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Have Industrialized Countries Shut the Door and Left the Key Inside? Rethinking the Role of Private Standards in the International Fruit Trade

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Abstract

In recent years, public and private food safety standards in the EU have proliferated and grown stricter while food prices and demand in these markets have been stagnating. The opposite is true for many emerging and transitional countries that are experiencing an increase in purchasing power and demand. However, these countries often have lower food safety standards than in the EU. In response to current trends in international food trade, this study seeks to determine whether traders in developing–transitioning countries and in industrialized European countries (especially Germany), are experiencing changes in trade flows in the international fresh-fruit trade and also identify the role of private standards in connection with relevant situational factors driving these changes. Underlying assumptions are derived from the concepts of the contingency approach. To obtain qualitative data, a series of semi-structured telephone interviews were conducted with industry experts from fourteen import countries and twenty-two export companies. Based on the results of a structured content analysis of these interviews, appropriate political, managerial and research implications are developed promoting the liberalization and harmonization of public and private maximum residue levels for fruits within the EU.

Keywords: private food standards, maximum residue levels, EU, developing and transition countries, international fruit trade

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Introduction

In recent decades, the food sector has been characterized by increasing globalization. As a result, developing and transition economies have been increasingly incorporated into the networks of international agri-food value chains, and producers and exporters in these countries have had to meet consumer demands mainly in the global North, which has served as their major export market (Challies 2010). Thus, agricultural production in the global South has shifted further and further away from traditional agricultural products such as coffee, tea and cacao to non-traditional agricultural exports (NTAE) such as fruits, vegetables, cut flowers and fish in order to meet customer demands and increase producer livelihoods by serving high-value food chains (Challies 2010; Humphrey and Memedovic 2006). In the NTAE sector, industrialized countries had high market attractiveness for exporting countries due to high prices and strong demand, good infrastructures etc. (Huang 2005).

In international NTAE markets, many developing and transition export countries have become heavily dependent on a few high-income countries (Diop and Jaffee 2005). The European Union, for instance, is a major player in the international fresh fruit market (Comtrade 2014; Huang 2005). The strong dependence of exporting countries on importing countries has been the topic of a high number of research articles in the last two decades, many of them dealing with the role of public and private standards in this area. Whereas the former are subject to political decision making at national and supranational levels, as in the EU, the latter are often introduced by powerful supply chain actors such as retailers (Henson and Humphrey 2010; Henson and Reardon 2005). Researchers are still in two minds regarding the impact of food standards on market actors' participation in the international food trade (Müller et al. 2013). Some claim that strict public but especially private standards function as indirect, non-tariff trade barriers, excluding farmers from transition and developing countries from the world market due to those farmers' inability to meet the high quality requirements laid down in these standards (Melo et al. 2013; Jongwanich 2009; Reardon et al. 1999). In contrast, others believe that, instead of functioning as a trade barrier, such standards can provide an excellent marketing opportunity for suppliers in those countries and serve as a door opener to highly attractive high-value food chains (Maertens and Swinnen 2009; Jaffee and Henson 2005).

Nowadays, food safety is still one of the main issues in EU politics as well as in the private sector due to increasing European consumer concerns about this topic in general and pesticide residues in particular caused by various food scandals and extensive media coverage. Faced with such scandals, politicians and private sectors in the EU and its member countries react by strengthening public and private food safety standards. Retailers in particular use private food standards (HAACP, BRC, GlobalGAP, etc.) as a commercial strategy to increase competitiveness and set their own maximum residue levels for fresh fruit, regulating beyond public standards (Melo et al. 2013; Willems et al. 2005; Jaffee and Henson 2005). Conversely, growing pressure from the private sector can lead to increasing levels of public standards. This is a new development in regulation, where private actors play a major role in rule-making without the democratic decision-making process coming into play (Soon and Baines 2013; Fuchs et al. 2011). Therefore, the phytosanitary and maximum residue levels (MRL), especially as perceived by middle- and low-income exporting countries, are associated with a negative influence on trade

volumes, while other private standards, such as GAP standards,[1] are associated with a positive impact. Even though MRLs for pesticides are often very difficult for suppliers from developing and transition countries to meet, especially if regulations differ greatly among import countries, confidence in trading relationships increases, boosting trade volumes, when those requirements are fulfilled. Since the more similar the residue levels are, the lower the MRL effect, exporters in developing and transition countries tend to deliver their products to countries with less stringent phytosanitary regulations, such as certain Asian countries. Consequently, it can be assumed that the global effect on fruit trade that accompanies the increasing stringency of MRLs in the EU will be to the EU's own disadvantage (Melo et al. 2013).

