

# The Role of Public and Private Standards in Regulating International Food Markets

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## **Abstract**

While much of the focus of the economics literature has been on the role of public food safety and quality standards both as policy instruments and as non-tariff barriers to trade, it is evident that private standards are playing an increasing role in the governance of agricultural and food supply chain. This paper provides an overview of the evolution of private food safety and quality standards, outlining how and why business-to-business and private collective standards have come to play an increasingly dominant role in determining the action of firms in the agricultural and food sectors, and the ways in which such standards influence trade flows. While there has been very little empirical analysis of the trade impacts of food safety and quality standards, the paper contends that they can play a contrasting role in both reducing and enhancing trade in agricultural and food products. At the same time, however, it is evident that private standards fall outside of the governance structures established by the WTO, raising challenges for the future role of the SPS and TBT Agreements.

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# The Role of Public and Private Standards in Regulating International Food Markets

## 1 Introduction

The proliferation and evolution of food safety and quality standards in industrialised countries, driven predominantly by the ‘ratcheting-up’ of regulatory requirements in response to consumer concerns about food safety and quality, scientific developments regarding the risks associated with food and concerns over the considerable economic costs associated with established food-borne hazards, has received much attention in the academic literature (HENSON AND CASWELL 1999; GARCIA MARTINEZ *ET AL.* 2005; WORLD BANK 2005). A major theme in this literature, which is the ultimate focus here, is the potential impact of food safety and quality standards on trade in agricultural and food products (BALDWIN 2001; OECD, 2003; JOSLING *ET AL.* 2004), reflecting both the proliferation of food safety and quality standards and increasing recognition of the importance of non-tariff measures for international trade in agricultural and food products (HENSON AND LOADER 2001). Indeed, a growing number of analytical studies have highlighted the trade reduction and/or diversion effects associated with food safety and quality standards (BEGHIN AND BUREAU 2001; MASKUS AND WILSON 2001). A specific focus of this literature, especially more recently, has been the potential adverse impact on developing countries attempting to exploit potentially lucrative markets for high-value agricultural and food products (JAFFEE AND HENSON 2004; WORLD BANK 2005), alongside the role of food safety and quality standards in international markets as catalysts for the enhancement of capacity and the strategic repositioning of exports.

Contemporary agri-food systems are increasingly pervaded by a plethora of private food safety and quality standards that operate alongside regulatory systems and which, although not legally binding in a regulatory sense, can be *de facto* mandatory for suppliers (HENSON AND NORTHEN 1998). These private standards have evolved in response to regulatory developments and, more directly, consumer concerns, and as a means of competitive positioning in markets for high-value agricultural and food products (WORLD BANK 2005). More generally, the evolution of private standards reflects the preponderance of ‘soft law’ in the governance of economic national and international systems (MORTH 2004) and the innovation of regulatory systems (BLACK *ET AL.* 2005), including towards the use of co-regulation (GARCIA MARTINEZ *ET AL.* 2005). As a result, it is arguably private rather than public standards that are becoming the predominant drivers of agri-food systems (HENSON AND HOOKER, 2001). Further, there is evidence that private standards, which are well

established in many industrialised countries, are fast becoming a global phenomenon, and pervading even developing country agri-food markets (REARDON *ET AL.* 2001; REARDON AND BERDEGUE 2002; HENSON AND REARDON 2005). Arguably, however, the predominant focus of the economic discourse on food safety and quality standards remains public regulation (HENSON AND HOOKER 2001) and (perhaps to a lesser extent) liability standards (see for example BUZBY *ET AL.* 2001). This is particularly the case in the academic literature on the trade effects of food safety and quality standards, and indeed the literature on the impact of non-tariff measures more generally. While there are signs that the role that private standards play in international markets for agricultural and food products is beginning to be recognized (see for example JAFFEE AND HENSON 2005; WORLD BANK 2005), there is a glaring paucity of empirical studies.

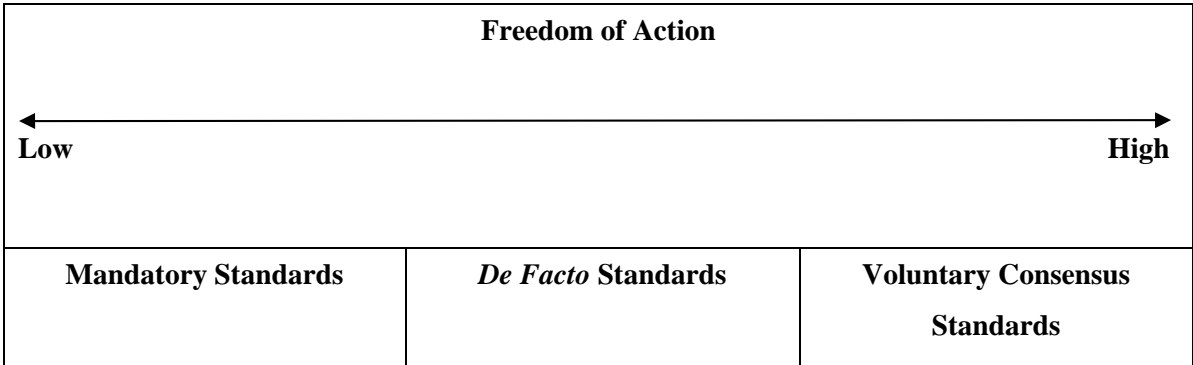
This paper provides a necessarily brief and incomplete overview of the growing importance of private standards in international markets for agricultural and food products, examining the extent to which private standards are dominating over the regulatory actions of governments and the resultant impacts on trade. It outlines the primary drivers behind the evolution of private standards and provides an overview of the current 'state of play' in key industrialised country markets. While there is relatively scant empirical evidence of the impact of private standards on trade in agricultural and food products, it is argued that private standards are fast becoming a primary determinant of market access, especially in selected industrialized countries. At the same time, the evolution of private food safety and quality standards is challenging the role of the World Trade Organization (WTO), in particular the Agreement on Sanitary and Phytosanitary Measures (SPS Agreement) and the Agreement on Technical Barriers to Trade (TBT Agreement) and the utility of food standards diplomacy based on government-to-government relations. The 'bottom line' is that more empirical analysis is needed as a matter of some urgency on the impact of private food safety and quality standards on trade in agricultural and food products.

## **2 Distinguishing Public and Private Standards:**

Food safety and quality standards can be promulgated in a variety of institutional forms that differ in the extent to which users have freedom of choice and action regarding compliance (Figure 1) and the role of the public and private sectors in promulgating and/or enforcing these standards. Standards can be mandatory in a legal sense or required in practice because of the sheer proportion of buyers that require them (NRC 1995). Alternatively, standards can be voluntary, such that potential users can decide whether to comply or not and take the economic consequences associated with this decision. While mandatory standards are generally the sole preserve of public institutions, both public and private institutions can be involved in the governance of voluntary standards.

Mandatory or regulatory standards, termed technical regulations by the TBT Agreement, are standards set by public institutions (in particular regulatory agencies) with which compliance is obligatory in the legal sense. As is discussed below, food safety has traditionally been seen as the preserve of government regulation as a means to achieve a socially-desirable level of protection to human health (ANTLE, 1995; HENSON AND CASWELL 1999; CASWELL AND JOHNSTON, 1991), enforced through official inspection of production facilities and/or end products. Voluntary consensus standards arise from a formal coordinated process involving participants in a market with or without the participation of government. Broadly, the international standards developed by the International Organization for Standardization (ISO) and national and/or regional standards bodies take this form. The standards developed by private standards-setting bodies, for example the Safe Quality Food (SQF) Institute and the British Retail Consortium (BRC) (see below) are examples specific to food safety and quality. Members of the group attempt to achieve consensus on the best technical specifications to meet their collective needs. A variety of private entities may be involved in the establishment of voluntary consensus standards including industry and trade organizations, professional societies, standards-setting membership organizations and industry consortia, which in some cases may be coordinated by a public entity. Use of the standards resulting from this process is generally voluntary, although they may be applied by the majority of suppliers, reflecting the economic advantage associated with standardization and/or market requirements. Finally, *De Facto* mandatory standards arise from an uncoordinated process of market-based competition between the actions of private firms. When a particular set of products or specifications gains market share such that it acquires authority or influence, the set of specifications is then considered a *de facto* standard. The Nature's Choice standard of Tesco Stores PLC in the UK, that commands a market share of over 30 percent, is arguably an example (see below). Standards promulgated by private entities, unless referenced by regulations, can not be legally mandated. However, through market transactions such standards may become involuntary in practice; firms have little or no option but to comply if they wish to enter or remain within a particular market.

