Research Paper *IJBARR*
Impact Factor: 4.729 *E- ISSN -2347-856X*
Refereed, Listed & Indexed *ISSN -2348-0653*

REGULATIONS AND OBLIGATIONS TO MAINTAIN THE QUALITY OF FOOD: AN INTERNATIONAL APPROACH

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Abstract
The Uruguay Round gave prominence to an area almost untouched by previous rounds of trade negotiations: food quality and safety. The Agreement and the Application of Sanitary and Phytosanitary Measures, or SPS Agreement, and the Agreement on Technical Barriers to Trade, the TBT Agreement, now provide a framework for strengthening food quality and safety measures taken by governments while at the same time ensuring that such measures are not unjustified or disguised barriers to international trade. Food control is a term covering measures to protect both food quality and food safety. This paper will defines that Food safety is addressed as a global public good through institutional innovations such as the SPS agreement under the WTO, and trade capacity building efforts to improve food safety management for countries exports. This paper aims at giving an overview that Food quality and safety should be the first priority issue for all Member governments; it is an essential part of their commitments to improved food security.

Keywords: Food Safety and Security, International Trade, Regulation, Sanitary and Phytosanitary measures, Trade Dispute.

Introduction

A safe food supply of adequate quality is essentials for sustaining humanity and quality of human life. The food supply must not endanger consumer health through physical, biological, and chemical contaminants and it must be presented in the markets honestly. Controls for food safety and quality ensure that the desirable characteristics of food are retained throughout the production, handling, processing, packaging, distribution, and preparation stages. This promotes healthy diets, reduces economic losses and encourages domestic and international trade of food. Consumers have the right to a good quality and safe food supply, and government and food industry actions are constantly needed to ensure this. Over the last decade, there have been significant changes in the national and international regulatory frameworks governing food control, food safety and food trade.[1] The adoption of the Codex Alimentarius[2] as the source of international food standards by the World Trade Organization Agreement on Sanitary and Phytosanitary Measures (SPS Agreement)[3] in 1995 has been one of the most significant recent influences on food regulation worldwide, and can be seen as an acknowledgment of the increasing globalization of food production and food trade. Worldwide outbreaks of food-borne disease, with concomitant media attention and outspoken consumer concerns, have also triggered unprecedented interest in food control and food regulation and in the country level infrastructures which govern food safety. In a number of countries, governments have vested food safety, animal quarantine and plant quarantine authority in a single executive agency which carries out inspections "from

[1] United Nations Human Rights, *"The Right to Adequate Food"*, Office of the high commissioner of Human Rights, *available at:* http://www.ohchr.org/Documents/Publications/FactSheet34en.pdf (Visited on March 12, 2017).

[2] The *Codex* Alimentarius (Latin for "Food Code") is a collection of internationally recognized standards, codes of practice, guidelines, and other recommendations relating to foods, food production, and food safety.
Its name is derived from the Codex Alimentarius Austriacus.[1] Its texts are developed and maintained by the Codex Alimentarius Commission, a body that was established in early November 1961 by the Food and Agriculture Organization of the United Nations (FAO), was joined by the World Health Organization (WHO) in June 1962, and held its first session in Rome in October 1963.

[3] The Agreement on the Application of Sanitary and Phytosanitary Measures, also known as the SPS Agreement, is an international treaty of the World Trade Organization. It was negotiated during the Uruguay Round of the General Agreement on Tariffs and Trade, and entered into force with the establishment of the WTO at the beginning of 1995. Broadly, the sanitary and phytosanitary ('SPS') measures covered by the agreement are those aimed at the protection of human, animal or plant life or health from certain risks. Under the SPS agreement, the WTO sets constraints on member-states' policies relating to food safety (bacterial contaminants, pesticides, inspection and labelling) as well as animal and plant health (phytosanitation) with respect to imported pests and diseases. There are 3 standards organizations that set standards that WTO members should base their SPS methodologies on. As provided for in Article 3, they are the Codex Alimentarius Commission (Codex), World Organization for Animal Health (OIE) and the Secreatariat of the International Plant Protection Convention (IPPC).

