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COMPATIBILITY OF FREE TRADE WITH HEALTH, SAFETY, AND ENVIRONMENT

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Abstract

Concern about food safety has caused trade frictions between exporting and importing countries. Can the expansion of world trade be compatible with maintaining the sustainability of both man and the earth? This paper searches for a practical solution from the viewpoint of international standardization. First, it is necessary to combine the WTO binding rules with voluntary standards in order to reduce social unrest. Second, if international standardization acts as an assessor and offers a common measure of risk, it will enlarge the freedom of choice by heterogeneous consumers. And third, the process of standardization should be governed by three fundamental principles: tripartite voluntary involvement, consensus-based decision making, and knowledge-based judgment.

Introduction

Concerns about food safety throw a dark shadow on the future of international trade. On January 13, 2006, United States Agriculture Secretary Mike Johanns asked Japanese Agriculture, Forestry and Fisheries Minister Shoichi Nakagawa to abide by the international standard of beef safety. This would mean they would import US beef that was less than thirty months old. Japan reopened importation of US beef in December 2005, after a two-year suspension due to fear of Bovine Spongiform Encephalopathy (BSE). The Japanese government made this decision based on the scientific risk assessment done by the Food Safety Commission. It pointed out that there was an almost equivalent level of risk for both Japanese and US beef. But they did restrict approval of imports to less than twenty-month-old cattle. This was stricter than the international standard. The Korean government also decided to reopen US beef imports on January 13, 2006, but followed the international standard of allowing less than thirty-month-old cattle. The government of Singapore made the same decision on January 19, 2006.

Besides the age of the cattle, Japan added a condition for reopening imports. They required the removal of specific risky portions, specifically brain, spine, etc., from US beef. On January 20, 2006, however, a spine was found in quarantine at the Narita airport and Japan stopped importation again.

These events show that international standards supported by exporting countries are not

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always acceptable to consumers in the importing countries. Consumers do not see them as a reliable criterion for protecting health from food risk[1]. Does international standardization aiming at unifying nations and promoting global free trade actually have a reverse effect? Can it work as divider of exporting and importing nations? How safe is safe enough? Is there any practical way to complement the mandatory regulation with voluntary market action? How can we reform the process of international standardization to create a better balance between consumers and producers interests, between domestic and international interests?

The Significance of Free Trade under the Common Rule[2]

Adam Smith and David Ricardo preached that voluntary transactions among nations would bring international division of labor and then development of domestic economies. Each nation can specialize in a commodity whose production cost is relatively cheaper than it is for the other nations. Differences in comparative costs will make exports to another country more valuable and profitable and the possibility of expansion of consumption will benefit foreign consumers. Both nations can enjoy gains from international trade. This theory of comparative advantage underlies promotion of free trade in the World Trade Organization (WTO).

This theory is not, however, an accepted one in national politics. Domestic industry threatened by imports tends to urge the government to restrict imports by high tariffs. In fact, from the middle of the fifteenth century, European countries, and the US after the end of eighteenth century, adopted an economic policy based on mercantilism. It maximized trade surplus to create an increase in national wealth. According to this doctrine, exports are good, but imports are bad. Since all nations cannot realize trade surpluses, mercantilism will cause bloc economies, wars, and depression. Two world wars taught us that laissez-faire, contrary to early expectations, led to a world where the stronger prey upon the weaker. There cannot be absolute freedom in trade without any limitations and conditions. Free world trade requires restraint on national sovereignty by international agreements.

In 1947, The General Agreement on Tariffs and Trade (GATT) was established as international trade rule and expected to play a role in postwar international economic order together with the International Monetary Fund and the World Bank. The primary objective of GATT was to remove import barriers by prohibiting import quotas and creating a decline in tariffs. In 1995, GATT was reformed and restructured into the World Trade Organization (WTO), whose role became the constraint of domestic regulation as a non-tariff barrier to importation. While GATT was concerned only with the trade of goods, WTO has enlarged its scope to cover services and intellectual property rights. GATT no longer exists as an organization but is still valid as an agreement.

Technical regulations (mandatory standards), voluntary standards, testing and certification systems concerning products vary from country to country. In 1979, the GATT Tokyo Round

[1] Nicholas Perdikis notes that EU consumers show less faith in genetically modified goods and science in general. Nicholas Perdikis "EU-US Trade in Genetically Modified Goods: a Trade Dispute in Making," in *The WTO and the Regulation of International Trade*, eds. Nicholas Perdikis and Robert Read, (Cheltenham, UK: Edward Elgar, 2005), 217.