**Figure 1 Legal Forms of Food Safety and Quality Standards**



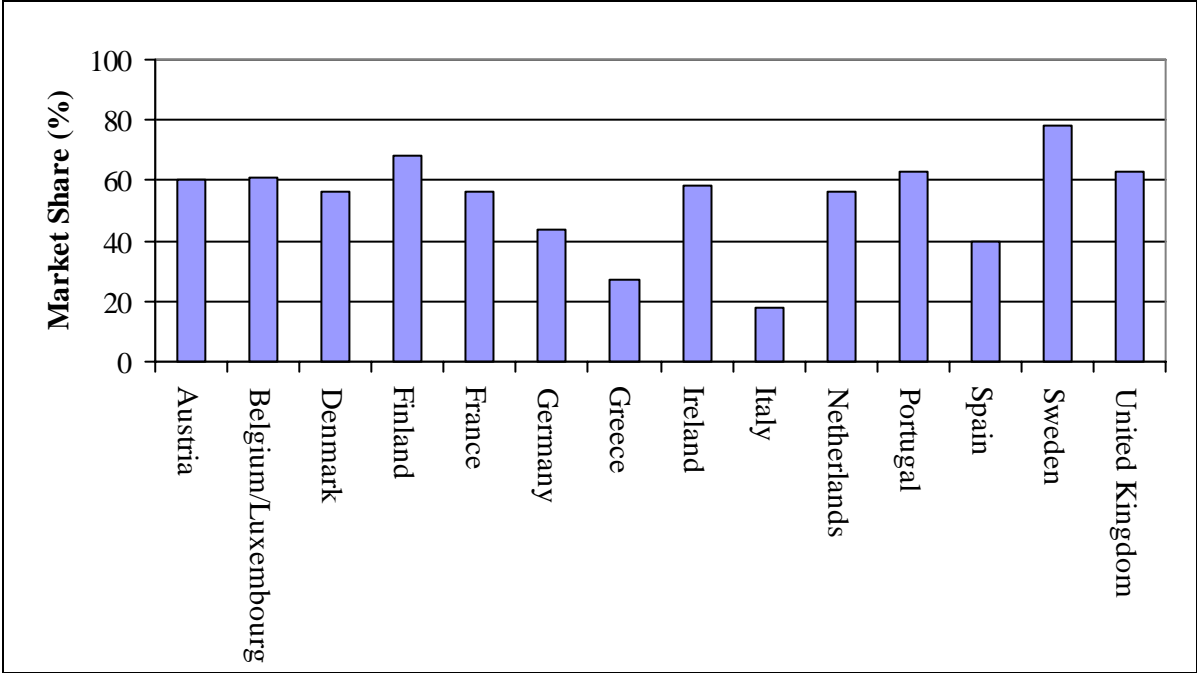
The broad trend outlined in this paper is a shift from mandatory standards as the predominant form of governance over food safety and quality, which is inevitably positioned within the public sector, to more voluntary forms of governance in the legal sense, that opens the way for, and indeed it is argued below has been actively driven by, the private sector. Thus, the distinction and shift between public and private standards can be seen through both the growing role of standards promulgated by private processes of consensus-building and/or the emergence of propriety private standards as *de facto* mandatory in agricultural and food markets (HENSON AND NORTHEN 1998). However, such trends are not unique to the agricultural and food sector. Indeed, the increasing role of voluntary consensus and *de facto* mandatory standards is discussed in the industrial organisation literature across many sectors (see for example FARRELL AND SALONER 1985; KATZ AND SHAPIRO 1985), for example through the victory of leading innovative firms (as in the case of the VHS standard for video recording) and/or the efforts of firms collectively to share network externalities (ECONOMIDES 1996; KATZ AND SHAPIRO 1994). Similar debates are also on-going outside of economics, for example in the legal literature. Here reference is made to the shift from ‘hard’ to ‘soft’ law (MORTH 2004), where soft law refers to ‘rules of conduct which, in principle, have no legally binding force but which nevertheless may have practical effects’ (SNYDER 1993), or in the international context as ‘the body of international instruments which *per se* do not make law (that are of non-legal character) but which still possess variable regulatory force’ (SZTUCKI 1990).

### **3 Trends in Food Safety and Quality Standards**

In order to understand the evolution of public versus private modes of governance over food safety and quality, it is necessary to recognise and examine underlying processes of change in global agricultural and food markets. A rapidly expanding body of literature in agricultural economics (see for example WORLD BANK 2005; FULPONI 2005; REARDON ET AL. 2001) and rural sociology (see for example FOLD AND PRITCHARD 2005; BUSCH 2000; BUSCH AND BAIN 2004) highlights the ways in which agricultural and food systems are being transformed. Increasingly, supply chains for agricultural and food products are extending beyond national and regional boundaries, facilitated in part by new food, communications and transportation technologies and a policy environment that encourages more liberal international trade (HENSON AND REARDON 2005; OECD 2004; FULPONI 2005; NADVI AND WALTRING 2003). Along these supply chains, ownership is becoming more concentrated such that a diminishing number of key economic players have power over global agricultural and food markets. In particular, concentration within food retailing - such that the five-firm concentration ratio ( $CR_5$ ) in many industrialized countries exceeds 50 percent (Figure 2) - is driving a shift towards buyer-driven supply chains (GEREFFI 1999; GEREFFI

ET AL. 2003; HUMPHREY AND SCHMITZ 2003) that are extending internationally with global sourcing and the emergence of multinational retailers, food service operators and manufacturers. The ways in which dominant firms in the retail, food service and food manufacture sectors compete is also changing, with increased emphasis on product quality attributes (RAIKES ET AL. 2000) as a means to ‘de-commodification’ and product differentiation (BUSCH AND BAIN 2004). Indeed, it is argued that the very ways in which agricultural and food markets are both structured and operate are defined by such quality-based competition, and at the same time the associated institutional arrangements are crucial to the legitimacy of the quality attributes embedded in agricultural and food products (ALLAIRE AND BOYER 1995; BUSCH AND BAIN 2004).

**Figure 2 Five-Firm Concentration Ratio for Retail Food Sales in Selected Industrialised Countries, 2003:**



Source: DOBSON (2003)

Alongside the structural and institutional transformation of agricultural and food markets have been pervasive trends in consumer demand that have put greater focus on product quality over price (KINSEY 2003). On the one hand, despite major advances in agricultural and food technology and scientific understanding of the risks associated with food, consumer concerns about food safety persist. Indeed, high profile food scares in a number of industrialised countries have served to fuel consumer concerns and erode confidence in prevailing mechanisms of food safety control, focused predominantly on public regulation (Table 1) (HENSON AND CASWELL, 1999). Indeed, it is some of these very advances in food technology (for example irradiation and genetic-modification) that have

generated concerns among consumers in the form of so-called ‘technological risks’ (BECH 1992). On the other hand, consumers have increasingly focused on a broader array of food product and process attributes when assessing product quality, many of which are experience or credence characteristics. These quality attributes encompass the manner in which products are produced (for example organic production, animal welfare concerns, etc) and substances present in products that are perceived to be unsafe and/or unhealthy including naturally-occurring constituents (for example fat or cholesterol) and contaminants (for example pesticide residues and antibiotics), as well as the wider impacts of the agri-food chain on the environment, worker welfare, etc. Thus, agricultural and food products are increasingly viewed as a complex array of quality attributes that are packaged together in differing combinations and quantities, many of which cannot be directly observed at the point of purchase or even post consumption.

