 11) conclude that "the momentum clearly seems to be in the direction of ISO adoption and the emergence over time of

certification as a necessary condition to do business in the EU food sector.”

Research Questions

The globalization of the processed foods industry raises many product and process standards issues that can be addressed. The increase in trade and foreign direct investment in processed foods increases the potential payoff from research on standards. The completion of the Uruguay Round creates a clearer set of obligations regarding standards and, with the establishment of the Dispute Settlement Body, a stronger procedure for determining whether WTO members' food product standards serve only to support legitimate objectives. The following four outlines of research topics show the way toward establishing the importance of product and process standards, how and where they are used properly and improperly, their effect on quantities of processed foods traded, funds invested internationally in the processed foods industry, and ultimately on food prices.

1. Prevalence of Technical Standards as Trade Barriers

With clearer rules and a stronger method of dispute resolution, one need is to identify countries, products, or firms for which product and process standards may have been used improperly in the past. The process of identifying this problem will reveal where researchers and government officials should focus efforts to achieve the greatest benefit in terms of removing improper product and process standards that impede food trade. By examining the pattern of trade complaints brought to GATT, one should be able to ascertain the importance of product and process standards in trade rule violations and whether their importance is increasing or decreasing in number and as a share of all trade complaints. A further step to assess the use of technical standards as trade barriers would be to pair the records of trade complaints with patterns of FDI and trade in processed foods to determine if there are patterns in countries, products, or firms that would establish the prevalence of problems with standards. Additional information from industry

sources could be valuable in identifying commercial concerns about the application of standards that never became formal trade disputes because of the lower likelihood of satisfactory resolution of disputes under the rules in force before the Uruguay Round Agreement.

2. Harmonization v. Mutual Recognition of Standards

Two principles that govern standards in the WTO Technical Barriers to Trade Agreement and the Sanitary and Phytosanitary Standards Agreement are harmonization and equivalence (also known as mutual recognition). These principles are not always congruent. In some cases harmonization, rather than equivalence, will be the guiding principle. In others, the reverse will be true.

The varied use of the two principles leads us to question whether it is possible to identify factors -- institutional, economic, or political -- that lead to the choice of one as opposed to the other. For example, Hooker and Caswell suggest that for food trade one should expect mutual recognition for quality standards and harmonization for food safety standards. We hypothesize that the type of product may be an important factor in determining the guiding principle used under WTO. Harmonization may yield the greatest benefit for bulk or intermediate products that do not require significant processing. These products are more likely to be commingled and benefit more from the facilitation of packaging and handling which lower production or transaction costs. In contrast, harmonization of standards may not realize these benefits for products that have been further processed. Harmonization may impinge on consumer sovereignty by narrowing the spectrum of products offered to the consumer.

3. Effect of Standards on Trade Versus FDI Decisions

Interviews have suggested that policies taken broadly, not just product and process standards, are not high on the list of criteria used by companies in deciding whether to export products or invest directly to enter a foreign market (Vaughan, et al). To discover the importance of product and process standards in the trade versus

FDI decision, one empirical approach would be to select a small number of cases -perhaps only one - and attempt to compare the relative costs of product placement associated with various approaches to entering a foreign market. Companies are understandably reluctant to divulge proprietary information about current decisions and operations, but perhaps suitable cases could be identified that would yield insight without compromising the firm's ongoing operations. By taking this approach, we would assess the impact of product and process standards on the relative costs, including the evaluation of risk, of product placement into a foreign market and thereby their influence on the method of entry into a market.

Summary

Product and process standards for food products are under the spotlight more following the Uruguay Round than in the past. Protectionist interests find other trade barriers falling, leaving standards as one of the few remaining avenues for protection. The dispute settlement mechanism that was strengthened in the Uruguay Round focuses attention on standards by requiring that they have a scientific basis and rest on appropriate risk assessment. International standards have been boosted, and equivalence the rule in the absence of international standards.

References

- Bredahl, Maury E., and Lokman Zaibet. "Adoption of ISO-9000 Quality Assurance Standards in the European Food Industry." Unpublished manuscript, Department of Agricultural Economics, University of Missouri (1994).
- General Agreement on Tariffs and Trade. "The Results of the Uruguay Round of Multilateral Trade Negotiations: The Legal Texts." *GATT Secretariat: Geneva, Switzerland* (June 1994).
- Hathaway, Dale E., and Merlinda D. Ingco. "Agricultural Liberalization and the Uruguay Round." Paper presented at The Uruguay Round and the Developing Economies. World Bank, Washington, D.C (January 26-27, 1995).

- Hooker, Neal H., and Julie A. Caswell. "Impacts of Food Quality and Safety Regulation Under Trade Agreements on Foreign Direct Investment and Processed Food Trade." Paper presented at the NCR-182 Conference on Foreign Direct Investment and Processed Food Trade, Arlington, VA (March 10, 1995).
- Jackson, John H. *World Trade and the Law of GATT*. The Michie Company, Charlottesville, VA (1969).
- Josling, Tim. "Agriculture and Natural Resources," *The New GATT: Implications for the United States*, ed. Susan M. Collins and Barry P. Bosworth. Washington, DC: The Brookings Institution. (1994): 40-62.
- Journal of Commerce*. "US Dairy Industry Fights Proposed Milk Limits." (January 26, 1995): 1A, 1B.
- Skully, David W. "Environmental Standards and Regulations in a Global Context." *Environmental Policies: Implications for Agricultural Trade*, ed. John Sullivan. USDA, Economic Research Service, Foreign Agricultural Economic Report Number 252 (June 1994): 39-47.
- US Department of Agriculture. *Effects of the Uruguay Round Agreement on US Agricultural Commodities*. Office of Economics and Economic Research Service, GATT-1 (March 1994).
- US Dept. of Comm., *EC 1992: A Commerce Department Analysis of European Community Directives* (September 1989): 12
- Vaughan, Odette, Margaret Malanoski, Don West, and Charles Handy. *Firm Strategies for Accessing Foreign Markets and the Role of Government Policy*. Agriculture Canada, Working Paper 5/94, (December 1994).