While food safety standards have been strengthening, food prices and demand in developed countries have been stagnating due to demographic changes and weak economic development. At the same time, purchasing power and demand in many transition countries and emerging economies have been increasing whereas food safety standards have often remained low, making it easier for farmers and exporters in developing countries to meet them (USDA 2014; Poole 2006). These circumstances have made emerging economies more attractive for exporters of non-traditional agricultural products and an obvious alternative to industrialized countries as destination markets (v. Braun 2007). From a contingency theory point of view, such changes in market situation can lead to a mismatch between the external situation and the formal structure of a food chain (in this case, the food standards required) and, in consequence, to decreasing performance, that is, growing procurement issues and problems in securing the required quantities on international markets—a situation about which there are already increasing complaints from food chain actors in industrialized countries (USDA 2014; Lawrence and Lorsch 1967).

Objectives

Against this background, we raise the research question whether today it is not the developing and transition countries that are suffering from the negative effects of especially private food safety standards but the industrialized countries, which are increasingly excluding themselves from international trade with non-traditional agricultural products by strengthening public and private food safety standards, and whether the industrialized countries will, as a result, run into growing procurement problems sooner or later. Due to the current trends in the international food trade, we seek to find out whether and, if so, to what extent exporters in developing and transition countries and importers in industrialized countries are experiencing changes in trade flows in international trade with non-traditional agricultural products. Furthermore, it is the objective of this study to identify the role of private standards in connection to relevant situational factors driving these changes to derive appropriate political, managerial and research implications. Thus, our results are of special interest to fruit and other NTAE importing as well as exporting countries as well as to public and private standard setters in industrialized countries.

[1]GAP = Good Agricultural Practice, Standards such as GobalGAP, TESCO, HACCP (Melo et al. 2013)

Theoretical Approach

The considerations in this study are based on the contingency approach in organization theory introduced by Burns and Stalker (1961), Woodward (1965), Lawrence and Lorsch (1967) and others. The basic assumption of this approach is that the fit between an organization's external and internal business environment ("Situation") and the formal structure of the organization influences the organization's performance (see Figure 1). Reversely, this means that a mismatch between situational characteristics and organizational structure might lead to decreasing performance, thus requiring adaption (Lawrence and Lorsch 1967).

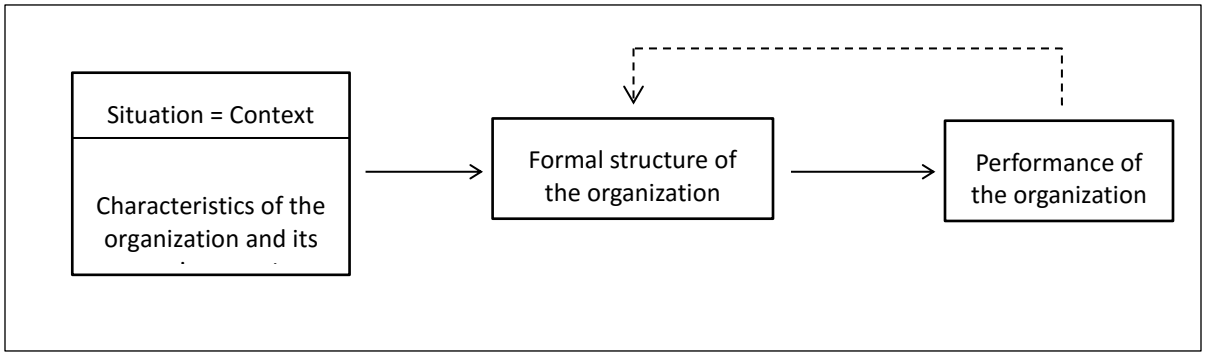

Figure 1. Contingency Approach
Source. Adapted from Kieser and Ebers (2014)