**Table 1 Examples of high Profile Food Safety Events in Industrialized Countries**

Year	Event/Issue	Country
1987/1988	Beef hormones	Italy/European Union
1988	Salmonella outbreak/scandal in poultry and eggs	United Kingdom
1989	Alar in apples	United States
1993	E.Coli outbreak in fast-food hamburgers	United States
1996	CJD linked to BSE and human health	United Kingdom
1996/1997	Microbiological contamination of berries	United States, Canada
1996	E. Coli outbreak in cooked meat	United Kingdom
1995- 1997	Avian flu spreads to humans	Hong Kong, Taiwan
1999	Dioxins in animal feed	Belgium
2000	Large-scale food poisoning from dairy products	Japan
2001	Contaminated olive oil	Spain

Source: JAFFEE AND HENSON (2005)

The increasing focus of global agri-food systems on food safety and quality attributes has served to highlight the role of product and process standards. While standards are ubiquitous to any market economy (BUSCH 2000; HENSON AND REARDON 2005; MAINSVILLE ET AL. 2005) and serve a fundamental role in the organisation of supply chains for most products and services, the current food safety and quality environment has enhanced the role of agri-food standards, while national and international institutional reforms have served to focus attention on the efficacy of alternative standards regimes and their secondary impacts, including on trade in agricultural and food products. On the one hand, product and process standards provide a mechanism through which public authorities



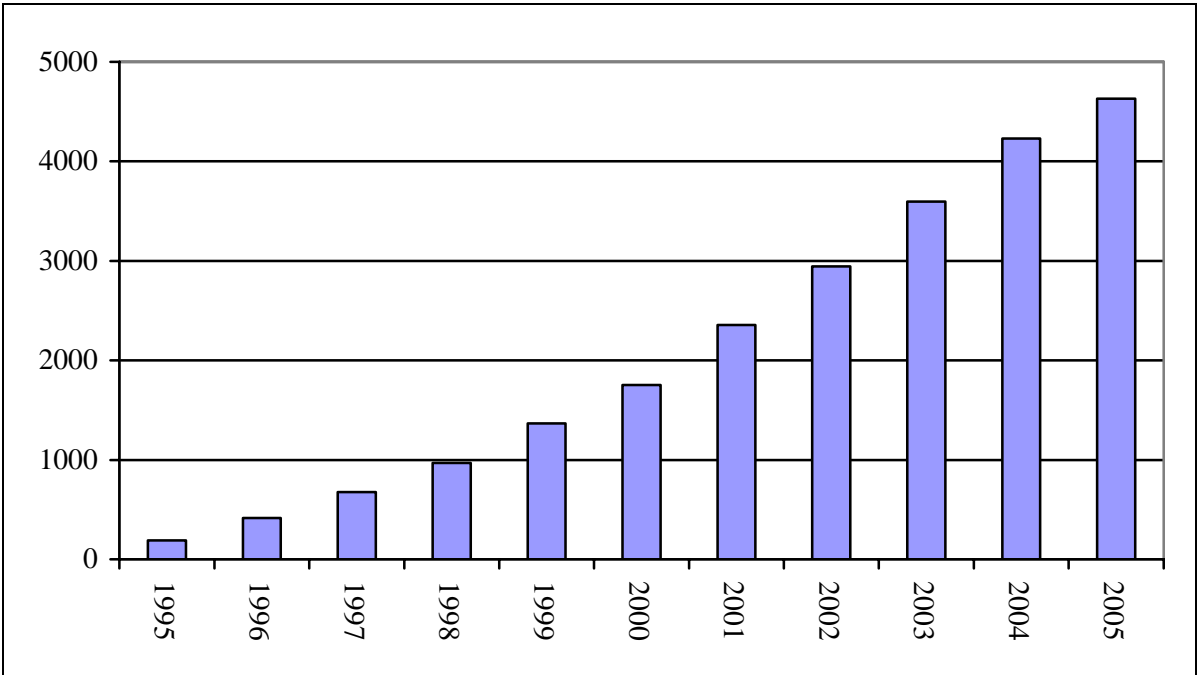
can regulate the food system in order to pursue social food safety and quality objectives. Indeed, as highlighted above, the predominant focus of the economic literature on food safety and quality standards has been on the scope for failure of food product markets to provide a socially-optimum level of food safety and/or quality, for example due to information imperfections and asymmetries, externalities, etc. (see for example HENSON AND TRAILL 1993; ANTLE 1995; CASWELL AND JOHNSTON 2001). On the other hand, food safety and quality standards are central to meeting the market demands of consumers, while forming the very basis of product differentiation in contemporary food markets (HENSON AND REARDON 2005). Indeed, BUSCH AND BAIN (2004) argue that agri-food standards have come not only to codify but also to define product quality.

Governments and the private sector have responded to developments in the food safety and quality environment in agri-food markets through institutional reforms that have yielded a new paradigm in food safety and quality regulation and management. In the public sphere, regulations have been revised and significant institutional changes made in the oversight of food safety (JAFFEE AND HENSON 2004), including the implementation of process and performance-based approaches such as hazard analysis and critical control point (HACCP) (CASWELL ET AL 1998). Certainly, there is now enhanced regulatory oversight of food supply chains, reflected in the greater incidence of SPS measures across WTO Member countries (Figure 3). In many cases, food safety standards have been tightened on foods that have long raised safety concerns (for example *Salmonella* and *Campylobacter* in meat and meat products), while new standards have been promulgated for emerging hazards and/or in areas that were previously less regulated (for example mycotoxins). With respect to food quality, public standards have been implemented to ensure fair competition and/or to prevent consumers from being misled (for example organic products), and to otherwise promote quality-based competition on a 'level playing field'. At the same time, product liability has come to play a more prominent role, both through tort liability standards (BUZBY ET AL. 2001) and the 'duty of care' required of food sellers with respect to their legal food safety obligations, most notably the concept of 'due diligence' (see for example HENSON AND NORTHEM 1998).

In the international sphere, attempts have been made to overcome the potential negative trade effects of food safety and quality standards. Thus, the WTO, through the SPS and TBT Agreements, has laid down the rights and obligations of WTO Members with respect to the application of public food safety and quality measures (JOSLING ET AL. 2004; ROBERTS 2004). Broadly, these agreements permit governments to apply food safety and quality standards in pursuit of legitimate policy objectives. For example, food safety measures can be employed in pursuit of a country's declared 'appropriate level of protection' given that these can be justified scientifically and provided that these measures are least trade-distortive of the options available (HENSON 2000). At the same time, attempts have been made

to harmonise food safety and quality standards across nation states, for example through the promulgation of international standards by the Codex Alimentarius Commission, and/or to facilitate the mutual recognition of differing national standards where these can be demonstrated to have an equivalent outcome, for example in terms of the level of protection afforded against food safety hazards. Indeed, arguably the dual impact of the WTO and international standards-setting bodies has been to bring about greater discipline, and certainly enhanced transparency, in the use of public food safety and quality measures (ROBERTS, 2004), while defining a more common vocabulary through which national governments can communicate their food safety and quality objectives.

**Figure 3 Notification of new SPS measures to the WTO, 1995 to 2005**



In parallel with the evolution of public food safety and quality standards have been moves by the private sector to address consumer concerns regarding food safety and/or quality and to harness these concerns as a means to differentiate their products and to compete in quality-defined markets. Much of the motivation behind this trend has been the mitigation of reputational and/or commercial risks associated with the safety of food products, related in part to the level and nature of public regulatory requirements, alongside quality-based modes of product differentiation. More broadly, a wide range of market and firm-level factors motivate the implementation of enhanced food safety and quality controls (see for example SEGERSEN 1999; HENSON AND CASWELL 1999). Thus, there is a rapidly increasing plethora of private ‘codes of practice’, standards and other forms of supply chain governance (JAFFEE AND HENSON, 2004). These efforts have been especially prominent among large food retailers, food manufacturers and food service operators, reflecting both their considerable market power and competitive strategies based around ‘own’ or private brands that tie a firm’s

reputation and performance to the quality supplied by its products (BERGES-SENNOU ET AL. 2004). Thus, contemporary agri-food systems are increasingly governed by an array of inter-related public and private standards, both of which are becoming *a priori* mandatory, especially in supply chains for high-value and quality-differentiated agricultural and food products. Indeed, it has been recognized that private standards can play a key role in governing food safety and quality and that public and private controls should be coordinated (HENSON AND CASWELL 1999), such that co-regulatory approaches (GARCIA MARTINEZ ET AL. 2005) are being employed as part of efforts to achieve social food safety and/or quality objectives in a more efficient manner.