[2] Toshiaki Takigawa, *The WTO Law* [in Japanese] (Tokyo: Sanseido, 2005).

enacted the Agreement on Technical Barriers to Trade (TBT), later revised as WTO/TBT. If standards are set arbitrarily, they could become an excuse for protectionism and could be obstacles to trade. To prevent too much diversity, TBT encourages countries to use international standards as the base for national standards when appropriate. It discourages any methods that would give domestically produced goods an unfair advantage. The agreement also encourages countries to recognize each other's testing procedures. That way, a product can be assessed to see if it meets the importing country's standards by testing it in the manufacturing country.

The TBT includes labeling in its technical regulations. Peru filed a complaint against the European Commission (EC) about the definition of sardines. The Peruvian sardine (Sardinops sagax) was included in the Codex Standard for Canned Sardines and Sardine-type Products (CODEX STAN 94-1981 Rev.1-1995). It listed eleven different kinds of sardines. However, the EC standard only listed the European sardine (sardine pilchardus), therefore Peru's product could not carry the label of sardine in Europe. In 2002, WTO decided that this EC standard was against the TBT agreement[3].

Article 20 (b) of the GATT allows governments to act on trade to protect human, animal, or plant life or health, provided they do not discriminate or use this as disguised protectionism for domestic producers. A separate agreement on food safety and animal and plant health standards (the Sanitary and Phytosanitary Measures Agreement or SPS) sets out basic rules. It allows countries to set their own standards, but any SPS measures should be applied only to the extent necessary to protect human, animal, or plant life or health, based on scientific principles. An annex to the SPS names the FAO/WHO CODEX Alimentarius Commission (for food), the International Office of Epizootics (for animal health), and the FAO's Secretariat of the International Plant Protection Convention (for plant health) as international standards. Member countries are encouraged to use these international standards. If there is scientific justification, however, members may also use measures which result in higher standards.

The SPS is expected to also work as a dispute settlement rule. EC banned raising cattle with hormones because of a risk of cancer in humans. They then applied this regional regulation to beef imports. The use of hormones for cattle growth was not, however, prohibited by the CODEX standard. US and Canada claimed that the EC regulation on these imports was against the SPS. The WTO approved this claim in 1998[4]. As cross-retaliation, the United States raised tariffs on EC imports to the US by more than one billion dollars. It became a major political issue.

Another case concerned Japanese measures affecting the importation of apples from the US. The apple tree is susceptible to a fire blight caused by bacteria. This disease has not yet been found in Japan, but if an infected apple were imported, there would be a great risk of this infectious disease spreading quickly to Japanese apple trees. So the Japanese government carries out a quarantine examination. This requires the exporting country to submit a certificate verifying there has been no such a disease in the past few years and trees producing the imported apples were planted far enough away from other trees and so on. The United States

[3] World Trade Organization, "European Communities—Trade Description of Sardines," DS231/AB/R, http: //www.wto.org/english/tratop_e/dispu_e/cases_e/ds231_e.htm.

[4] World Trade Organization, "European Communities—Measures Concerning Meat and Meat Products (Hormones)," DS/26, http: //www.wto.org/english/tratop_e/dispu_e/cases_e/ds26_e.htm; DS/48, http: //www.wto.org/english/tratop_e/dispu_e/cases_e/ds48_e.htm.

protested against this Japanese quarantine system. The US asserted that matured apples were not infected with this disease and that there was little risk of infection to the Japanese apples. The WTO Panel as a court of first instance supported the US claim. Japan appealed to the WTO Appellate Body as a higher court. Japan insisted the US side should submit a prima facie case showing the inadequacy of scientific evidence of risk that had been mentioned by the Japanese. The final judgment failed to meet Japanese expectations. The US claim was judged to be based on a series of facts showing little possibility of infection and the Japanese had to provide the burden of proof for the presence of risk. The Japanese quarantine system was judged in 2003 to be extreme, compared with the scientific evidence of infection risk, and to violate the SPS.[5]