Due to its abstract and generalizable viewpoint and reductionist character, the contingency approach has been operationalized for various types of organizations, situations and institutional arrangements over time (Flynn et al. 2010). In this regard, organizations could be single agribusiness companies or even whole food supply chains (Kieser and Ebers 2014; Otter et al. 2014); their situational parameters could be internal characteristics, such as the age and size of the organization, or external ones, such as socioeconomic circumstances, market characteristics, customer structure or global cultural context (Kieser and Ebers 2014). Furthermore, formal structures include a wide spectrum of design parameters, among others, the degree of formalization and standardization (Pugh and Hickson 1971; Pugh et al. 1968). More recent studies have categorized the latter instruments as procedural design parameters and distinguished them from structural, motivational and personal instruments (Kayser et al. 2015). Simultaneously, these studies indicate that the contingency approach takes dynamic organizational characteristics and environments into account and, in this way, emphasizes to revalidate the fit of situational characteristics and organizational structures over time (Kieser and Ebers 2014). This theoretical viewpoint provides a framework for rethinking the role of private standards in the international fruit trade (as a prime example of NTAE) under consideration of current changing market characteristics and contrasting the findings with those of earlier studies (Melo et al. 2013; Jongwanich 2009; Reardon et al. 1999; Maertens and Swinnen 2009; Jaffee and Henson 2005).

In the focus of this study will be the aspect of formalization, as private food standards (e.g., GlobalGap, BRC and retailers' MRLs) are an expression of standardization and, thus, an integral part of the formal structure of a food supply chain and therefore need to accommodate various

market characteristics and customer structures (e.g., quality requirements, demand quantities and purchasing power) in various destination countries in order to maximize organizational performance. Therefore, the organization is defined as the whole international fruit supply chain in this study. However, the operationalization of organizational performance is recognized as a major pitfall in contingency theory—an issue that increases with the complexity of the organization as the unit of investigation. Since the term *efficiency*, which is often used in this context, is distensible in nature, this study will waive the quantification of parameters and instead focus on a major qualitative aim of supply chain activities: the optimal supply of goods with regard to quantity and quality at any time (Kieser and Ebers 2014; Van der Vorst 2006).

Material and Methods

In this study the contingency approach is applied to the international fresh fruit trade as an example of NTAE supply chains. In doing so, we focus on the European Union as the destination market since it is one of the most important actors in global fruit trade (Huang 2005). Therefore, the EU would also be vulnerable in the case of increasing procurement problems due to a mismatch between situational factors and the organizational design of supply chains. With nearly 10 million tons and about US$20 billion of fresh fruit imports in 2013, The European Union is a major—but also very dependent—customer on the world market (Comtrade 2014). Germany alone accounts for 9% of the global fruit trade volume and, with a population of about 80 million, is the principal market in the EU and a very important country for the fresh fruit trade (Comtrade 2014; Hart et al. 2007).

In order to supply this market, German importers and exporters from non-EU countries that deliver their products to Germany must comply with a variety of MRLs required by large German retailers. These MRLs are often much stricter than the ones required by EU legislation. Privately determined MRLs in other EU countries have been steadily declining and, nowadays, can fall short of the EU levels by up to 30% (CBI 2014). Thus, compared to other European countries, Germany has extremely high quality requirements, especially for fresh fruit. The pesticide MRLs set by large retailers respond mainly to repeated public campaigns by nongovernmental organizations (NGOs) accusing retailers of threatening consumer health through high (although in most cases legal) pesticide residues (Soon and Baines 2013). Higher standards on pesticide residues have helped retailers avoid public campaigns (Melo et al. 2013). Thus, the standards producers and exporters have to meet in the German fruit market have increased in the recent past. Consequently, the country can be seen as a prime example of other highly industrialized countries where standard setting is concerned and has therefore been chosen as the focus of investigation in this study. Furthermore, Germany is a country where prices for fresh fruits (and other food products) are comparatively low (Comtrade 2014) due to intensive price competition between retailers and the market dominance of low-price hard discount stores. These low prices, as an expression of the "characteristics of the organization and its environment" in the sense of the contingency approach (see Figure 1), cannot compensate for the high quality requirements and, thus, are no longer in keeping with the very high degree of formalization. In consequence, it is likely that the fruit trade flows will continue to shift to destination markets where quality requirements are more in line with prices, leading to decreasing organizational performance through supply shortages in the EU (Kieser and Ebers 2014; Van der Vorst 2006). For a detailed understanding of the specific issue, we collected qualitative data through semi-structured in-depth interviews (Denzin and Lincoln 2011).