farm to fork" and aims to protect animal, plant and human life and health. Food packaging must serve its function of adequately protecting food contents and identifying the contents of the package in a way that it is readily recognizable. Consequently, the food packaging industry is important to both the consumer and the food industry.[4] The food packaging industry is a highly sophisticated and high technology industry, and it has managed to carry out its role so successfully that there are few consumer concerns about the safety of packaging and packaging ingredients.[5] From a trade perspective, the technological advances in food packaging over the past 30 or more years have made a significant contribution to facilitate international trade. With the advancements made in food packaging technology, food safety has been enhanced, food quality attributes have been preserved and shelf-lives of foods have been extended. These improvements permit long haul shipment from continent to continent as a matter of routine.[6] The issues of food safety and lack of appropriate trade facilitation measures turn out to be a great challenge in enhancing the gains from trade. The sanitary- and phytosanitary-related problems in spices and marine products exports constitute good examples in the Indian context.[7] Food safety and trade issues related to it are becoming more pronounced. There has been an increased scientific awareness of the public health risks from unsafe food, including both acute and long-term health consequences.

Food Safety Standards And Mutual Trade Obligations

Food and agricultural products are unique in posing potential biological risks to human, animal, and plant health. SPS measures to address these risks are presumed to pose potential barriers to trade.[8] A regulation becomes a barrier if used in a way to impede trade rather than achieving the legitimate and specific public health objective. On the other hand, a weak trade regulatory regime is perceived to be a threat to public health. A comprehensive treatment of the issues from the public health angle is outside the scope of this article specifically for two reasons. First, estimate of the lost or affected trade as a result of tighter regulations is evidently more accurate than the estimate of gains in public health.[9] In terms of evidences too, more studies try to assess the impact of tighter regulations (food safety) on trade and not on public health. However, this literature is rapidly expanding. Second, as experiences show that trade is first affected and not public health, the evidences are more valuable at the trade policy level.[10] The Agreement on the Application of Sanitary and Phytosanitary Measures (SPS) of the World Trade Organization (WTO) sets out the broad ground rules for the application of food safety, health and environmental measures, many of which could affect international trade in agro-food commodities rather adversely. However, there are no specific international standards for some commodities which are intensively traded. Proving conformity with standards and technical regulations requires establishing efficient testing, certification and accreditation mechanisms that conform to the requirements of the SPS and Technical Barriers to Trade (TBT)[11] agreements.[12] Testing and certification facilities thus take on extreme importance for developing countries, as they are to benefit from trading opportunities. This is also strongly linked to trade facilitation measures, which are actions undertaken with the objective of facilitating market access of traded goods and services in areas within the scope of a trade agreement, and these include provisions for expediting and simplifying

[4] John Taschek, *"Turning Out Your Product: From Food Safety to Marketing, There's a Lot you'll Need to Know" available at:* https://extension.umd.edu/sites/extension.umd.edu/files/_docs/articles/EB-416%20Turning%20Out%20Your%20Product.pdf (Visited on February 12, 2017).

[5] Kenneth Marsh and Betty Bugusu,"Food Packaging—Roles, Materials, and Environmental Issues" Vol.72 Issue 3, *Journal on Food Science,* 45-56 (2007).

[6] Richard Coles, Derek Mcdowell and Mark J. Kirwan, *"FOOD PACKAGING TECHNOLOGY" available at:* https://polymerinnovationblog.com/wp-content/uploads/2017/02/Food-Packaging-Technology.pdf (Visited on March 15, 2017).

[7] C. Nalin Kumar, "Export supply chain and food safety in India: new issues for policy research" Vol.3 No.1, *Journal of Asian Public Policy,* 71-85 (2010).

[8] World health Organization, *"Assuring Food Safety and Quality: Guidelines for Strengthening National Food Control Systems"* Food and Agriculture Organization of The United Nations, available at: http://www.wpro.who.int/foodsafety/documents/docs/English_Guidelines_Food_control.pdf (Visited on March 17, 2017).

[9] M.A. Aksoy, *The Evolution of Agricultural Trade Flows* (World Bank, Washington D.C. 2005).

[10] J.A.Caswell, M. Bredahl and N. Hooker. "How Quality Management Met systems are affecting the Food Industry." Vol.20, *Review of Agricultural Economics*, 547-557 (1998).

[11] The Agreement on Technical Barriers to Trade, commonly referred to as the TBT Agreement, is an international treaty administered by the World Trade Organization. It was last renegotiated during the Uruguay Round of the General Agreement on Tariffs and Trade, with its present form entering into force with the establishment of the WTO at the beginning of 1995, binding on all WTO members.

