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# FOOD SAFETY STANDARDS AND THEIR IMPACT ON THE SMALL FARMS OF DEVELOPED COUNTRIES

JEL classification: Q17, F13, F55

Maria Angela Perito\*, Abdelhakim Hammoudi\*\*

**Abstract.** *This work aims to provide an update on the issue of the effects on agriculture and food of the heavy regulatory burden regarding food safety. The issue is addressed in a context of heterogeneous international sanitary requirements and multilateral and bilateral agreements. The idea of our analysis is*

*to examine the problem of food safety standards and their implications for international trade in general and to carry out a brief analysis on the effects on small farms in developed countries.*

**Keywords:** *Food safety standards, international trade, compliance costs*

## 1. Introduction

In developed countries agricultural models are developed around the concept of quality in a broad sense: quality of products, food safety, animal welfare, labor and environmental protection. This model reflects the evolution of the needs of consumers and, more broadly, of the demands of society.

Food safety represents a key factor that, with others, contributes to food quality. For example, European food safety regulations focus on guaranteeing to consumers that food is free of risk. Obviously, zero sanitary risks are quite unattainable without enormous and unsustainable costs for food producing firms. This means that society needs to set rules to guarantee a low level of risk that is socially, economically and scientifically acceptable. Differently from other factors that contribute to food quality, food safety can be thought of as a public good and, for this reason, the policy maker needs to intervene, introducing regulations to enforce mandatory requirements.

The high number of food crises and incidents endangering health in recent decades (BSE, bird flu, etc.) has had significant repercussions globally and has resulted in an increased demand for worldwide protection of food safety. EU policy has evolved a lot over the last 20 years to respond to growing concerns expressed by consumers as regard food safety. In this respect, according to Mazzocchi *at al.* (2013), doubts could be raised whether such regulations are justified by a persisting real risk to human health or, rather, are driven by the political need of responding to short-term and possibly irrational public concerns.

In addition, private food standards at the retail level are playing an increasingly important role in determining market access.

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The effects of food standards on farms in developing countries as regards compliance costs has been investigated widely (Henson, Brouder, Mitullah, 2000; Otsuki, T, Wilson, J. Sewadeh M., 2001; Aloui and Kenny, 2005; Rios, L. B. D., Jaffee, S., 2008). So far, however, there has been little understanding with respect to the effects of food standards requirements on farmers in developed countries.

Nonetheless, food standards show significant differences around the world. The proliferation of standards is occurring both at the public level (i.e. Codex Alimentarius, regional blocs, and individual countries) and at the private level (through supply chain requirements and in response to the demands of consumers) with different levels of protection, thus creating problems on international markets.

Agricultural systems around the world, however, are constantly changing, in a setting of diminishing trade barriers, globalization and liberalization, the introduction of new conditions from different countries that *de facto* means increasing non-trade barriers. In this context, the European Union and other most developed countries put a considerable effort into the creation of policies aimed at the improvement of food safety. This situation causes enormous managerial difficulties worldwide: if, on the one hand, the matter of food safety is a necessity for the majority of consumers in developed countries, on the other, it creates significant compliance costs for agricultural firms in developing countries. Indeed, there is a widespread presumption that food safety standards are used by developed countries as a protectionist tool for discriminating against imports by applying higher and/or more rigorous regulatory standards than those enforced on domestic suppliers (Henson and Loader, 2001). Hence some studies find that smallholders are increasingly excluded and marginalized (Maertens, Swinnen, 2006); others studies highlight the challenges faced by some developing countries in complying with food safety standards in export markets for agricultural and food products (Swinnen, 2012; Okello, 2012). The costs of compliance with public and private standards for small-scale farmers in developed countries, however, have been much less investigated. This paper, therefore, aims to introduce the discussion of the effects of food safety standards on small farmers in Italy.

The present work provides an overview of the evolution of food safety standards and their impact on compliance costs. For this purpose, the work is based on a literature review, some in-context verification, the analysis of trade data and some specific interviews.