Qualitative research in general is used, among other things, for applied research describing and interpreting new, still under-researched or future issues—as is the case in this study (Bitsch 2005). It should be noted that qualitative surveys, unlike quantitative approaches, contain research methods and data collection and analysis without a numerical basis (Creswell 2009; King et al. 1994). Since the broad constructs of the contingency approach are hard to quantify, especially on the supply chain level, and comparable as well as reliable data are scarce[2], the qualitative approach is preferred in this context. Furthermore, intensive interviews have the advantage of obtaining detailed information from a relatively low number of participants (Neves et al. 2013; King et al. 1994) since the strength of a semi-structured interview lies in its opportunity for participants to express their own perspective freely and in their own terms. Nonetheless, the interview is carefully prepared and guided to avoid missing important aspects. This research method allows the identification of undiscovered developments and requires a new point of view (Cohen and Crabtree 2006; Bitsch 2005). According to Cassell and Symon (1994), qualitative approaches are a valuable tool, especially in times of change, since changes are due to time lags in quantitative data often not observable in the moment they occur. Additionally, "with quantitative methods we may be able to assess that a change has occurred over time, but we cannot say how or why" (Cassell and Symon 1994, 5). Thus, in this study a qualitative approach is used to explore the following questions:

- Do experts perceive a change in the role of private standards in international fruit supply chains?
- How did the change in the role of private standards occur?
- Why did the change in the role of private standards occur?

Study Design and Sample Description

To obtain the qualitative data, a series of semi-structured telephone interviews were conducted with industry experts from import and export companies between September and November 2014 using an interview guideline with open-ended questions. The interview guideline was developed to gather detailed information from industry insiders' perspectives (Leech 2002). Additionally, ad hoc questions were spontaneously phrased at the end of each interview reflecting any new issues that had arisen during the dialogue. Interview guidelines for both importers and exporters closely resembled each other to ensure the compatibility of the results. Both sets of guidelines contained four main sections: general data (A); company data (e.g., size, export markets), certification systems, product portfolio and product sources (B); questions about specific aspects of the role of private standards in the international fruit trade (C); and sociodemographic information about the respondent (D). As the centrepieces of the interview guidelines, Section C included key questions concerning:

- experts' trade relations with the EU, specifically with retailers in the EU.
- experts' perception of food quality certification and private standards in the fruit trade.
- the emergence of new destination markets for fruit worldwide.

[2] Trade data, such as import and export flows from/to the European Union (especially to Germany), are difficult to obtain because of re-imports/exports in all current databases. Furthermore, databases for many countries, especially developing and transition countries, are incomplete, unreliable, heterogeneous or even nonexistent.