[12] Maury , E. Bredahl and Erin Holleran, *"TECHNICAL REGULATIONS AND FOOD SAFETY IN NAFTA"* available at: http://ageconsearch.tind.io//bitstream/16906/1/ag970071.pdf (Visited on March 11, 2017).

conformity assessment procedures, certification or accreditation of laboratories mainly through adopting simpler documentation, electronic commerce and efficient logistics.[13] Market has incentives to provide safe food, as firms have to maintain sales over the long run. But generally, markets cannot ensure the supply of food with the ideal level of safety for many reasons. We point out two important reasons for this. First, consumers cannot determine how safe the food is before purchase. Even when consumers purchase food, they often cannot tell whether a particular food was responsible for making them ill or whether consuming it might have long-term health effects. Second, when consumers eat unsafe food and become ill, costs extend beyond consumers themselves to health-care workers, employers and family members. Consumers usually do not take these costs to others into account when they consume food. On the other hand, regulations might differ across countries, as countries have different types of regulations, different levels of tolerance for food safety risks, different costs of producing safer food and differing levels of accidental contamination. Standards and technical regulations drawn up by countries to protect health and the environment can also act as technical barriers to trade. Non-tariff barriers to the markets of developed countries are particularly high in agricultural food items as compared to manufactures.[14] This is significant since the greatest comparative advantage of many developing countries lies in agro-based industries. In addition, exporters face more stringent private standards of developed country retailers. Increasingly, international buyers require effective application and demonstrated proof of enterprise system management standards such as International Organization for Standardization (ISO)[15] 9000 for quality management, Hazard Analysis and Critical Control Points (HACCP)[16] and ISO 22000 for food safety, ISO 14000 for environmental management and Social Accountability (SA) 8000[17] for social accountability.[18] Product standards specify characteristics that a product might attain before it is considered safe to sell. For instance, most developed countries have maximum residue levels (MRLs)[19] for pesticides and other contaminants.[20] On the other hand, process standards specify techniques that must be used to process or package foods, with the belief that certain

[13] Greg McGuire, *"TRADE IN SERVICES – MARKET ACCESS OPPORTUNITIES AND THE BENEFITS OF LIBERALIZATION FOR DEVELOPING ECONOMIES"* UNITED NATIONS CONFERENCE ON TRADE AND DEVELOPMENT, POLICY ISSUES IN INTERNATIONAL TRADE AND COMMODITIES, *available at:* http://unctad.org/en/docs/itcdtab20_en.pdf (Visited on January 12, 2017).

[14] Uttam Kumar Deb, "Non-Tariff Barriers in Agricultural Trade: Issues and Implications for Least Developed Countries" ARTNET POLICY BRIEF, *available at:* http://www.unescap.org/sites/default/files/polbrief12.pdf (Visited on January 14, 2017).

[15] The International Organization for Standardization is an international standard-setting body composed of representatives from various national standards organizations. Founded on 23 February 1947, the organization promotes worldwide proprietary, industrial and commercial standards. It is headquartered in Geneva, Switzerland, and as of March 2017 works in 162 countries. ISO, the International Organization for Standardization, is an independent, non-governmental organization, the members of which are the standards organizations of the 162 member countries. It is the world's largest developer of voluntary international standards and facilitates world trade by providing common standards between nations. Nearly twenty thousand standards have been set covering everything from manufactured products and technology to food safety, agriculture and healthcare.

[16] Hazard analysis and critical control points or HACCP is a systematic preventive approach to food safety from biological, chemical, and physical hazards in production processes that can cause the finished product to be unsafe, and designs measurements to reduce these risks to a safe level. In this manner, HACCP attempts to avoid hazards rather than attempting to inspect finished products for the effects of those hazards. The HACCP system can be used at all stages of a food chain, from food production and preparation processes including packaging, distribution, etc.

[17] SA8000 is an auditable certification standard that encourages organizations to develop, maintain, and apply socially acceptable practices in the workplace. It was developed in 1997 by Social Accountability International, formerly the Council on Economic Priorities, by an advisory board consisting of trade unions, NGOs, civil society organizations and companies. The SA8000 streamlines the complexities of navigating industry and corporate codes to create a common language and standard for measuring social compliance. As it can be applied worldwide to any company in any industry, it is an extremely useful tool in measuring, comparing, and verifying social accountability in the workplace.

[18] *Supra* Note 7, pp.75.

[19] The traces pesticides leave in treated products are called "residues". A maximum residue level (MRL) is the highest level of a pesticide residue that is legally tolerated in or on food or feed when pesticides are applied correctly (Good Agricultural Practice).