## **2. Public and private food safety standards**

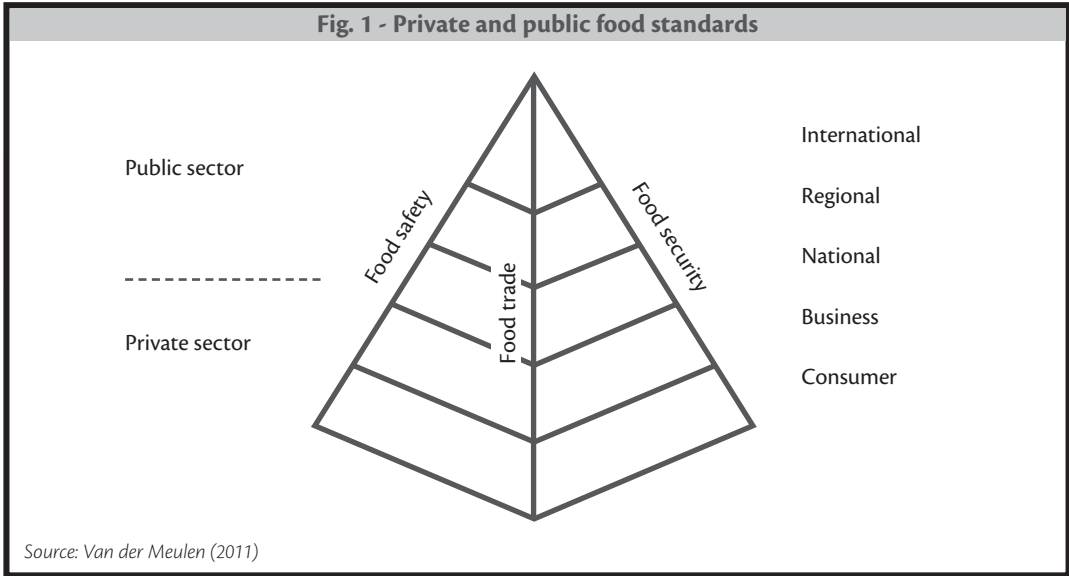
The globalization of food trade is changing food production and distribution. Food products are distributed over far greater distances than before, creating conditions conducive to general outbreaks of foodborne illness. Other factors account for the emergence of food safety as a public health issue. Increasing urbanization creates more stringent requirements for transport, storage and harvesting of food products. All these changes lead to situations in which a single source of contamination can have widespread, even global consequences.

As a result of this evolution, over the past few years, food safety and quality has become an important issue, both for food security and in international trade, for public opinion, policy makers, researchers and for stakeholders at national and at international level.

Food standards have impacted on many aspects of food production, transport and trading. Furthermore, in the light of this, in recent years, we have witnessed a dramatic increase in both public and private food standards. In particular, the governance of food is increasingly by private

actors via private governance mechanisms such as standards, and retail governance mechanisms acquire a *de facto* mandatory nature for all other operators in the supply chain (McEachern, Warnaby 2004; Di Fonzo, Perito, Russo, 2011).

As a consequence of these developments, small farmers are subject to an enormous number of food safety rules from different sources both as public standards and as private regulations.



### ***Public regulations***

Public sanitary regulations have evolved throughout the years through careful management of the conditions of production/processing/commercialization and the strengthening of judicial tools associated with the principle of the liability of the agricultural food-chain. Over the past few years we have witnessed an increase in regulations and norms that force agricultural producers to follow standard practices that guarantee the production of healthy and safe food.

The regulations put in place by policy makers are:

- of a judicial type, that establish the liability of the producers and sanctions in case of lack of conformity with regulations or in case of incidents caused by lack of respect for regulations;
- of a procedural type, e.g. the creation of the HACCP procedure or procedures regarding food traceability;
- concerning the end result, e.g., regulations that set a ceiling on harmful substances that are permitted in end-products;
- control and inspection (sampling the quality of end-products and inspection of the production and storage of food products).

In order to evaluate sanitary regulations different methods of assessing their impact have been devised. For example, opportunity cost analysis has helped policy makers in the choice of the best solution in terms of benefits for society and low total costs, by analyzing different regulatory options. The economic advantages can be measured, for example, by analyzing the reduction in resources spent because of food intoxication. Clearly, accounting for all the advantages associated

with food sanitary regulations is a daunting task and would require a quantification of the value of health, the improvement of living conditions and life-span.

### ***Private quality standards***

Government regulation on food safety, therefore, is based on the minimum requirements for market access and mainly related to the obligations of results. Processing and marketing companies always have a legal responsibility for the consumers' health problems and are therefore encouraged to adopt insurance schemes in order to protect themselves from the negative economic impact following the control processes: fines after monitoring and inspections, economic loss from the withdrawal or recall of products, any permanent or temporary suspension of business by the authorities, brand damage in the view of consumers (Henson and Holt, 2000).

In order to respond adequately to the demands of the community and to improve control of product quality between upstream and downstream sectors, companies have implemented forms of vertical coordination, more or less extensive (in some cases even as far as processes of real integration).

Some scientific studies have shown that these forms of contract have resulted in changing the balance of power within the supply chain, creating further tensions between the actors (Giraud-Heraud, Hammoudi, Soler, 2012) and, in some cases, leading to the exclusion of producers from the system (Fulponi, 2006, Henson and Caswell, 1999).