Since qualitative data is not collected on a numerical basis, statistical representability is of minor relevance during the sampling process (Creswell 2009; King et al. 1994; Lamnek 2010). Therefore, in this study, import as well as export companies were selected by focusing on content-related representability, for which the relevance and popularity of the fruit traded to Germany plays a key role. Hence, fruits were included that are either imported seasonally, because domestic yields cannot supply the German demand or year round because they cannot easily be cultivated in Germany. This applies in particular to apples, pears, grapes, bananas, pineapples, kiwi fruits and citrus[3]. The main non-EU export countries of these seven fruits are Ecuador, Chile, Costa Rica, South Africa and Guatemala, which together provide approximately 43% of the entire German import of the seven fruits under analysis (Comtrade 2014). Thereby, export companies in these countries were only selected if they operate in accordance with European quality requirements and are GlobalGAP certified. In all, 194 export companies were identified in the five countries, of which twenty-two participated in the interviews. Simultaneously, forty-three importers of the same fruits from non-EU countries with headquarters in Germany were identified on the basis of the companies' fruit trade flows and their trade relations with the German food retail sector and asked to participate in the telephone interviews. Of these, fourteen company representatives agreed to be interviewed. The interviews focused especially on managing directors but also on experts in logistics, marketing, purchasing, sales and quality management. The first attempt to contact the experts took place at the German Fruit and Vegetable Congress 2014 in Düsseldorf, Germany; additional contacts were made through an Internet-based search.

Interviews lasting between twenty and ninety minutes were recorded. After transcribing all expert interviews, a qualitative content analysis was carried out using Atlas.ti software to code and process the data (see Figure 2). During the structured content analysis developed by Mayring (2010), a combined deductive and inductive coding system was derived from the literature to evaluate in detail content-related connections between the statements. The basis for analysis was a deductive pre-coding of the transcribed interview into main categories according to the questions in the interview guideline. Then, subcategories were established in order to further differentiate the statements within the main categories, followed by the interpretation of results (Kuckartz 2012; Lamnek 2010).

In total, the sample consisted of fourteen German importers of fresh fruit from the Southern Hemisphere (see Table 1), representing about one-third of the number of German fresh fruit importers and twenty-two exporters and primary producers located in and operating from the main countries of origin of these fruits (see Table 2). The exporters under analysis represent 11.3% of the total number of relevant exporters in the leading source markets for the fruits included in the study. Experts interviewed on the importer side are between 28 and 58 years of age and have had between one to forty years of work experience. Most experts are managing directors (10). Furthermore, one marketing director, one key account manager, one quality management representative, and one expert on sales and purchasing were interviewed. The import companies surveyed operate mostly in the legal forms of GmbH (11) and GmbH & Co. KG (3). These companies employ between 6–800 employees.

[3] In this study, citrus comprises oranges, lemons, limes, mandarins and grapefruits.

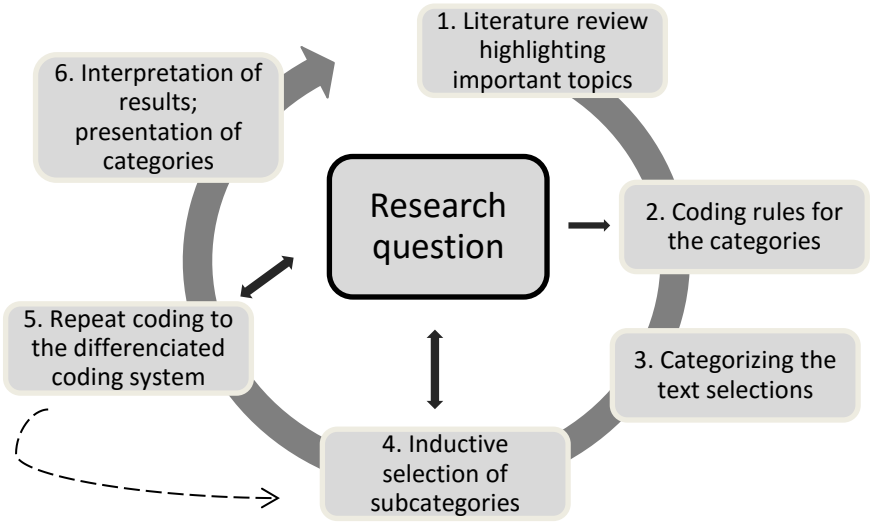

Figure 2. Process of the Qualitative Content Analysis
Source. Adapted from Kukartz 2012