The US, Canada, and Argentina are the three major countries exporting genetically modified foods. In 2003, they accused the EU of a moratorium on their imports[6]. The EU requires dealers to label these foods to ease consumers' fears of contamination. The EC views it as a precautionary principle even if it might result in overprotection. No scientific evidence of the negative impact of genetically modified foods on safety and environment has yet been found. The SPS gives priority to scientific evidence; therefore it denies the precautionary principle. On February 7, 2006, the WTO's three-person panel made a preliminary decision that the European restrictions on the introduction of genetically-modified foods violated international trade rules. They found that there was no scientific justification for Europe's failure to allow use of new varieties of corn, soybeans, and cotton. On November 21, 2006, the Dispute Settlement Body adopted the final panel report. The Panel found that, by applying this moratorium, the European Communities has acted inconsistently with its obligations under Article 8 of the SPS Agreement because the de facto moratorium led to undue delays in the completion of EC approval procedures. With regard to the EC member State safeguard measures, the Panel found that the European Communities acted inconsistently with its obligations under Articles 5.1 and 2.2 of the SPS Agreement with regard to all of the safeguard measures at issue, because these measures were not based on risk assessments satisfying the definition of the SPS Agreement and hence could be presumed to be maintained without sufficient scientific evidence. On December 19, 2006, the European Communities announced its intention to implement the recommendations, but the adopted report has not yet been implemented. On the other hand, the Convention on Biological Diversity came into effect in 1993 without the participation of the United States. It asks for the domestic regulation of genetically modified organisms based on a precautionary principle. Accordingly, such domestic regulation required by this Convention may be considered by the WTO to violate the SPS because of the lack of scientific evidence.

These cases show that increasing concerns about food safety and environmental impact may restrict international trade in spite of the existence of the WTO. The traditional or mercantilistic purpose of protectionism has been to guard domestic producers by denying foreign producers equal access to domestic markets. The TBT aims at the unification of national markets by harmonizing national standards with international standards. However,

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[5] World Trade Organization, "Japan—Measures Affecting the Importation of Apples," DS245/AB/R, http: // www.wto.org/English/tratop_e/dispu_e/cases_e/ds245_e.htm.

[6] World Trade Organization, "European Communities—Measures Affecting the Approval and Marketing of Biotech Products," Request for Consultations by the United States, DS291/1, http://www.wto.org/english/tratop_e/dispu_e/cases_e/ds291_e.htm.

protectionism is now emerging to protect domestic consumers and the global environment in response to a sense of risk which national governments find difficult to ignore. We cannot call it mercantilism nor commercialism; it may be called a kind of consumerism or environmentalism initiated not by citizens but by governments. There is a division of opinions on the question of loyalty to international standards versus protecting people and the environment. This is a dilemma for national governments. This radical change suggests the need to rethink the meaning of free international trade and its common rule in order to make it compatible with safety and environmental concerns for our common future.

Market Solutions to the New Protectionism

There are differences between the old type of protectionism and the new one. In the case of the old protectionism, the government intervenes in competition between domestic and foreign producers. It is a problem of business versus business and is concerned with the price differential between domestic goods and imports. Usually this means higher prices for domestic products and lower prices for imports with the gap offset by higher tariff rates. Basically it is a price problem, but in the case of the new type of protectionism, the government intervenes between domestic consumers and foreign producers. It is a problem of consumer versus business and is concerned with the quality/risk differential between domestic goods and imports. It is fundamentally a quality problem. In the Ricardian model of comparative advantage, the traded goods are implicitly assumed to be risk-free. Gains from international exchange arise from the relative price differential between the two countries. The increase in welfare of both countries is not influenced by quality/risk. Therefore, the new type of protectionism is not covered by this Ricardian model. How can we succeed in coping with such a quality/risk problem?

The Kansas factory of National Beef Corporation is one of the major private beef companies in US. It recently acquired the certificate showing it met the requirements of the Japanese Agricultural Standard (JAS) for traceability and labeling. This certificate was developed to alleviate anxiety about BSE among the Japanese consumers. This JAS requires the company to maintain records of the breed, sex, date of birth, and farm for cattle as part of traceability management. Adopting this system will cost a company a lot of money, but it is expected to pay for itself eventually. This voluntary attempt to adapt exports to circumstances in the importing country seems to be effective in coping with the new type of protectionism. It will have a strong impact on improving the image of US beef. Having the JAS mark on its exported beef will strengthen the company's competitive advantage in the Japanese market. Since it is a voluntary action taken by a private corporation, it is outside the scope of the WTO. It seems difficult to solve the quality/risk problem in this new type of protectionism within the current framework of the WTO and its authorized international standards. To force international standards on the importing country will bring about consumers' revolts against the WTO with consumers refusing to buy imports. A market solution to this problem, on the other hand, tries to increase consumers' demands by lowering the psychological barriers to imports through exploiting voluntary standards. International standards backed by the WTO can get past barriers to trade built on the border, but cannot encourage consumers to buy them. As in Aesop's fables, mandatory standards can be compared to a north wind trying to blow off a traveler's coat, while

voluntary standards are like the sun's warmth making a traveler take it off for himself.