From a general perspective the reasons why private operators have developed various strategies over the years, are linked to different logics:

- one of them is related to the need for product differentiation with respect to their direct competitors (Caswell et al. 1998; Grunert, 2005; Garella, 2006). This strategy leads companies to create individual approaches aimed at making the consumer aware, by specific standards (e.g. system B2C - business to consumer), of the quality checks carried out on production (e.g. quality controlled by Carrefour, Auchan, ...). Within a context of imperfect market information, an indication of quality to consumers through a system of certification is a method of differentiation and competitive positioning (Caswell et al. 1998; Grunert, 2005);
- in recent years the B2B (business to business) standards, that are not communicated to consumers, have had a significant growth. These standards refer to a range of behaviors designed to improve quality and food safety, required by large retailers and processing companies from their suppliers, and not disclosed to the final consumer (GlobalGap, BRC, IFS, SQF). The development of this category of collective and voluntary standards requires the presence of forms of horizontal coordination among groups of enterprises (agri-food and food distribution). These standards, even if voluntary, directly or indirectly affect the conditions of competition and the structure of the chain (Giraud-Heraud *et al.* 2009, Hammoudi *et al.* 2009).

### **3. The role of food standards in international debate**

The food alarms of recent years have brought the issue of safety and quality of food to the center of public debate. For example, with the Beijing Declaration of 2007 on food safety it has been clearly stated at international level that food safety is an essential public health function that protects consumers from health risks posed by biological, chemical and physical hazards in food as well as by the condition of food. Furthermore, many studies (Dupuy, 1979, Mai-Anh, 2007; Negri, 2009) have addressed the issue of food security as one of the fundamental human

rights. In this context, food security is a fundamental social concern (Tothova, 2009). The same view is supported by the United Nations. In fact, the International Bill of Human Rights provides the legal framework for the construction of the human right to eat safe food, with observations and interpretations of a general nature prepared by the United Nations Committee on Economic, Social and Cultural Rights. In different contexts, from statements referring to other international legal instruments, the individual right to adequate and safe food has been affirmed in recent years.

The evolution of food safety legislation as a fundamental human right went, however, in parallel with the general principle of the development of free trade.

If, on one side, tariff barriers to trade, in accordance with the Uruguay Round, have undergone a significant reduction over the years, on the other, rules of individual countries aimed at protecting individual health have increased dramatically: many observers feared that these international standards were also used, in some cases, principally as non-tariff barriers. In fact, although some developing countries have had the ability to adapt to these new challenges, a large number of them remained excluded from trade with industrialized countries.

In such a context of overall complexity, as evidenced by Josling *et al.* (2004), in order to guarantee the freedom of world trade, during the Uruguay Round a central element of the system of multilateral rules for trade in food was the SPS (Sanitary and Phytosanitary) Agreement, accompanied by the TBT (Technical barriers to Trade) Agreement.

The primary function of the SPS Agreement was to clarify the meaning of Article XX of GATT, that is the right of countries to protect human health, animals and plants, investigating the issue of procedures that countries must adopt in order to prevent that generic standards and the precautionary principle can be used improperly to restrict access to domestic markets. The requirements for hazard analysis and critical control points (HACCP - Hazard Analysis and Critical Control Point) and maximum residue limits of pesticides in food and animal feed are some examples of SPS requirements for market access the EU. Within the WTO (World Trade Organization) procedures of “notification and review”, have been established such as to enable countries to oppose those restrictive trade measures that are unsubstantiated from the scientific point of view and, are therefore, harmful to business. However, the SPS Agreement recognizes the principle that science does not always provide specific answers in terms of potential risks to human health.

The SPS Agreement applies only to those governmental measures that may directly or indirectly affect international trade. If a measure has no trade effect or is imposed by a private firm or trade association, the SPS Agreement does not apply to it.

The SPS measures include all relevant laws, decrees, regulations, requirements, and procedures and the agreement contemplates that individual members of the WTO may apply SPS measures on a temporary basis when the scientific evidence on the potential risk is insufficient. These measures are commonly called “precautionary measures”. Obviously, these areas of discretion for individual countries have led to several trade conflicts (e.g. US against EU for the import ban on beef derived from U.S. cattle that have been treated with certain growth-promoting hormones; Japan bans imports of U.S apples on the basis of concerns over the introduction of fire blight).

However, it is difficult to determine the number of trade conflicts that occur each year, or the costs of such conflicts. There are widely known conflicts (e.g. meat hormone), but others are literally unknown to the general public (Roberts and Unnevehr, 2003).

Three broad categories of policy instrument can be employed by governments to achieve SPS protection. Firstly, import bans prohibit the entry of a product entirely. These are most widely

applied to products that pose a great risk to human, (or more commonly) plant or animal health. The second type of SPS measures are technical specifications such as: process, product or packaging standards. Thirdly, information requirements for labelling and checks on voluntary claims (Roberts *et al.*, 1999).