[20] Spencer Henson and Julie Caswell, "Food Safety Regulation: An Overview of Contemporary Issues," Vol.24 Issue 6, *Food Policy*, 589-603 (Dec. 1999).

production techniques make food safer. Such regulations are based on research, such as studies on the percentage of contaminants destroyed at certain processing of food items. Researches in this area are growing.[21]

Food Safety Regulation: Resolving Trade Disputes

Three of the principles under the SPS Agreement— science-based risk assessment, equivalence, and harmonization—directly address some aspects of food safety regulation that create the potential for trade disputes. Progress toward realization of these principles is reviewed here to see how well the SPS Agreement and supporting institutions have addressed emerging issues arising from regulatory trends.[22] The agreement's requirements for the use of scientific risk assessment, for example, have led to the resolution of a number of disputes. Less progress can be reported in reducing transaction costs to trade through equivalence or harmonization. Multilateral institutions continue to work on projects—such as identifying the types of technical assistance that best help developing countries meet food safety requirements in key export markets—to achieve welfare-enhancing trade.[23] Several changes in the global food system—increased scientific understanding of food borne hazards, increased international trade in food products, and changes in how consumers obtain and prepare food—have brought renewed attention to food safety regulation in many countries.[24] The science of public health is now better able to identify new food borne pathogens and other hazards, estimate the incidence and severity of food borne illness, and trace hazards to their sources. Increased public awareness of microbial pathogens has raised public concern about this type of food borne hazard.[25] In industrialized countries, consumers carry out less food preparation, consume fresher and minimally processed foods, and consume more meat and seafood products. A greater share of consumption is now imported in many countries, including many fresh products. These changes in consumption patterns alter the sources and incidence of risk and reduce consumer control over food safety, at the very time that increasingly affluent consumers are demanding a higher level of safety.[26] One indicator of breakdowns in global food safety management is provided by public monitoring and rejection of food imports for failure to meet food safety standards. Product refusals and recalls have high private costs. When imports are refused or general alerts are raised about a product, it represents a failure in food safety management. When such refusals or alerts occur frequently for particular hazards or products, it is clear that management is challenging and imperfect.[27] The primary goal of food safety regulation is public health. In the past, some food safety agencies have had multiple mandates relating to other issues such as food quality, industry promotion, or animal health. To more clearly focus food safety regulation on public health and consumer protection, several countries have reorganized their food safety regulatory agencies in order to refocus and to integrate previously scattered functions.[28] Countries are increasingly adopting the Hazard Analysis and Critical Control Point (HACCP) system as a basis for new regulation, often of microbial pathogens in food. HACCP requires identification of critical control points and development of procedures for monitoring controls and addressing any failures in control.[29] Other new approaches to food safety regulation attempt to improve market performance through provision of food safety information. These approaches include the use of voluntary guidelines or standards, provision of third-party certification, provision of information through labelling, establishing legal liability for food safety, and establishing voluntary or mandatory systems for traceability.[30] Such interventions may improve performance by providing information or incentives that encourage consumers to choose safe food and reward producers for its provision. The public

[21]Julie Caswell and Eliza Mojduszka,"Using Information Labelling to Influence the Market for Quality in Food Products", Vol.78 Issue 5, *American Journal of Agricultural Economics*, 1248-53 *(*Dec. 1996).

[22] John Antle, "Benefits and Costs of Food Safety Regulation," Vol. 24 Issue 6, *Food Policy* 605-623 (Dec. 1999).

[23] *Ibid.*

[24] S.Henson and R. Loader, "Impact of Sanitary and Phytosanitary Standards on Developing Countries and the Role of the SPS Agreement," Vol. 15, *Agribusiness* 355-369 (1999).

[25] Baker, Gregory A. "Consumer Preferences for Food Safety Attribute in Fresh Apples: Market Segments, Consumer Characteristics, and Marketing Opportunities," Vol.21 Issue 1, *Journal of Agricultural and Resource Economics* 80-97(1999).

[26]Alessandra Casella, "Product Standards and International Trade: Harmonization through Private Coalitions?" Vol. 54 No.2, *Kyklos* 243-64(2001).

[27] L. Unnevehr and D. Roberts, "Resolving Trade Disputes Arising from Trends in Food Safety Regulation: The Role of the Multilateral Governance Framework" Vol.4 (3), *World Trade Review*, 469-497(2005).