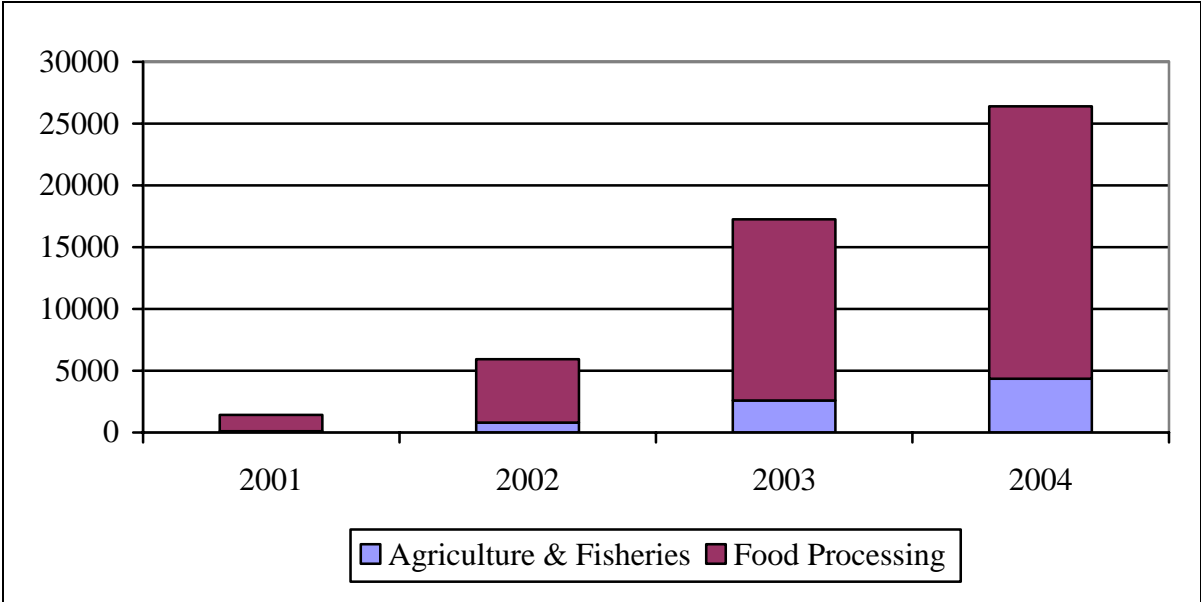
Both reflecting and supporting the promulgation of private food safety and quality standards has been the development of quality meta-systems (CASWELL ET AL., 1998) such as HACCP, good manufacturing practice (GMP), good agricultural practice (GAP), ISO 9000, etc (see for example Figure 4). Some of these quality meta-systems are embedded in voluntary public standards at the national and/or international levels (for example ISO 22000) and may not be specific to agricultural and food products (for example ISO 9000), while others are propriety private standards developed by standards bodies (for example SQF 2000) or by individual food firms (for example Tesco's Nature's Choice); these are described in greater detail below. Such meta-systems can be viewed as 'codes of conduct' for the agri-food system in both achieving a particular bundle of food safety or quality attributes and the processes by which this is achieved. Increasingly, such systems govern the way in which the entire supply chain operates, from primary production through to retail distribution. At the same time, the evolution of these meta-systems has been both stimulated and facilitated by the development of a multi-tiered system of conformity assessment based around certification and accreditation (NRC, 1995). Thus, contemporary agri-food systems are governed not only by public and private standards, but also by public and private modes of enforcement. While many of these meta-systems started out as voluntary 'codes' of good practice, they are increasingly pervading public regulations (for example, as in the inclusion of HACCP among the regulatory requirements for meat and meat products in the United States, Canada, EU, etc.) such that the relations between public and private food safety and quality standards are increasingly complex; while private standards may evolve as a means to facilitate compliance with public regulatory requirements, regulators are increasingly adopting the mechanisms employed by private standards, and indeed even referencing private standards, in their rule-making (HENSON AND NORTHEN 1998; HENSON AND HOOKER 2001).

## **4 Evolution of Private Food Safety and Quality Standards**

The development of private governance structures for food safety and quality raises considerable challenges for the analysis of trade in agricultural and food products that, arguably, we are only now

beginning to address. On the one hand, private standards are a relatively new element of the food safety and quality landscape and continue to evolve over time; if current trends continue, the extent and form of private governance structures is likely to change fundamentally over the next decade. On the other, the extent of private food safety and quality standards differs widely across countries, products and customers. Certainly, private standards remain far from universal and in certain contexts, for example broad commodity markets (such as for basic grains) into food processing, public standards continue to predominate (WORLD BANK 2005). At the same time, however, it is possible to discern the factors that influence the development and/or adoption of public and private standards, providing guidance on where private modes of governance are more pervasive and/or are likely to predominate over time.

**Figure 4 Global certifications to ISO9000: 2000 in agriculture, fisheries and food processing, 2000 to 2004**



Source: ISO (2005)

Perhaps the most explicit case for the application of public regulatory standards is to reduce the risks to human health associated with food-borne hazards and/or to protect consumers against fraud due to artificial product differentiation (HENSON AND TRAILL 1993; ANTLE 1995). Indeed the failure of markets to provide the desired level of protection to consumers has been the *prima facie* case for the promulgation of public mandatory food safety and quality standards. Thus, firms will arguably have the greatest incentive to implement private standards where there are missing or inadequate public food safety and/or quality standards; here private standards act as a substitute for missing public institutions (REARDON ET AL. 2001; HENSON AND REARDON 2005). Indeed, the demand for food safety and quality by consumers and the actions of firms in response may mean that the

implementation of minimum quality standards by government may have little or no impact on the safety or quality of products supplied and consumed (SHAPIRO 1983; RONNEN 1991). As firms compete among themselves in national and international markets and attempt to differentiate their products to protect and gain market share, public standards are unlikely to provide sufficient scope for product differentiation on the basis of safety and quality attributes (HENSON AND REARDON 2005) and to reward firms for investing in enhanced food safety and quality controls, such as the meta-systems described above (REARDON *ET AL.* 2001). Indeed, there may be very strong incentives for leading firms to promulgate private standards to differentiate themselves from competitors that operate at or near the minimum food safety and/or quality standards laid down by public regulations. Where public standards are well-developed and afford a high level of food safety and/or quality, there may still be an incentive to implement private standards, for example as a means to manage exposure to liability, limit exposure to potential regulatory action and/or pre-empt future regulatory developments (LUTZ *ET AL.* 2000). Indeed, where the sunk costs of investing in enhanced food safety and quality meta-systems are high, the benefits from being an early adopter can be considerable (JAFEE AND HENSON 2004).

To some extent, regardless of prevailing public food safety and quality standards, private standards have become the predominant basis for product differentiation in markets increasingly driven by quality-based competition. Standards take the form of technical specifications, terms and definitions and principles through which goods are categorized or included in product groupings (JONES AND HILL 1994). Thus, in the context of agricultural and food products they permit the production, identification and preservation of product and process characteristics through the supply chain in a consistent manner over time. This is most critical in the case of credence attributes that relate to the way in which products are produced and handled rather than the intrinsic characteristics of the product itself (HENSON AND TRAILL 1993; HOBBS *ET AL.* 2000). Indeed, private standards have arguably become a critical element of strategies to differentiate products and firms, that requires the consistent supply of food safety and quality attributes supported by branding and certification (BERGÈS-SENNOU *ET AL.* 2004). Further, by enabling firms to capture the benefits of the food safety and/or quality attributes they supply, private standards provide incentives for those firms to make the required asset-specific investments, for example in meta-systems such as HACCP and GAP.

Private standards also function as instruments for the coordination of supply chains by standardizing product requirements over suppliers, which may cover wide geographical regions that cut across national boundaries (HENSON AND REARDON 2005). This becomes of greater importance as supply chains become more global and cut across differing regulatory, economic and regulatory environments. In turn, standards act to reduce the transaction costs and risks associated with

procurement, in particular where high levels of oversight are required to ensure food safety and/or quality attributes are delivered. The main reduction in costs comes from using process standards to co-ordinate supply chains, with firms complementing the private standards they implement with their own quality management meta-systems, for example HACCP and ISO 9000, and branding (CASWELL *ET AL.* 1998). Indeed, the construction of trust and reputation around the visible symbol of a brand arguably acts to enhance the credibility of private standards among consumers (HENSON AND NORTHEN 1998). To build this confidence on the basis of consistency of standards compliance over time requires rigorous vertical co-ordination that can be costly to achieve. Private food safety and quality standards and the associated processes of conformity assessment (see below) can be one mechanism through which the associated costs can be managed.

Drives to enhance minimum quality standards, pre-empt regulatory developments and differentiate products, and at the same time manage the transaction costs and risks associated with expansive supply chains, has provided great impetus for the evolution of private food safety and quality standards. This has been predominantly driven by the major food retail and/or food service operators that have the oligopsonistic power to induce changes in their supply chains and are able to motivate their suppliers through price premia and/or other preferential supply terms. The promulgation of these private standards has occurred most notably in industrialised country markets, and in particular Europe, although there is evidence that they are pervading global supply chains and are beginning to be promulgated in low and middle-income countries (REARDON *ET AL.* 2001; REARDON AND BERDEGEU 2002; HENSON AND REARDON 2005). While private food safety and quality standards have become more numerous, their specific forms have evolved, arguably at much faster rates than equivalent public standards could change (KRISLOV 1997; JONES AND HILL 1994), reflecting the enhancement and evolution of quality management meta-systems and efforts by leading firms to manage the transaction costs associated with private regimes of supply chain governance. Indeed, there is arguably a natural tendency for the evolution of private standards as leading firms switch away from dominant standards once levels of adoption reach a certain level in order to differentiate themselves from competitors and retain price premia (CODRON *ET AL.* 2000). These trends suggest that a world governed by private food safety and quality standards is subject to more rapid change than where public modes of regulation predominate.