Attempts to harmonize SPS measures have been made at an international level, even if the SPS Agreement provides a basis for harmonization of standards starting as a reference with the Codex Alimentarius and from here to the mutual recognition of national standards, where they can have demonstrably equivalent results in terms of, protection against food safety risks.

The SPS Agreement also provides for WTO members to facilitate the provision of technical assistance to other members, especially developing countries. In fact, these specific non-tariff regulations have become a major concern of developing countries regarding access to the international market. Faced with these changes in the international scenario, the attempt to find *ad hoc* conciliation with individual countries have been supported worldwide by the use, we could say abnormal, of regional trade agreements (RTAs) in specific countries.

Regional trade agreements have become an incontrovertible reality in the international trade scenario. Their number has increased significantly in recent years and there are currently about 200: many of these agreements have been notified to the WTO, but the actual number could be much higher since some of them have never been reported and many other multilateral understandings are under negotiation. This results in an increasing share of trade being covered by regional preferential agreements, and, even more, this situation is becoming no longer the exception. The effects of regional and bilateral agreements on the multilateral trading system are still uncertain, as is their impact on trade and sustainable development, but they represent exceptions to the fundamental principle of non-discrimination in the WTO.

Industrialized countries, as well as developing countries, however, have continued bilateral negotiations, at an even higher speed in recent years, due to the slow progress of the multilateral trade negotiations of the Doha Round. So while most countries continue formally to declare their commitment to the successful conclusion of the Doha negotiations, many of them intensify their efforts in bilateral agreements. This development is widely facilitated by the market access opportunities provided by bilateral agreements, as in a one to one agreement; non-traditional trade barriers may be included, that is technical barriers to trade and sanitary and phytosanitary measures, with exceptions reserved for specific countries covered by agreements. Obviously, these agreements create privileged “corridors” in terms of access to the market.

Furthermore, the systems of voluntary private standards of large modern retailing determine a new form of governance in the food supply chain and some studies show that standards set by the private sector can help suppliers improve the quality of their products and gain access to high-quality markets (Swinnen, 2012, Okello, 2012).

#### **4. Food safety standards and implications for farmers in developed countries**

It is widely recognized that standards can have a significant impact on trade. A large body of literature presents debates on the impact of international standards on developing country producers. These studies argue that given the widespread poverty in these countries, new norms may require considerable investment beyond their reach. Other research indicates that many producers have successfully adopted food safety standards that upgrade and enhance their competitiveness worldwide (Swinnen, 2012, Okello, 2012).

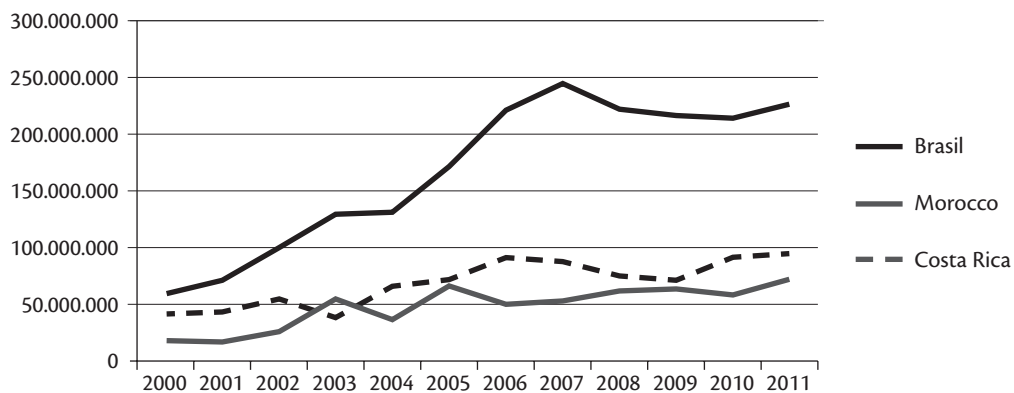


Furthermore, the standards and the level of border controls influence the direction of trade flows (Hammoudi, Fakhfakh, Grazia, Merlateau, 2010; Malorgio, Grazia, 2007). Indeed, different types of standard can have distinct trade outcomes. At the same time, many products are subject simultaneously to a range of standards and disentangling the impacts of each is problematic. Further, the impact of standards is influenced by the strategic manner in which firms respond.

Developing country producers can incur significant costs of compliance whenever changes are made in international standards or those of their trading partners. Additional costs may also be incurred in response to new or more stringent requirements of private buyers. These costs can come in various forms, including fixed investments in adjusting production/processing facilities and practices, recurrent personnel and management costs to implement the standard and the public and private sector costs of conformity assessment.