Table 1. Interviewed Importers' Product and County Portfolios

Importer	Apple	Pineapple	Banana	Pear	Kiwi fruit	Grape	Citrus
1	ZA[1]			ZA		ZA	ZA
2	AR, CL, NZ			ZA, AR, CL		ZA, AR, CL	ZA, AR, UY
3				ES, IT, ZA, AG, UY		ES, IT, ZA, AG, UY	ES, IT, ZA, AG, UY
4		CR, PA, EC	CO, CR, EC				BR
5	NZ	CR, EC	EC				ES, ZA
6						ES, EG, PE	ES
7			CO, EC				
8			PE, CO, EC		IT, NZ, AU		
9	EU, Overseas	EU	CR, CO, EC	EU, Overseas			
10	ZA, AR, CL	CR, CI	PA, CO			IT, GR, ES, ZA, AR	ES, IT, ZA, AR
11			CR, EC, VN, CN				
12	CL	CR	EC, CO, CR	CL	CL	ZA, IN, CL	ZA
13	NZ, CL, ZA	CR, PA	EC, CR, CO	ZA, CL, AR	NZ, IT	IN, ZA, BR	ZA, AR, MX
14	FR, IT, NZ, AR, CL	CR	CR, EC, CO	IT, ES, ZA, CL	IT, FR, GR, NZ, CL	IT, GR, ES, CL, ZA, Ar, BR, IN	ES, TR, IT, ZA, CN, AR

Source. Authors' elaboration; [1]abbreviation of countries according to ISO-3166-1-codelist

The experts surveyed on the exporter side are between thirty-four and fifty-six years of age and have between nine months and thirteen years of working experience. Two of the exporters are farmers (100% self-/in-house production), five are direct exporters, and fifteen are producers who export their own products (30–90% self-/in-house production). Most of the latter kind of companies are organized as cooperatives.

Table 2. Interviewed Producers' and Exporters' Geographic Origin and Product Portfolio

Exporter	Chile	South Africa	Costa Rica	Guatemala	Ecuador
1 (PE)[2]			Pineapple		
2 (E)			Pineapple		
3 (E)			Pineapple, Banana		
4 (PE)			Pineapple		
5 (E)			Pineapple, Banana		
6 (PE)					Pineapple
7 (PE)					Banana
8 (PE)		Citrus			
9 (PE)	Grape				
10 (PE)	Apple, Pear, Grape, Kiwi fruit				
11 (PE)	Apple, Pear, Grape, Kiwi fruit				
12 (PE)		Apple, Pear, Citrus, Grape			
13 (P)					Banana
14 (P)			Pineapple		
15 (E)		Grape			
16 (PE)		Citrus			
17 (E)		Grape			
18 (PE)		Apple, Pear, Citrus, Grape			
19 (E)				Citrus	
20 (PE)	Grape				
21 (PE)	Citrus				
22 (PE)		Apple, Pear			

Source. Authors' elaboration; [2] P= primary producer; PE= primary producers who export their own products; E=exporters

Results

In evaluating the expert interviews it is necessary to differentiate between the statements of importers and those of exporters in order to approach the problem from different angles and to derive recommendations for political and managerial decision makers and future research directions.

Importers

The interviews with importers clarify that German fruit importers use various criteria to select their suppliers. However, the essential criterion for delivering to the European and German market is a GlobalGAP certification: "Certifications, such as GlobalGAP and IFS, are simply basic preconditions due to the underlying customer requirements" (Importer 11). In this context, customer requirements are the basis for specifications—especially certifications—of German food retailers for companies that supply to the EU market. Thus, "… if they do not have any certification, they do not have to deliver" (Importer 3).

All the experts surveyed from import companies confirmed that national retailers demand private standards (GlobalGAP, IFS, BRC, etc.) as the basic precondition for supply; thus, these standards have become quasi-mandatory for producers in developing and transition countries (Meuwissen et al. 2003). In addition to these private standards, which ensure quality and traceability, producers must comply with the MRLs set by the European Union and other food law regulations. According to the importers interviewed, the requirements stemming from these established public standards and the limitations regarding some pesticide residues are quite easy for producers to fulfil: "[The] … governmental standards everybody may fulfil; there are no problems. Problems tend to occur with the retailer specifications" (Importer 4). In contrast, the very stringent requirements of German food retailers relating to pesticide residues are regarded as particularly problematic. For delivery to German food retailers, importers focus on the traceability and monitoring of quality criteria. The enforcement of strict, specific requirements has made imports to the German food market substantially more difficult. However, for producers and suppliers from exporting countries who want to sell their fruits in Germany, there is no way round them.