Initially, private food safety and quality standards mainly took the form of business-to-business requirements that were formulated by individual firms in pursuit of their market objectives, to facilitate regulatory compliance and to manage exposure to product liability (OECD 2004; FULPONI 2005). The introduction of a 'due diligence' defence under the Food Safety Act 1990 in the UK (HOBBS AND KERR 1992; HENSON AND NORTHEN 1998) was arguably the first major impetus

for the development of such standards. Prior to 1990, food safety standards in the UK invoked a so-called ‘warranty’ defence whereby suppliers were required to show that food products did not enter into a state which contravened legal requirements while under their control. Food that was purchased from others was deemed to be ‘warranted’, meaning that the seller assumed legal responsibility for ensuring that the food conformed to the standards at the time of sale. The Food Safety Act 1990 brought about a reversal of legal liability for food product safety along the supply chain, providing for a defence of ‘due diligence’ against all food safety offences:

“A defence for the person charged to prove that he took all reasonable precautions and exercised all due diligence to avoid the commission of the offence by himself or by a person under his control”.

Under this defence, suppliers were required to demonstrate that they had been proactive in ensuring that the food they handled, and any food obtained from upstream suppliers, conformed to legal food safety standards. Major food retailers in the UK, who were increasingly utilising private label products as a means to differentiate themselves from competitors and achieve market power through the supply chain, responded by enhancing their own technical expertise and applying this to the development of food safety protocols for suppliers that were enforced through second-party audits. Subsequently, the introduction of a ‘Rapid Alert’ system within the EU, through which details of products in contravention of legal requirements and that pose a risk to human health are made available through a public database, provided impetus for large food retailers and/or importers Europe to implement greater oversight of their suppliers, most typically through proprietary business-to-business food safety and quality standards.

While the application and enforcement of firm-level food safety and quality standards may afford the highest level of ‘due diligence’ against regulatory liability and the greatest scope for firm and product-level differentiation on the basis of food safety and quality, while promoting competitive advantage on the basis of ability to manage complex networks of firms through the supply chain (PORTER 1990; CASELLA 2001; OECD 2004), the associated transaction costs are also extremely high. This is particularly the case where food retailers source from suppliers that are dispersed globally. Thus, through the 1990s a series of competing third party food safety standards were established by industry organisations (for example the European Food Safety Inspection Service) or private firms (for example PROCheck) as a substitute for business-to-business standards (HENSON AND NORTHEN 1998). Although a number of large food retailers began to adopt these standards, many leading firms retained their own systems of second party certification because of concerns over the level of protection such third party standards afforded against legal liability. Thus, in the mid-1990s a discourse began to

emerge between the major food retailers, initially in the UK and then more widely, over the development of joint private standards that would permit suppliers to be certified through a single third party audit against a harmonized code (HENSON AND NORTHEN 1998). This reflected a growing recognition among large food retailers that a collective private standard would them to reduce the costs of governing food safety along their supply chains, while expanding the population of suppliers from which they could procure. More generally, it supports the contention that collective private standards evolve as club goods to improve market functioning and promote the competitive advantage of members through voluntary coalitions of firms, often resulting in the formation of new standards bodies (CASELLA 1997; 2001). Thus, in the UK all but one of the major food retailers has collaborated in the development of a harmonised private food safety standard through the British Retail Consortium (BRC). Similar efforts by German and, more recently, French food retailers have lead to the International Food Standard (IFS).

Casella (2001) argues that firm-level coalitions for the formation of harmonized collective standards will shift from predominantly national to predominantly international as markets become more globally integrated. Thus, we would predict that, with a diminishing number of dominant global food retailers, efforts will be made to act collectively in arenas where there are common interests for standardization, shifting the focus of harmonization efforts from national and/or regional institutions (such as the BRC and IFS) towards the evolution of international private standards organizations. Indeed, this is now being observed through the formation of the Global Food Safety Initiative (GFSI) through the Food Business Forum (CIES), which is developing guidelines for the benchmarking of national and regional private food safety standards in order to bring about harmonization or mutual recognition of differing codes (see below). Likewise, a coalition of 13 major food retailers across Europe in the late 1990s formed the Euro-Retailer Produce Working Group (EUREP) that has developed a common private protocol on good agricultural practice (EUREPGAP).

The predominant function of private food safety standards in particular has been to achieve effective food safety governance within buyer-driven supply chains (NADVI AND WALTRING 2003; HUMPHREY and SCHMITZ 2003) that are increasingly global in nature. In many cases, however, these standards are not directly communicated to consumers, such that their function is to support and protect wider efforts at product differentiation, for example through private label development. However, a parallel series of private food safety and quality standards has evolved, induced at various levels of the supply chain, that are linked to co-brands and/or symbols that are directly communicated to consumers. These have been developed by some major food retailers (for example the Finest brand by Tesco Stores PLC in the UK, and Filière Agriculture Raisonnée by Auchan and Filière Qualité by Carrefour in France), but also by producer organizations (for example Assured Food Standards in the



UK) in an effort to counteract the dominance of major retailers in systems of private governance of food safety along supply chains. At the same time, there has been a tendency for collective private standards to become more inclusive both vertically along supply chains, through the inclusion of suppliers and/or their representative organizations, and the participation of non-commercial interests, including non-governmental organizations, consumer groups, etc. These trends reflect concerns about the potential anti-competitive claims against collective private standards, recognition that network efficiencies may be enhanced by the participation of other levels of the supply chain and an increasing need for oversight among commercially 'disinterested' groups as private standards come to encompass a wider range of food quality attributes, including environmental and worker protection, animal welfare concerns, etc.

While it is not clear *a priori* that a single private food safety and/or quality standard is the optimum (FARRELL AND SALONER, 1986), for example given that firms may wish to differentiate their products and/or otherwise to supply to different standards, there is an inevitable trade-off between economies of scale and the need to reduce transaction costs, and the ability to cater to consumer demands for variety along a range of food safety and quality dimensions. More generally, the proliferation of private standards acts to reduce network economies and can enhance transaction costs on the part of both supply chain buyers and sellers. Thus, while the generally tendency is likely to be the dominance of a small number of collective private food safety and/or quality standards that span international rather than national markets, it is not evident that a single standards will necessarily emerge. Indeed, as fast as collective private standards are evolving, leading food retailers are introducing their own proprietary standards in particular spheres of food safety and/or quality to retain scope for product differentiation. At the same time, international food safety standards are evolving through public or quasi-public institutions. A key example is ISO 22000 that establishes for the first time a global standard for food safety management systems that encompasses the entire supply chain from production through to distribution, well beyond the scope of most private standards. The impact that ISO 22000 will have on the evolution of private food safety standards is yet to be seen.

## **5 Current 'State of Play'**

Having outlined the role of private food safety and quality standards, this section provides an overview of the private standards that currently predominate in global agricultural and food supply chains. These standards reflect on-going trends in private modes of food safety and quality governance, in particular from second to third party certification, from business-to-business to collective private standards and from national to regional and/or international standards, and are evolving rapidly over time. In Table 2, a distinction is made between standards that are public mandatory, public or private

voluntary (and thus take the form of voluntary consensus standards) and buyer-specific or proprietary standards. This later category is increasingly taking the form of *de facto* mandatory standards in the case of business-to-business standards, promulgated and applied by dominant food retailer and/or food service operators. Each standard is also categorised according to whether its focus is national or international, predominantly in terms of the geographical location of the actors involved. Reference has been made above to many of the standards outlined in Table 2. Here, these standards are described in more detail to highlight the iterative and inter-linked processes through which they have evolved and to provide hints as to their likely trade effects.