According to Swinnen (2012), food standards create conditions for investment, reduce transaction costs, enforce competition and improve the economic conditions of farmers. The achievement of some standards for some farms in developing countries can be crucial, in the sense that standards could become catalysts for trade. In fact, the number of producers from developing countries, that are adopting these quality assurance systems to improve their competitiveness in the global market is continually increasing. A demonstration of this effect is that, despite the proliferation of public and private standards in the EU market, European imports of fruit and vegetables are continually increasing. In fact, if we analyse specific products such as melons and watermelons, that have enormous problem of food safety worldwide (with people dying as a result of salmonella poisoning), in a few years imports from certain developing countries have enormously increased, despite the evolution of food standards.

**Figure 1 - The evolution of imports of melons and watermelons into the EU-27 2000-2011 (values in US\$)**



Source: Comtrade

A first result of this analysis is that public and private standards have no real negative effect on the export performance of some developing countries. Studies conducted in some developing nations partially confirm that European imports of such products are more or less equivalent, with respect to safety risks, to those of European products. However, there remain doubts on the possibility of fraud for international products. On the other hand, some producers can be

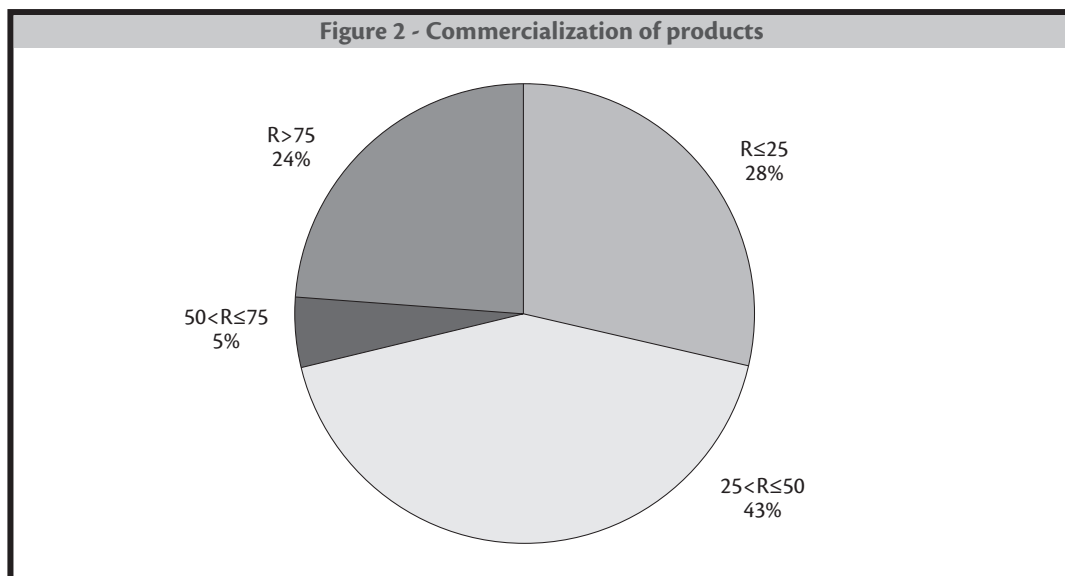
integrated into world trade without changing their practices. The imperfections of the control systems within the EU and their diversity between European countries can lead to opportunistic and risk-taking behavior by some producers and big importers (Hammoudi *et al.* 2009). Lacking systematic controls in the production zones and lacking precise certification, the reality of compliance to sanitary regulations and the investments in the other countries is difficult to quantify. Border control remains the only filter to ensure respect for EU regulation of the imported products. Few studies have analyzed the effectiveness of border control in the EU. Some descriptive studies (i.e. Fakhfakh *et al.*, 2009) show that heterogeneous rules are applied in different European ports, which means that some are more rigorous and selective than others in applying European regulations. Evidently this can lead to fraud with important repercussions on public wellbeing and on the competitiveness of individual firms and producers.

Nevertheless, as shown by Otsuki, Wilson, Sewadeh (2001), small farmers in developing countries could well have a comparative disadvantage in complying with quality standards owing to their specific endowments. A critical point associated with the increasing prevalence of standards is the potential exclusion of developing countries' small producers from high-standard export markets, with subsequent negative effects on household incomes and rural poverty. However the evidence in the last few years shows an increasing level of exports from these countries. According to Chemnitz (2011), farm size is correlated at the margin with the costs of compliance and the impact of standards on developing countries' trade flows is, in some circumstances, still limited. In fact, if evidence from Kenya (Humphrey *et al.*, 2004, Jaffee, 2003), Morocco (Aloui and Kenny, 2005), Costa Rica (Berdegué *et al.*, 2005) and Senegal (Maertens, 2006) describes examples of small farmers losing market share as a result of increasing quality standards, other surveys find very different effects: the inclusion of small farmers in modern value chains can be found, for example, in Madagascar (Minten, Randrianarison and Swinnen, 2006) and South Asia (Gulati *et al.*, 2007).