Generally, the reason a commodity doesn't sell is either because its price is higher than the consumer is willing to pay or because its quality is lower than consumer expects. In the case of the new type of protectionism it is the quality/risk for human health that is questioned. This is a commodity that cannot be sold however cheap it may be. There are two conditions necessary for establishing free trade in the market economy. One condition is free competition on the supply-side. In other words, a new entrant to the market should have an equal opportunity to do business with incumbents. Another condition is free choice in the demand-side. That is to say, freedom of choice shall be secured for consumers with the prerequisite condition that consumers have information enough to know substance or quality of the commodity. Regrettably, this prerequisite is increasingly difficult to secure in a modern economy driven by the rapid pace of technological innovation. Since the majority of consumers are neither scientists nor engineers, they have little technological knowledge in cases like genetically modified foods. This information or knowledge gap between the supply-side and the demand-side must be filled for a well-functioning of market economy in which a commodity is exchanged for money. The absolute trust in a commodity without deceit is required as a fundamentally essential basis for the free market economy. In this sense, the National Beef Corporation by voluntarily following the labeling standard of the importing country will probably succeed in earning trust from consumers. Utilizing voluntary standards becomes a strong incentive for a government to avoid restricting imports. Thus, the diffusion of voluntary standards in the export market can complement governmental regulation and lessen international trade frictions.

Standardization as Assessor of Risk

Security against risks for health, safety, and the environment from traded goods is a necessary sustainable condition for man and the earth in the twenty-first century. And naturally it is included in the general aims of standardization together with variety control, compatibility, interchangeability and so on.[7] This means that the subject of standardization which consists of product, process, and service or activity in general must fulfill not only requirements for function and performance but also for the reduction of such risks. The level of protection by current international standards, however, is below that expected by many consumers. This leads to social unrest among people urging their governments to adopt protective measures. This situation presents difficulties for the WTO whose goal is to help producers of goods and services, exporters, and importers conduct their business. Social unrest, not higher tariff, hinders imports from entering domestic markets.

The term "market" refers to a group of sellers and buyers that cooperate to exchange goods and services and the market is expected to match up this heterogeneous supply and demand. In fact, consumers have different needs, preferences, and wealth. Similarly, producers have different resources, goals, and capabilities[8]. Therefore, the numbers and types of products,

[7] International Organization for Standardization/International Electrochnical Commission, *Guide 2: 2004 Standardization and Related Activities—General Vocabulary,* 2 (ISO/IEC, 2004).

[8] Jane A. Malonis, *Encyclopedia of Business,* 2nd edition (Detroit, MI: Gale Group, Inc., 1999) 1224.

processes, or services will increase to meet these heterogeneous needs unless countermeasures are not provided for. Usually variety reduction is adopted to meet the prevailing needs of the majority of people by disregarding heterogeneity in the market. This traditional way of standardization may lead to cost reduction and benefit consumers.[9] However, the sense of risks varies much from country to country as well as from person to person, and cannot be dealt with through a certain level of universal standard. How can international standards handle this problem of heterogeneity essential for sensibility to risk?

In order to cope well with social unrest, it seems effective not to deny it. Rather the level of risk should be manifest so that consumers can see it. Even if the domestic market opens to imports, whether they can be sold depends on decisions made by individual consumers. If the level of risk is labeled in addition to the price, consumers will be able to choose commodities that satisfy their own expectation of safety level. While the price mechanism plays a role to adjust the quantity of supply and demand, this risk-labeling mechanism aims at coordinating the risk level of supply and demand. The intrinsic role of standardization seems to be the establishment of a common understanding between heterogeneous beings. It should establish that understanding between producers and consumers, products and users, one artifact and another, and artifacts and environment. In other words, the inherent nature of standards resulting from the process of standardization is an interactive or communicative interface as a common language for common understanding. The ultimate objective of standardization is the facilitation of the flow of goods and services from producer to consumer by providing a common language to both of them. To make a bridge between foreign producer and domestic consumer, it is necessary to establish an international standard for risk estimation and grading or rating that is accepted universally. Consumers can compare one commodity with another while having absolute trust in this universal measure of risks. Different levels of risk can be evaluated by a common denominator called the metrological unit of risk.

Diversity in national standards concerning characteristics or performance of final products has often been a technical barrier to trade in the past. This gave birth to the TBT in order to harmonize national standards with international standards. Diversity reduction is welcome to producers because the production cost per unit is lowered through economy of scale. However, it is not necessarily good for consumers because they buy a cheaper product at the cost of it fitting their heterogeneous needs. Some consumers prefer more variety even with higher prices to less variety with lower prices.