While a distinction can be made between private standards that apply to one sub-sector and those that lay down codes of practice for the entire supply chain, all encompass meta-systems such as HACCP (CHIA-LUI LEE, 2005). Thus, the BRC Global Standard and the IFS apply essentially to food processing, while Assured British Meat (UK) and Qualitat und Sicherhei (Germany) encompass both primary production and processing. Note that most standards that apply to the entire supply chain are national rather than international in focus. A further distinction can be made between standards that essentially focus on food safety controls and those that cover a wider spectrum of quality attributes. Thus, the SQF 1000 standard entirely focuses on food safety in agricultural production, while EUREPGAP also includes requirements on environmental protection. Enforcement and conformity assessment regimes also differ across the standards outlined in Table 2. In general, collective private standards are enforced through third party certification, although buyers may undertake second party audits on new suppliers. While some business-to-business standards are enforced through third party audits (for example the Nature's Choice standard of Tesco Stores in the UK), second party audits by the respective firm are more common (for example Field-to-Fork of Marks and Spencer in the UK). Regardless of the standard, third party auditors are generally approved on an individual basis and required to be accredited to the ISO 45000 series of standards, usually by the official accreditation agency in the country in which they operate. Thus, it is interesting to note that private standards regimes are reliant on public systems of oversight to ensure credibility and allow for a rigorous liability defence.

**Table 2 Examples of Private Food Safety and Quality Standards**

		Public Mandatory	Public Voluntary	Private	
				Collective	Business-to-Business
<b>Focus</b>	<b>National</b>	National Legislation	Food Safety Enhancement Program HACCP Advantage [SQF]*	Dutch HACCP BRC Global Standard Assured Food Standards Qualitat und Sicherhei Integrale Keten Beheersing	Nature's Choice (Tesco Stores - UK) Field-to-Fork (Marks & Spencer - UK) Filière Agriculture Raisonnée (Auchan - France) Filière Qualité (Carrefour - France) Terre et Saveur (Casino)
	<b>International</b>	EU Regulations	ISO 9000 ISO 22000	International Food Standard SQF 1000/2000/3000 EUREPGAP	-

\*: Until July 2003

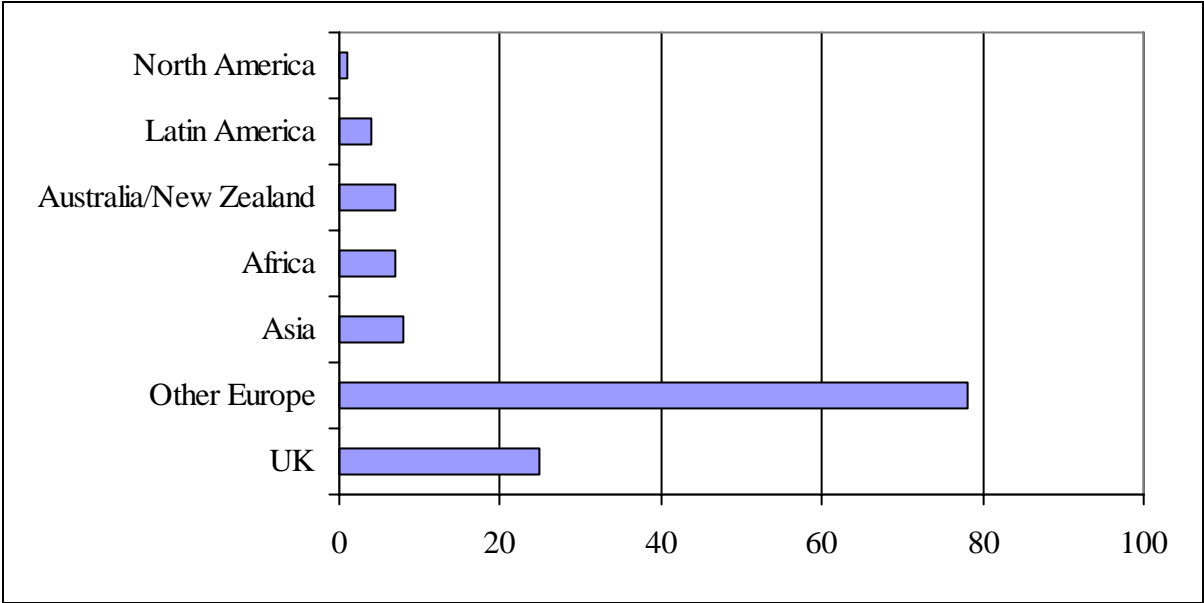
The first private food safety standard to be developed entirely through the collective action of private firms was the BRC Technical Standard. The BRC is an industry organization representing the interests of major retail operators in the UK. Since 1998, the BRC has coordinated the harmonization and consolidation of the business-to-business standards implemented by its members, as well as a number of third party food safety standards. The BRC Technical Standards has been revised on an ongoing basis and, reflecting the global nature of supply chains to UK food retailers, is now international in focus. Currently, all but one of the major food retailers in the UK, collectively accounting for around 58 percent of retail food sales, accepts third party certification to the BRC Global Standard in lieu of their proprietary business-to-business standard when sourcing private label products. Adoption of the BRC Global Standards has also expanded rapidly with the number of certified processing facilities increasing from less than 500 in the UK in 1999 to 5,500 in 64 countries in 2005 (BRC, 2005). As the international adoption of the BRC Global Standard has increased, the geographical distribution of approved third party certifiers has also expanded (Figure 5), such that the BRC Global Standard has become international not only in terms of its reach, but also the associated conformity assessment infrastructure.

In part mimicking and developing upon the BRC Global Standard, in 2000 a group of leading German food retailers developed the International Food Standard (IFS) through their trade organisation, the Hauptverband des Deutschen Einzelhandels (HDE). In 2003, the Fédération des Entreprises du Commerce et de la Distribution (FCD), an organization representing French food retailers, became involved in the further elaboration of the IFS. In so doing, the IFS became the first pan-European collective private food safety standard. Although the IFS and BRC standards overlap in their scope and specific requirements by up to 80 percent (GFSI 2006), food retailers in the UK, Germany and France do not accept these two standards as equivalent, such that manufacturers supplying into multiple countries may be required to have certification to both. Examining these standards side-by-side, it is evident that the BRC standard very much reflects the prevailing regulatory environment in the UK, namely the 'due diligence' defence, while the IFS is based more broadly on EU regulatory requirements, predominantly the need for HACCP.

In the Netherlands, a code on Requirements for a HACCP-Based Food Safety System (the so-called 'Dutch Code') operated by the Certification Foundation Food Safety (SCV) is the dominant private food safety standard. This standard was established by a National Board of Experts - HACCP (NBE-HACCP) on behalf of organisations accredited to undertake HACCP certification by the Dutch Council for Accreditation (RvA). Unlike the UK, Germany and France, therefore, the genesis of the Dutch Code came from suppliers of food safety certification services rather than dominant firms in the food retail sector. Indeed, the Code represents a benchmarking standard that facilitates mutual

recognition of the proprietary standards of a number of private certifiers, currently totalling 13. To date, 1,900 processing facilities have been certified according to the Dutch Code, of which 700 are outside the Netherlands.

**Figure 5 Approved Certifiers to BRC Global Standard by Region, 2006**



Source: BRC (2005)

The Safe Quality Food (SQF) series of food safety standards for agricultural production (SQF 1000), food processing (SQF 2000) and food distribution (SQF 3000) was originally developed and owned by the Ministry of Agriculture of the State of Western Australia. The SQF series represented a collection of public voluntary food safety standards that had been developed, at least in part, in response to regulatory requirements in Australia that permitted voluntary systems of food safety certification to be used as a means to achieve and demonstrate compliance. In July 2003, however, the SQF series was acquired by the Food Marketing Institute (FMI), an organization representing 15,000 member food retailers and wholesalers in the United States. The SQF series is now operated by a subsidiary of the FMI, advised by a technical committee consisting of representatives of food retailers and manufacturers from both the US and other countries, as a set of private collective food safety standards. This is the only documented case of the international acquisition of an established voluntary food safety standard and its transfer from the public to private sectors.

In the UK, producer organizations have also played a role in developing private food safety and quality standards, in part as a reaction to the demands of major food retailers with respect to food safety, but also to enhance consumer confidence following the outbreak of BSE and to counteract the trend towards buyer-driven governance of supply chains. Thus, Assured Food Standards (AFS) has

evolved to harmonise the generic elements of a series of six commodity-specific quality assurance schemes and to provide a governance structure to maintain credibility of the associated certification process. The AFS schemes are linked to a logo that is included on food packages and thus aims to communicate compliance direct to consumers. Although AFS is formally operated by a board of directors with members drawn from relevant producer organisations, non-executive directors are drawn from consumer organisations, food retailers and food manufacturers, among others.