These results show that international literature has been mainly focused on the effects of standards on developing countries small farmers. As we know, there are very few studies (Romano *et al.* 2005) on the effects of the standards on small farmers of developed countries.

Thus many small farms are forced to become certified according to a certain quality standards, because they help them maintain their competitiveness in the marketplace. This point is confirmed by a direct survey that we have carried out, in Italy in 2012, on more than 25 fruit and vegetable producers' organizations (PO), with 10,000 farms associated.

In the survey 94% of these farms had applied private food standards. But the general opinion of interviewees is that the food standards are the precondition, necessary but not sufficient, for contracts with large supermarkets. The general crisis seems to have legitimized the market to consider the fruit and vegetables products a "social safety net", convenience good, regardless of the cost required by the production process. Therefore, Italian (and also European) farms negotiate the prices of their products with supermarkets in competition with companies from around the world who have, in many cases, lower prices and similar standards to European producers in general. This point is demonstrated by our survey which shows that almost the totality of firms follow private food standards (such as Globalgap) and of these only 24% sell more than 75% of their production to large modern retailers, while over 40% sell between 25-50 per cent. The remaining share of the output of these producers is sold mainly in the wholesale markets in an undifferentiated way and without receiving a higher price for the food quality standard. Therefore, these products become as commodities in competition with other national non-standardised products and with international products.



In addition, interviewees indicated some difficulties in achieving these food standards:

- they often do not have a professional quality manager, which creates the need to hire external consultants;
- in most cases, the documentation is not well understood by the executives of the farms;
- non-homogeneity of standards available, which are often considered too complicated to integrate with each other to meet the needs of multiple buyers.

Therefore, the need to conform with food standards sets a significant administrative and management burden. These firms also need to invest heavily in drastic changes in terms of production, transport, cold chain, logistics and commercialization. Again, the cost of implementing standards is very important for a firm but its burden may depend on factors exogenous or endogenous to the firm. The level of compliance costs may increase as a result of the high number of relationships that upstream producers have with downstream suppliers and then from the requirement to comply with many, not always equivalent, standards (Fulponi, 2006). Some studies, moreover, show that the nature of relationships between firms in the supply chain coordinated through a strong and permanent exchange of information, may help reduce the costs paid by the individual firm (Henson et Humphrey, 2009). The compliance costs investigated are essentially on private standards and HACCP systems (Romano *et al.* 2005; Henson *et al.*, 1999, Semos *et al.* 2007).

However in a globalized economy, when protection is reduced in domestic markets, and there are also specific free trade agreements (bilateral agreements) that determine special arrangements for entrance of food products from specific countries, local products, with high standards of food safety, would be penalized because they compete with less expensive foreign products and do not receive a fair return for the compliance costs to achieve standards. In these circumstances domestic producers are penalized compared to their foreign competitors and despite the application of standards, they need to re-direct their products to less demanding markets, such as wholesale markets or processing companies.

The answer to this problem would require an international comparison of the level of per-

formance of the other countries' and the European products regarding the more stringent regulations. The problem has, however, received little attention in empirical quantitative studies. Qualitative analysis has been proposed in some studies (Hammoudi, 2010), especially with respect to productive chains that can represent risks in competitiveness with international products. Evidently such considerations become more complex when taking into account the difference between the "dominant" commercial chains of the large buyers (big retailers, traders) that use private standards and other chains where private standards are not required (wholesale markets, regional markets and so on, in the developed and developing countries).

## **5. Conclusion**

The last decade has seen notable change in the international scenario for farms and food firms. The new scenario is, therefore, a renewable policy space with actors, procedures and rules. Through the 1990s and into the 2000s, international trade in food products expanded significantly, fuelled by changing consumer tastes, advances in production, transport and other supply-chain technologies, and the progressive liberalization of traditional barriers to trade. But simultaneously, the increasing prevalence of non-trade measures, such as quality and phytosanitary standards, is a reality of agri-food trade. A systematic assessment, across countries and across products, is much warranted, particularly in view of the rising occurrence of trade friction about food safety and food quality. The private sector is evolving rapidly and in many cases is setting standards that will supersede public ones.

Taking all these elements of change, this paper has provided a brief overview of the potential ways in which standards can influence trade from developing countries to developed countries. The question of the impact of food safety standards (public and private) on the competitiveness of developed countries' agriculture is an important topic that refers, for example, to one of the main axes of the European agricultural model based on the organization of quality in a broad sense. Behind this approach, there is the question of compatibility between society's demand for health and safety in food supply and economic priorities.