[28] *Ibid.*

[29] Julie Caswell, and Neil Hooker, "HACCP as an International Trade Standard," Vol.78, *American Journal of Agricultural Economics* 775-779(Aug. 1996).

[30] Kathleen Segerson, "*Mandatory vs. Voluntary Approaches to Food Safety"* Food Marketing Policy Center Research Report No. 36, *available at:* http://fmpc.uconn.edu/publications/rr/rr36.pdf (Visited on March 23, 2017).

role in these new approaches, and the degree to which they are mandatory or voluntary, varies among countries.[31] Regulatory trends, associated unresolved public policy issues, and the growth in world food trade have several implications for how food safety standards affect international trade in food products. First, the simultaneous move toward improved safety among industrialized countries creates the potential for convergence around higher standards.[32] Food safety concerns have some of the same implications for international trade as for domestic trade, but with the added complication that consumer preferences and government regulations may differ from country to country, creating the potential for rivalry and conflict. The 190 or so countries of the world all have established different regimes for food safety, and thousands of different foods are regulated. Differences in trade regulations can put either domestic or foreign firms at a competitive disadvantage in selling their products.[33] Trade conflicts frequently result when countries enact different types of regulations, have different desired levels of food safety, or have different costs in complying with regulations. Countries can resolve these conflicts in a number of ways, including ceasing to trade, adopting each other's regulations, or recognizing each other's regulations.[34] .As food processing firms open plants in many different countries, their private standards might be modelled after their production facilities in wealthy countries (Reardon and Barrett, 2000). Nestle; for instance, sets stringent standards for suppliers to its plants that operate in a number of developing countries (USDEC, 2001). These internal standards stem from the fact that firms desire reputations for food safety.[35] It is sometimes costly to communicate food safety attributes to the consumer, so firms might rely on their international reputations to do so. However, since most of the food processing firms began in nations with stringent safety standards, the firms might simply be adopting stringent standards for their worldwide operations to reduce transaction costs by having standardized procedures.[36] Whatever the reasons, the firms from wealthy countries that open branches in other countries usually do so to produce for the host country's market, so the production at those facilities generally is not traded.[37] The host country also has the legal right to impose food safety standards on these foreign-owned processing plants operating in their country. Foreign firms undertaking trade also undertake several risks as well. If compliance with the regulations requires a lot of fixed investment costs in the form of new equipment, foreign firms risk the investment without certainty of obtaining certification.[38] In addition, even if they undertake certification, they might experience random transitory events, like disease outbreaks, that prevent them from complying with their trading partner's food safety regulations for short periods of time. The same problems that lead to a need for regulation domestically can lead to a need for government regulation in the international trade environment. Consumers do not consume as much safe food as society would like them to. Consumers also lack information about the safety level of the foods they eat, and the inability of consumers to distinguish between safe and unsafe food can reduce the incentive for firms to provide safe food.[39] Consumers

[31] Margret Will and Doris Guenther, "Food quality and safe standard" required by EU law and the private Industry, with special reference to the MEDA Countries exports of fresh and processed fruit and vegetables, herbs and spices, available at: http://www.value-chains.org/dyn/bds/docs/608/GTZ-Food_Quality_And_Safety_Referencebook-Ed_2007.pdf (Visited on February 12, 2017).

[32] Daniel A. Sumner and Sébastien Pouliot, *"Traceability, Liability and Incentives for Food Safety and Quality", Department of Agricultural and Resource Economics*, University of California, Davis Davis, CA 95616, *available at:* http://ageconsearch.tind.io//bitstream/21121/1/sp06su08.pdf (Visited on March 12, 2017).

[33] William Meyers, *"Food Safety", available at:* http://openaccess.uoc.edu/webapps/o2/bitstream/10609/53961/4/Agri-Food%20Policy,%20Food%20Safety%20and%20International%20Trade_Module3_Food%20safety.pdf (Visited on October 23, 2016).

[34] Ibid.

[35] James MacDonald and Stephen Crutchfield, "Modeling the Costs of Food Safety Regulation" Vol.78 *American Journal of Agricultural Economics* 1285-1290(Dec. 1996).

[36] Terry Marsden, Robert Lee, Andrew Flynn and Samarthia Thankappan, *The New Regulation and Governance of Food: beyond the Food Crisis?*, 56-122 (Routledge Tylor and Francis group, New York, London, 2010).