Reflecting the importance of imports in the supply of fresh produce to UK supermarkets, and thus the need to extend beyond established private food safety standards that were national in focus, the leading UK food retailers have driven efforts to establish a European code on good agricultural practice (GAP). In 1997, the Euro-Retailer Produce Working Group (EUREP) was established and by 1999 a trans-national private protocol for the application of GAP by fresh produce suppliers had been agreed. Currently, 30 major food retailers in 12 European participate in EUREP, controlling an estimated 85 percent of fresh produce retail sales in 2004 (Garcia Martinez and Poole 2004). In practice, however, EUREPGAP has only been widely implemented by food retailers in the UK and the Netherlands, while some dominant firms that have participated in the promulgation of the standard have retained their own business-to-business standards (for example Nature's Choice in the case of Tesco Stores in the UK). The rapid growth of EUREPGAP has stimulated the development of private and/or public codes of good agricultural practice that have subsequently been recognized as equivalent in a number of countries (for example ChileGAP, Naturane [Spain], New Zealand Fresh Produce Approved Supplier Program and Mexico Supreme Quality GAP) and/or are in the process of being recognised as equivalent (for example SwissGAP, KenyaGAP, ChinaGAP and JGAP [Japan]). Thus, a process of harmonization and mutual recognition has occurred in response to the growing dominance of EUREPGAP in supply chains for fresh produce, arguably at a much faster rate that would occur with regulatory requirements.

Recognising the global proliferation of private food safety standards and the potential for the fragmentation of global supply chains, the Global Food Safety Initiative (GFSI) was established in 2000 under the initiative of the Food Business Forum (CIES), a member-based organization of Chief Executive Officers of leading international food retailers. The aim of the GFSI, among others, is to facilitate the benchmarking of private food safety standards with a view to their harmonisation and mutual recognition, such that members meet their needs to protect brand capital and exposure to legal liability while facilitating network economies and the management of transaction costs. In September 2001, the first version of the GFSI Guidance Document was published. To date, the BRC Global Standard, IFS, Dutch HACCP code and SQF 2000 have been assessed and recognised as equivalent to the GFSI Guidance Document. In 2004, the Guidance Document was extended to standards for on-

farm food safety standards. To date, SQF 1000 has been assessed and recognised as equivalent. It is likely that other global private food safety and quality standards for agricultural production will be benchmarked in the future, for example EUREPGAP.

Alongside on-going processes of private standards development for food safety, standards are being developed at both the collective and business-to-business levels for a wider range of food quality attributes. These take the form of formal collective standards, often involving a wide group of stakeholders including commercial firms, trades unions, government and NGOs. For example, the Ethical Trading Initiative (ETI) and Social Accountability International (SAI) have both developed labour standards based broadly on International Labour Organisation (ILO) conventions that are widely required by food retailers in the UK (in the case of the ETI) and multinational manufacturers and retailers (in the case of the SAI). At the same time, industry organisations are coordinating processes of benchmarking to promote the harmonisation and/or mutual recognition of business-to-business standards. Thus, the FMI in the United States is currently coordinating a benchmarking exercise for the animal welfare codes promulgated by industry organisations. This suggests that, while private food safety standards have pervaded the supply chains to major food retailers on an increasingly global basis, similar regimes will increasingly govern a wider range of food quality attributes in the future. At the same time, however, there are signs that comparable processes of harmonisation and mutual recognition are at work that will, at least in part, erode differences in private standards between buyers and markets.

## **6 Trade Effects of Private Food Safety and Quality Standards**

Despite the evolution of private standards and their increasing role in the governance of global supply chains for agricultural and food products, most of the current debate on the impact of food safety and quality measures on trade has focused on public standards at the national or supra-national levels (GARCIA MARTINEZ AND POOLE, 2004; BUSCH *ET AL.* 2000). Indeed, while it is recognised that compliance with private standards in many markets is *de facto* mandatory (HENSON AND NORTHEM 1998; HENSON AND HOOKER 2001), it is interesting to note that the predominant debate over the impact of private food safety and quality standards has focused on developing countries (see for example JAFFEE AND HENSON 2005; WORLD BANK 2005; CHIA-HUI LEE 2006). Further, across this literature there is a particular paucity of empirical studies, with the only studies coming close to examining the trade effects of private standards focusing on official national or international standards (such as the product standards of ISO) (see for example SWANN *ET AL.* 1996; MOENIUS 1999) and/or codified quality management meta-systems such as ISO 9000 (see for example TURNER *ET AL.* 2000)

Examining the current scope of private food safety and quality standards suggests that the associated impacts on agricultural and food product trade flows are complex, with perhaps significant trade reduction and diversion effects. These trade effects are likely to be specific by product, destination country and/or origin country, also by customer type and across individual firms (JAFFEE 2003; GARCIA MARTINEZ *ET AL.* 2002). Thus, isolating out the trade effects of private standards regimes as a whole (for example the BRC Global Standard or SQF 2000) and/or for particular country markets is problematic, probably requiring detailed case studies before turning to quantitative analysis. At the same time, however, it is important to recognise that public standards still matter. On the one hand, exporters to any country are still required to comply with regulatory requirements, some of which necessitate prior approval at the country and/or facility level before even being able to gain market access (see for example HENSON AND MITULLAH 2004). On the other, as has been illustrated above, the evolution and specific forms taken by private standards reflect, at least in part, prevailing national and supra-national public standards.

Examining first the potential for private food safety and quality standards to impede trade, it is evident that the associated enhanced systems of food safety and quality management, which in many cases go well beyond regulatory requirements, can impose significant costs of compliance on exporters. In turn, these costs are likely to be greater for exporters in countries where public and/or private food safety standards are less well-developed. For example, to the extent that private food safety standards are less well developed in the United States, exporters may face a disadvantage relative to comparable firms in the UK because certification and/or advisory services are more costly, food safety controls are more attuned to regulatory than private modes of oversight, etc. That being said, private certification is evolving rapidly in the United States and any comparative advantage enjoyed by UK exporters is likely to diminish over time; thus, CALVIN *ET AL.* (2001) indicate that 80 percent of US fresh produce suppliers have been asked for some kind of third party certification. At the same time, however, in many agricultural and food product markets, public standards remain the predominant form of governance (for example bulk grains, vegetables and fruit for processing, etc) such that business-to-business and collective private food safety and quality standards are unlikely to be a major impediment to trade at the current time. Likewise, there are many countries in the world where private standards are less evolved (for example Japan) and public regulations are the dominant influence on trade.

More generally, the growing dominance of buyer-driven supply chains on a global scale presents a challenge for analysts in examining the role of food safety and quality standards as barriers to trade. In a world where private standards predominate, the key issue for any exporter is to gain access to a



given buyer's supply chain rather than a national market *per se* (DOLAN AND HUMPHREY 2001; REARDON AND FARINA 2001). As a diminishing number of leading retail, food service and (to a lesser extent) food processing firms govern these supply chains and/or across these supply chains a declining number of private standards lay down the conditions for entry, there is greater scope for exclusion from entire markets. At the same time, however, for those exporters who do gain access to these supply chains, the benefits in terms of long-term trade relations through systems of 'preferred suppliers' can be enormous. This raises interesting challenges for public modes of governance at both the national, regional and international levels (NADVI AND WALTRING, 2003); should public standards concede the governance of global supply chains to private standards or attempt to rein these in? While private standards are influenced, in part, by regulatory requirements (WILSON AND ABIOLA, 2003), there are questions over whether and how this influence might be enhanced? There are also wider policy issues, for example the scope for anti-competitive behaviour on the part of dominant firms (CASELLA 2001), although this is more difficult to regulate on the international rather than the national level.

Turning to the potential for private food safety and quality standards to facilitate trade, it is evident that processes of harmonisation and mutual recognition are taking place with respect to both the standards themselves and systems of conformity assessment. Indeed, these processes are arguably occurring at a much faster rate than is typical for national public regulations through bilateral and/or multilateral government-to-government negotiations. At the same time, the shift to third party certification has reduced the transaction costs associated with global supply chains for agricultural and food products to leading food retailers and food service operators. In principle, once an exporter has been certified to a dominant collective private standard, they are able to gain access to the supply chain of all buyers that accept this standard. At the same time, conformity to an established private standard can have a high signal value, even among customers that do not require the standard. This would suggest, perhaps, that dominant business-to-business standards could have greater scope to impede and/or redirect trade than collective private standards.