## **REFERENCES**

- Aloui O, Kenny L., (2005), *The Cost of Compliance with SPS Standards for Moroccan Exports: A Case Study*, The World Bank, Public Disclosure Authorized, 47843.
- Berdegú J., Balsevich F., Flores L., Reardon T., (2005), "Central American Supermarkets' Private Standards of Quality and Safety in Procurement of Fresh Fruits and Vegetables", *Food Policy*, Vol. 30, pages 254-269.
- Caswell J.A., Bredahl M.E., Hooker, N.H., (1998), "How quality management metasystems are affecting the food industry?", *Review of Agricultural Economics* 20: 547-557.
- Chichilnisky G., (1994), "North-South Trade and the Global Environment", *The American Economic Review*, Vol. 84, No. 4 (Sep.), pp. 851-874.
- Crespi J., Marette S., (2001), "How Should Food Safety Certification Be Financed", *American Journal of Agricultural Economics*, 83, 4: 852-861.
- Davis C., (2007), "A Conflict of Institutions? The EU and GATT/WTO Dispute Adjudication", Princeton University.
- Dupuy R., (1979), Communauté internationale et disparités de développement. *Recueil des Cours de l'Académie de Droit international de La Haye / RCADI*.

- Roberts D., Unnevehr L., (2003), "Resolving Trade Disputes Arising from Trends in Food Safety Regulation: The Role of the Multilateral Governance Framework" ed. Jean C. Buzby, *International Trade and Food Safety: Economic Theory and Case Studies*, USDA, Agricultural Economic Report No. 828
- Hammoudi A., Fakhfakh, F., Grazia C., Merlateau M-P. (2010), "Normes sanitaires et phytosanitaires et question de l'accès des pays de l'Afrique de l'Ouest au marché européen: une étude empirique", document de travail, AFD, juillet 2010|100.
- Henson S., Caswell J., (1999), "Food safety regulation: an overview of contemporary issues", *Food Policy*, Volume 24, Issue 6, Pages 589-603.
- Humphrey J., McCulloch N., Ota M., (2004), "The Impact of European Market Changes on Employment in the Kenyan Horticulture Sector", *Journal of International Development*, Volume 16, Issue 1, pages 63-80.
- Fulponi, L. (2006), Private voluntary standards in the food system: the perspective of major food retailers in OECD countries, *Food Policy* 31: 1-13
- Garella, P. G. (2006), "Innocuous" minimum quality standards, *Economics Letters* 92: 368-374.
- Garcia Martinez, M., A. Fearn, Caswell, J.A. Henson S., (2007), Co-regulation as a possible model for food safety governance: opportunities for public-private partnerships, *Food Policy* 32: 299-314.
- Giraud-Héraud E., C. Grazia, Hammoudi A. (2007), "Agrifood safety standards, market power and consumer misperceptions", *Journal of Food Products Marketing*, Vol. 16-1.
- Giraud-Héraud, C. Grazia et A. Hammoudi (2009), "Hétérogénéité internationale des normes de sécurité sanitaire, stratégie des importateurs et exclusion des producteurs dans les pays en développement". Cahiers d'ALISS-INRA. www Inra.fr.
- Giraud-Héraud E., Hoffman R., Soler L.G.(2012), "Joint private safety standards and vertical relationships in food retailing" *Journal of Economics and Management Strategy*, 21.
- Grunert, K.G. (2005), Food quality and safety: consumer perception and demand, *European Review of Agricultural Economics*, 32: 369-391.
- Gulati, A., Minot, N., Delgado, C., Bora, S. (2005), "Growth in high-value agriculture in Asia and the emergence of vertical links with farmers", Paper presented at the workshop "Linking Small-Scale Producers to Markets: Old and New Challenges", 15 December 2005, World Bank, Washington D.C..
- Hammoudi A., Hoffmann R., Surry Y. (2009), "Food safety standards and agri-food supply chains: an introductory overview", *European Review of Agricultural Economics Vol. 36 (4) pp. 469-478*
- Henson, S., Caswell, J. (1999), Food safety regulation: an overview of contemporary issues, *Food Policy* 24: 589-603
- Henson, S. et Holt, G. (2000), Exploring incentives for the adoption of safety controls: HACCP implementation in the U.K. dairy sector, *Review of Agricultural Economics* 22: 407-20.
- Henson, S., Brouder, A-M., Mitullah W. (2000), "Food Safety Requirements and Food Exports from Developing Countries: The Case of Fish Exports from Kenya to the European Union", *American Journal of Agricultural Economics*, 82(5): 1159-1169.
- Henson S., Loader R. (2001), "Barriers to Agricultural Exports from Developing Countries: The Role of Sanitary and Phytosanitary Requirements", *World Development* Vol. 29, No. 1, pp. 85-102.
- Henson S., Blandon, J. (2007), The Impact of Food Safety Standards on an Export-Oriented Supply Chain: Case of the Horticultural Sector in Guatemala, Naciones Unidas, CEPAL.
- Henson, S. et Humphrey, J. (2009), The impacts of private food safety standards on the food chain and on public standard-setting processes. Joint FAO/WHO Food Standards Programme, Codex Alimentarius Commission, Thirty-second Session, FAO Headquarters, Rome, 29 June - 4 July 2009. Hikken et Harrison (1999).
- Jaffee, S. (2003), From Challenge to Opportunity. Transforming Kenya's Fresh Vegetable Trade in the Con-