Apart from general perceptions of private standards—especially MRLs—as entry barriers to fruit trade with the EU market, experts are critical of certification systems, with some raising doubts about the relevance of a certificate. "It is not a sufficient criterion to have a GlobalGAP certification to make sure everything runs as we like and is required by the German food retailers" (Importer 8). Requirements in the field of certifications have to be met; nevertheless, they do not reliably guarantee that German consumers' and retailers' expectations will be met. To avoid penalties by German food retailers, importers set their own specific standards for their suppliers.

Another issue from the importers' perspective is having to comply with a veritable certification jungle of numerous different quality requirements: "In general, however, there are no difficulties. There are no problems with GlobalGAP, in any case; the problems tend to be about the multiplication of certifications. There are so many and everybody is developing another one" (Importer 12). "From my point of view, the problem for producers is that they have so many standards which overlap each other. They have British certifications, US certifications and other specific ones …" (Importer 4). As the interviews show, experts often face these complications due to a lack of integration of the various private standards. Thus, producers and suppliers of fresh fruit have to separately meet the requirements of the market in the EU, the United States, and specific countries like Great Britain or Germany as well as special standards defined by individual food retailers.

The importers considered retailer policy on pesticides a reaction to the headline-grabbing presentation of fruit and vegetables contaminated with pesticides by NGOs, whether the story is true or not. Several years ago, some NGOs held promotional campaigns publicizing the hazardousness of fresh fruit. As a result, consumers have become increasingly sceptical. "These people had a strong influence, and this has led to a broad range of these special requirements in the EU and in German food retail" (Importer 2).

After the NGO campaigns, retailers established lower pesticide residue levels to avoid negative publicity and losing consumers and consumer trust. "[There] … were problems, and then the only theme was 'food safety'. Every discount store started to make its own food safety standard. These standards [especially maximum residue levels] go far beyond the standards of the European Union" (Importer 3). "If there are thresholds [i.e., maximum residue levels] established by the EU, this is binding throughout most EU countries. Only [retailers in] Germany and a few other countries (e.g., the UK) undermine these standards such as [X: Name of the discounter is known to the authors] requiring thresholds which are 33% below EU legislation and [X: Name of the supermarket is known to the authors] requiring thresholds, which are 5% below. However, Germany-wide, no consistent standard exists; everyone does his own thing" (Importer 1).

At the same time, average retail prices have not increased in the same way as requirements for producers. As a result, it has become more and more difficult for producers to deliver fruits that meet the requirements and, at the same time, ensure the profitability of their businesses. "It is getting harder and harder to meet the standards. … But it costs a lot of money and requires a lot of time. The question is whether they will overshoot the target" (Importer 4). However, importers state that it is difficult to reverse these strict MRL requirements, even if they have since come to be seen as—at least to some extent—too excessive. "But it is difficult for a food retailer to break out of this role and say, 'Instead of 70%, we now need only 80% or 100% [of the European standard].' [If this happens,] … there are concerns about dumping at the expense of food safety again" (Importer 8).

Importers perceive the German food retail sector as price- and quality-dominated, so that producers have to comply with these standards despite the low prices. Low customer prices in conjunction with stagnating or declining fruit consumption and rising quality requirements in Germany are, according to the experts in our importer sample, the main factors making Germany less attractive as a destination market for suppliers in the international fruit trade: "It will no longer be easy for us to enthuse producers. We can no longer say, 'Come to us; we have the best prices, and you will have a sufficient income. This is seen more and more critically today. We are no longer in a position to pay such prices" (Importer 4).