[37] Jo Swinnen and Miet Maertens, "Standards, Trade and Developing Countries", Note prepared for the World Bank, Trade and Research Departments, for the Project on Adjustment Costs to Trade, *available at:* http://siteresources.worldbank.org/INTRANETTRADE/Resources/239054-1239120299171/5998577-1244842549684/6205205-1259868742627/6620468-1259868833400/Standards_Swinnen.pdf (Visited on January 18, 2017).

[38] RUERD RUBEN, MAJA SLINGERLAND AND HANS NIJHOFF, *"Agro-Food Chains and Networks For Development issues, Approaches and Strategies"* Wageningen University and Research Centre (WUR), *available at:* http://edepot.wur.nl/36618 (Visited on January 23, 2017).

[39] Stephen R. Crutchfield, "*ECONOMIC ISSUES ASSOCIATED WITH FOOD SAFETY*", USDA Economic Research Service, *available at:* http://ageconsearch.tind.io//bitstream/17042/1/ar950137.pdf (Visited on March 19, 2017).

might assume that if one firm's product is unsafe, all brands of that good are unsafe. If governments impose regulations on domestic firms, and such regulations raise costs for producers, then producers might suffer a loss of sales.[40] This problem can be compounded in the context of international trade. If domestic producers must adhere to regulations that raise costs of production, but foreign firms do not have to meet the same requirements, then the foreign firms can offer their products at lower prices, undercutting the domestic firms and capturing a larger market share. Although consumers are willing to pay more for a safer good, if they cannot distinguish between the more heavily regulated, and presumably safer, domestic good and the less regulated imported good, they will not be willing to pay what the safer good is worth to them.[41]

Conclusion and Suggestions

Consumers throughout the world desire a safe food supply. However, the extent of that desire might differ from country to country. Consumers are also generally willing to pay more for safer food, but the amounts they are willing to pay might differ. Consumers in very poor countries might have to balance expenditures on other health threats against that of food safety. Wealthy countries therefore sometimes have more stringent standards for pesticides and microorganisms than developing countries do. As advances in science and increases in wealth put greater focus on food attributes, both firms and governments find themselves increasingly responding to consumer demands for food safety. Firms have incentives to provide safe food, but in some cases, the market and legal incentives are insufficient to give consumers the level of protection that a society as a whole would like. In such cases, governments enact food safety regulations, and at some point, the regulations of trading partners are bound to conflict, as countries choose different types of regulations and different levels of stringency from the wide array of options available. When conflicts occur, countries may stop trading in some items, one or both countries may alter their standards, or they may maintain both standards.[42] The option countries choose should depend on the cost of implementing the strict standards compared with the price that consumers are willing to pay for safe food, and also on country differences in the costs of complying with the new standards. If firms find it too difficult and costly to satisfy the demand of consumers in the markets of their trading partners, they might forgo trade or try to lobby for a change in their trading partners' regulations or a compromise solution. If, however, firms can charge an adequate premium in the market with more stringent standards, they might adopt the standards of their trading partners, which can, under certain conditions, eventually improve food safety in the domestic market.[43] Harmonization can also benefit consumers, especially if the origins of regulatory heterogeneity are the result of chance events, information differences, or interest group capture. Food supply insecurity and unsafe food are tolerated, encouraged or even positively promoted by many aspects of current international law. Serious reform is essential if we want to create an international law for adequate food. Therefore, it is to be hoped that the joint efforts of the major international organizations involved at both the universal and the regional level – which point towards the prospective enhancement of the degree of cooperation among international actors, State authorities and private stakeholders – will succeed in shaping an improved legal framework for food safety governance, which may benefit from the commitment of both international and national institutions.

[40] L.L. Sharma, Stephen P. Teret and Kelly D. Brownell, "The Food Industry and Self-Regulation: Standards to Promote Success and to Avoid Public Health Failures" Vol.100 (2), *American Journal of Public Health*, 240-246 (2010).

[41] Helen Jensen, H. Laurian, J. Unnevehr, and Miguel I. Gomez. "Costs of Improving Food Safety in the Meat Sector", Vol. 30 Issues 1, *Journal of Agricultural and Applied Economics* 83-94(July 1998).

[42] Stefania Negri, "Food Safety and Global Health: An International Law Perspective" Vol.3 No.1, *Global Health Governance* (2009).

[43] M. Kenny, "*International Food Trade: Food Quality and safety consideration"*, FAO CORPORATE DOCUMENT REPOSITARY, *available at:* http://www.fao.org/docrep/W9474T/w9474t02.htm (Visited on March 28, 2017).