- text of Emerging Food Safety and Other Standards in Europe. Agriculture and Rural Development Discussion Paper 1. World Bank, Washington D.C..
- Josling, T., Roberts D., Order D. (2004), "Food Regulation and Trade: Towards a Safe and Open Global System", *Institute for International Economics*, Washington, D.C. March.
- Maertens, M. (2006), "Trade, Food Standards and Poverty: The Case of High-value Vegetable Exports from Senegal", Poster paper at the 26th *Conference of the International Association of Agricultural Economists*, August 12-18, Gold Coast.
- Mai-Anh Ngo, (2007), "La conciliation entre les impératifs de sécurité alimentaire et la liberté du commerce dans l'accord SPS," *Revue internationale de droit économique*, 21, no. 1 27-42.
- Malorgio G., Grazia C. (2009), "Strategie produttive e commerciali della sicurezza alimentare: lo standard GlobalGap e il ruolo delle Organizzazioni di Produttori", XLIV Convegno SIDEA, *Produzioni Agroalimentari tra rintracciabilità e sicurezza: analisi economiche e politiche di intervento* Taormina, 8-10 novembre 2007, Milano, FrancoAngeli.
- Maertens, M., Swinnen, J. (2006), "Trade, Standards, and Poverty: Evidence from Senegal" LICOS. Centre for Transition Economics Discussion Papers 177/2006.
- Mazzocchi M., Ragona M, Zanoli A. (2013), "A fuzzy multi-criteria approach for the ex-ante impact assessment of food safety policies", *Food Policy* 38, 177-189.
- McEachern MG, Warnaby G., (2004), Retail 'Quality Assurance' Labels as a Strategic Marketing Communication Mechanism for Fresh Meat, *The International Review of Retail, Distribution and Consumer Research*, Volume 14, issue 2.
- Minten, B., Randrianarison, L., Swinnen, J. F. M., (2006), "Global Retail Chains, International Trade and Developing Country Farmers - Evidence from Madagascar", Contributed paper at the IATRC Summer Symposium 2006, "Food Regulation and Trade: Institutional Framework, Concepts of Analysis and Empirical Evidence". May 28-30 2006, Bonn.
- Mitchell, L., (2003), "Economic Theory and Conceptual Relationships Between Food Safety and International Trade", Cap. 2 in Buzby, J.C. (ed.) "*International trade and food safety: Economic theory and case studies*" USDA/ERS Agricultural Economic Report 828, November.
- Moenius, J. (1999), "Information versus Product Adaptation: the role of Standards in Trade" Working paper, University of California, San Diego.
- Negri, S. (2009), "Global Health Governance", volume, n. 1 (fall 2009) <http://www.ghgj.org>.
- Okello, JJ (2012), "Compliance with International Food Standards: effects on family farmers", AfD-INRA Conference on "Food Safety, Trade and Development", Paris Dec 2012.
- Otsuki, T, Wilson, J. Sewadeh M., (2001), "Saving two in a billion: quantifying the trade effect of European food safety standards on African exports", *Food Policy* 26, 495-514.
- Romano D., Cavicchi A., Rocchi B. et G. Stefani (2005), Exploring costs and benefits of compliance with HACCP regulation in the European meat and dairy sectors, *Act Agriculture Scand Section C*, 2005; 2: 52-59.
- Semos A. et A. Kontogeorgos (2007), "HACCP implementation in northern Greece: food companies' perception of costs and benefits", *British Food Journal*, 109, 5-19.
- Swinnen, J., (2012) "Food Safety, Trade and Development - Linking Rich Consumers to Poor Producers", AfD-INRA Conference on "Food Safety, Trade and Development", Paris Dec 2012.
- Tothova, M. (2009), The Trade and Trade Policy Implications of Different Policy Responses to Societal Concerns, OECD Food, Agriculture and Fisheries Working Papers, No. 16, OECD, Paris.
- Unnevehr L., Roberts D. (2002), "Food safety incentives in a changing world food system", *Journal of Food Control* 13: 73-76
- Unnevehr, L. and Roberts D. (2005), "Resolving Trade Disputes Arising from Trends in Food Safety Regula-

tion: The Role of the Multilateral Governance Framework” *World Trade Review*, 4 (3): 469-497.

Van der Meulen B. (2011), *Private food law - Governing food chains through contract law, self-regulation, private standards, audits and certification schemes*, Wageningen Academic Publishers.