Perhaps one of the foremost concerns regarding the growth of private food safety and quality standards is their potential impact on the transparency of regulatory processes. While the WTO commits Member states to notifying all new public food safety and quality standards and providing time for trade partners to voice concerns and engaged in bilateral dialogue, this does not apply to private standards. On the other hand, a wide constituency of stakeholders, both along the supply chain and geographically, is often involved in the promulgation of collective private food safety and quality standards. For example, the EUREPGAP and SGQ standards are all developed by technical committees that include representatives of food retailers and suppliers from multiple countries. This

might suggest that, in some cases, private standards are more open to influence by trading partners than national regulatory requirements.

## 7 Where Does This Leave the WTO?

The final issue to be addressed in this paper is the consequence of the evolution of private food safety and quality standards for the WTO, and specifically the SPS and TBT Agreements. One could argue that, as private standards become the predominant form of governance of global agricultural and food supply chains, the WTO will become irrelevant, or at least of secondary importance. In this respect, the key issue is whether private food safety and quality standards come under the umbrella of the rights and obligations laid down by the SPS and TBT Agreements, or whether they might conceivably do so in the future. At the same time, the evolution of private standards does not imply that regulatory food safety and/or quality requirements will go away; regardless of what their customers require, exporters still have to achieve and demonstrate compliance with public mandatory standards to the satisfaction of regulatory authorities at the national and/or supra-national level. Here the SPS Agreement is examined as a case example, most notably because the issue of private standards has recently been raised in this context.

The SPS Agreement permits measures that are “necessary to protect human, animal or plant life and health,” yet requires governments to: (1) base measures on a scientific risk assessment; (2) recognize that different measures can achieve equivalent safety outcomes; and (3) allow imports from distinct regions in an exporting country when presented with evidence of the absence or low incidence of pests and diseases. In addition, the Agreement encourages (yet does not require) the adoption of SPS measures based on international standards, guidelines and recommendations, making explicit reference to those of Codex Alimentarius in the case of food safety (ROBERTS 2004). Importantly, however, the Agreement protects the right of a country to choose its own ‘appropriate level of protection’, while guiding members to ‘take into account the objective of minimizing negative trade effects’. The SPS Agreement thus sets out broad ground rules for the legitimate application of food safety measures, many of which have the potential to affect international trade.

The predominant focus of the SPS Agreement is the public food safety measures that are adopted by Member countries and for which there is a requirement to comply. This leaves questions over the application of the Agreement to measures that are adopted by private entities; whether an individual firm or some form of non-governmental organisation, and/or measures that may be *de facto* mandatory while not being legal requirements. Within the SPS Committee this issue has been raised with particular reference to EUREPGAP. Specifically, in the June 2005 meeting of the Committee, St

Vincent and the Grenadines complained about the requirement for EUREPGAP certification in exporting bananas to UK supermarkets (WTO 2005; CHIA-HUI LEE 2006). Jamaica subsequently raised its own concerns with respect to exports of various fresh fruit and vegetables and further support was given to these concerns by a number of other developing countries. The crux of the issue is whether, given EUREPGAP is a private standard over which EU member States and/or the European Commission have no jurisdiction, do the rights and obligations of the SPS Agreement apply?

Under the SPS Agreement, Member States are directed to take ‘reasonable’ measures to ensure that ‘non-governmental entities’ comply with the SPS Agreement, thus Article 13 specifies:

“Members are fully responsible under this Agreement for the observance of all obligations set forth herein. Members shall formulate and implement positive measures and mechanisms in support of the observance of the provisions of this Agreement by other than central government bodies. Members shall take such reasonable measures as may be available to them to ensure that non-governmental entities within their territories, as well as regional bodies in which relevant entities within their territories are members, comply with the relevant provisions of this Agreement. In addition, Members shall not take measures which have the effect of, directly or indirectly, requiring or encouraging such regional or non-governmental entities, or local governmental bodies, to act in a manner inconsistent with the provisions of this Agreement. Members shall ensure that they rely on the services of non-governmental entities for implementing sanitary or phytosanitary measures only if these entities comply with the provisions of this Agreement.”

This implies that, if EUREP and the private firms requiring EUREGAP can be considered ‘non-governmental entities’, the rights and responsibilities of the SPS Agreement would apply and the European Commission and respective EU Member States government would be completed to address the concerns raised by their trading partners. Unfortunately, the concept of ‘non-governmental entities’ is not defined in the SPS Agreement, although the TBT Agreement does elaborate on this in Article 4.1 (which is arguably similar in spirit to Article 13 of the SPS Agreement), making reference to ‘non-governmental standardising bodies’. Likewise, Annex 1 to the TBT Agreement defines a ‘non-governmental body’ as a:

“Body other than a central government body or a local government body, including a non-governmental body, which has legal power to enforce a technical regulation.”

On the basis of this definition it is difficult to argue that private standard-setting bodies such as EUREP and/or firms requiring compliance with their own business-to-business or collective private standards such as EUREPGAP can be regarded as ‘non-governmental entities’ and coming under the remit of the SPS Agreement. Paradoxically, it would be particularly difficult to argue that EUREP is a ‘non-governmental entity’ under the jurisdiction of a WTO Member State given that the technical committee advising on the EUREPGAP standard includes representatives of retailers and suppliers in equal numbers, including suppliers from Chile, South Africa and Israel (CHIA-HUI LEE 2006).

More generally, it is evident that some WTO Member States are concerned about the potential challenges to the future work of the WTO posed by private food safety and quality standards. A good illustration of this is provided by the comment made by the representative of Argentina at the meeting of the SPS Committee where the issue of EUREPGAP were first raised, as summarised in the record of the meeting (WTO 2005):

“The representative of Argentina recalled that the international community had generated international agreements to ensure that trade standards were not unnecessarily stringent so as to act as barriers to international trade and countries had devoted time and financial and human resources to attend all the international meetings where standards were discussed, developed and implemented. If the private sector was going to have unnecessarily restrictive standards affecting trade and countries had no forum where to advocate some rationalization of these standards, twenty years of discussions in international fora would have been wasted.”

However, while private food safety and quality standards might challenge the dominance of the WTO as the main forum through which trade issues related to food safety and quality measures are addressed, it is hard to conceive of a situation where an international agreement or treaty can be brought to bear on the private commercial transactions of buyers within agricultural and food supply chains. Indeed, private standards, whether taking the form of business-to-businesses specifications or collective standards, are (and have arguably always been) integral to the private contractual relations between buyers and sellers. The WTO has no jurisdiction there.

## 8 Conclusions

While economists have continued to focus much of their analysis on the role of government regulations and other forms of public action on the management of food safety and quality, private standards have become an increasingly dominant mode of governance in global supply chains for agricultural and food products. To some extent, private food safety and quality standards have emerged in response to the regulatory and reputational risks faced by leading firms in supply chains, most notably major food retailers, but at the same time have been employed to facilitate competitive strategies of product differentiation on the basis of an increasingly wide array of food safety and quality characteristics. Private food safety and quality standards have also evolved from being predominantly business-to-business requirements to collective standards as leading firms have made efforts to manage the transaction costs associated with their global supply chains. As these supply chains have begun to span national borders, private standards have emerged as a potentially important trade issue.

To date, analysis of the trade impacts of food safety and quality standards has similarly focused largely on public measures, predominantly regulatory approaches. Empirical research has demonstrated that public food public safety and quality standards can act as significant barriers to trade in agricultural and food products, suggesting that private standards might have similar effects, although there is not a comparable body of empirical literature. However, to the contrary, the trend towards collective private standards and the harmonisation and mutual recognition of standards across global markets, suggests that these might act to facilitate trade. Indeed, there is evidence that the tendency and speed towards harmonisation of private food safety and quality standards far exceeds similar efforts in public spheres. Evidently there is a pressing need for empirical research on the trade impacts of private food safety and quality standards which examines the competing trade reduction and creation effects across product and geographical markets.

While private food safety and quality standards are emerging as an important trade issue for agricultural and food products, it is evident that such standards fall outside of the scope of existing institutions aimed at providing discipline in the use of food safety and quality measures. Thus, although concerns about the potential for private standards to act as barriers to trade have begun to be voiced in the WTO, it has been recognised that the actions of private firms, both individually and collectively, are not subject to the rights and obligations defined by the SPS or TBT Agreements. What this means for the future of the WTO, and associated institutions such as the Codex Alimentarius Commission, are interesting questions that need further exploration by economists and others. Hopefully, the preliminary commentary provided in this paper will stimulate research in this direction.

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