Standardization can satisfy this need for a common scale for comparability among different products for the benefit of consumers. The aim of international standardization does not necessarily have to be a unifier of national markets by excluding non-standard diversity. A neutral role as assessor of risk seems to be one of the most urgently needed roles of international standardization and that role does not contradict a role of unifier of local markets. It becomes, rather, a common language for the common understanding of risk which must really be a prerequisite for international trade in a global scale. International standardization is responsible for the construction of the modern Tower of Babel designed by the WTO and built on the base of two world wars.

[9] International Organization for Standardization, *Benefits of Standardization*, (ISO, 1989).

The Three Fundamental Principles of Standardization

The CODEX standard of growth hormone was adopted by the Codex Alimentarius Commission by a close vote. The voting result was thirty-three countries approving, twenty-nine disapproving and seven abstaining. The majority of countries approving were beef exporting countries. There is some doubt as to whether the conclusion was grounded on scientific evidence. If scientific facts had been presented, the committee would not have been so divided on this question. Since the CODEX standards are officially designated as international standards for food safety by the SPS, voting is susceptible to political pressures. In this instance, the logic of globalization or free trade came into conflict with that of food safety. The result is that the committee cannot stand on common ground in accord with the scientific principles.

Fundamentally, standards should be developed according to three principles:

- **Tripartite voluntary involvement:** Standardization should be based on voluntary involvement of stakeholders, including all interested parties. In the case of risk, stakeholder refers to any individual, group, or government that can affect, or be affected by, a risk. This includes manufacturers, vendors and users, consumer groups, testing, inspection, and certification bodies, research organizations and so on.[10] This tripartite participation represents the views of supply-side, demand-side and the neutral third parties. This structure is necessary for fair discussion and increases the acceptability of the completed standard.
- **Consensus-based decision making:** Decisions should be made based on the group as a whole agreeing to a judgment or opinion on the matter with the views of all parties concerned taken into account.
- **Standard as unifier of knowledge:** Standards that are supposed to be used as mandatory or voluntary rules and guidelines should be based on the consolidated knowledge of science, technology, and experience. This has the practical purpose of achieving great confidence in standards. The authenticity of standards is derived from the knowledge-based judgment of professional experts. The second law of thermodynamics may be applied to our society. If left to proceed arbitrarily, the entropy will increase indefinitely, resulting in chaos. Standards will try to decrease entropy and coordinate heterogeneous demands and supplies in the market economy by making the best use of expert knowledge in society.

These three principles can make international standards the best available knowledge that is accepted worldwide. In 2005, serious health damage from asbestos was revealed in Japan. The 1976 Japanese regulation regarding asbestos has been “less than 2000 per liter of air” for the past twenty-nine years, in spite of the fact that in 1986, the WHO had made the international standard “less than 10 per liter of air.” The lack of harmony between national and international standards caused this tragedy. Any standard must be reviewed and justified by up-to-date information according to the third principle.

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[10] International Organization for Standardization/International Electrochnical Commission, *Guide 73: 2002 Risk Management—Vocabulary—Guidelines for Use in Standards.*(ISO/IEC, 2002).

Concluding Remarks

This paper has tried to search for a way to make free trade compatible with security against risk for health, safety, and the environment from the viewpoint of standardization. The three propositions pointed out are summarized as following:

- The TBT or SPS agreement aims to minimize the divergence of national standards from international standards under the WTO umbrella. However, there is usually discrepancy between them. For example, voluntary national standards for labeling and traceability in the importing country, if adopted by an exporter, are expected to facilitate imports through a reduction of social unrest. In this sense, voluntary standards can be a complement to the international rule. Such an approach that combines mandatory regulation and voluntary market action will be an effective way to cope with the risk problem.
- Standardization can be an assessor of the degree of heterogeneity as well as a unifier of heterogeneous entities. Consumers will be able to compare the risk level of one product with that of another if a common measure of risk is offered by standardization. This kind of standardization is not against the diversification of consumers' needs, but rather helps consumers' freedom of choice.
- Standardization should be governed by the three fundamental principles: tripartite voluntary involvement, consensus-based decision making, and knowledge-based judgment.

Briefly, the task of making economic globalization compatible with the sustainability of man and the earth is not easy, but international standardization must be challenged to do it for our common future.[11]

[11] Shiro Kurihara, "Foundations and Future Prospects of Standards Studies: Multidisciplinary Approach," *International Journal of IT Standards and Standardization Research*, Vol.6, No.2, July-December 2008, pp.1-20.