At the same time, importers are concerned about the rising advantages of newly emerging growth markets for exporting countries, which extend their existing trade relations and open new sales channels. "We [i.e., Germany] have achieved a consumption level; despite all the assurances that people would or should eat more fresh fruit and vegetables, it does not necessarily happen. There are other countries, such as Russia or China, which are definitely increasing their imports [of fresh fruits], at least in part" (Importer 4). Such new growth markets as China, India, and Russia are experiencing an increase in per capita food consumption and purchasing power to buy high value food such as fresh fruits. "There is a great appetite for fresh

fruit and vegetables in these countries, with a stronger tendency than we have in Germany. In this respect, competition is growing there" (Importer 8).

Therefore, most experts argue that the international fruit trade flows are changing at the expense of European markets. In addition to the Asian and Russian markets, domestic markets in the exporting countries are also gaining relevance due to the increasing income of many consumers, shorter distances to end markets, and, thus, easier logistics and less stringent quality standards. Moreover, producers and exporters usually do not have to fear complaints and sanctions in their home markets. "In the meantime producers have got several alternatives, and that is a very simple problem that we need to address. This means simply that we have strong competition" (Importer 4). The majority of the importers agree that there is growing competition on the world market, especially for Germany, and are anxious about the availability of the fresh fruit quantities needed for Western Europe and Germany. "Therefore, Europe will play a minor role because growth—population size—is increasing in other parts of the world, but no longer in Europe" (Importer 13). The availability of fresh fruit all year long can no longer be taken for granted, and a supply shortage is very likely to occur in future.

Exporters and Producers

The majority of the producers and exporters interviewed describe themselves as open to all markets in principle and constantly searching for new sales opportunities for their fruits. They confirm that Europe is one of their traditional main target markets although it has become increasingly less important. Most of the respondents state that they have reduced their companies' export shares to the European market during the last years. "Five years ago, our company sold 70% of its fruit to the European market; today it is around 40%" (Exporter 15). The exporters do not expect Europe to be a growing market for their business. "In future, the focus will be less on Europe …. There already exist other markets that pay the same or higher prices with less risk. Therefore, I think that Europe … for us as exporters of fresh fruits will lose its importance" (Exporter 11).

Lower prices and stagnating consumption and demand are minimizing the advantages of the European market for exporters. "In Western Europe, consumption level has already reached its limit and demand is not increasing any further" (Exporter 1). Concurrently, it was highlighted in the interviews, that the strictness of product requirements have been constantly increasing on European markets for fresh fruit: "Quality certificates are already a precondition for delivering to our target markets" (Exporter 3).

The experts see Western Europe as one of the most challenging markets, which require a lot of quality certificates. They particularly expect Germany to be "a market that is not willing to pay but has a high demand for various certificates" (Exporter 11). Private standards such as the GlobalGAP certification are key factors in entering the European market and sometimes valued more highly by customers than the "real quality of the fruit" (Exporter 7). This certification is widespread among producers and exporters in the exporting countries due to their long experience and the adaptation of their production processes to market requirements. One of the exporters even claims that "If there is an important certification in the world, it is the GlobalGAP certification" (Exporter 1). GlobalGAP certification is mainly positively assessed by the

interviewees since it provides compliance with the minimum standards and helps the exporting companies organize their business processes.

Standards are considered more as a means of facilitating trade, even with other, non-European markets, and as a basis for the adoption of further standards. Therefore, most private food standards and the European legislation are no longer impairing factors for exporters' business on the European market. In contrast, it is the low MRLs fixed by retailing companies that have become increasingly stringent and that pose a real challenge. The German market in particular is characterized by the experts as price driven, sophisticated "and focused on the topic of application of pesticides" (Exporter 11). The MRLs are more restrictive, and the experts observe "growing pressure on reducing pesticides in food" (Exporter 4) because most of German supermarkets "accept only a third of the official maximum level" (Exporter 4). The requirements on the German market exceed the level of GlobalGAP; as a result, this certification no longer safeguards entrance to and success on the European market. "German supermarkets have their own rules, and they are very hard to comply with, and they do not have a solid scientific basis" (Exporter 19). "Even slight deviations in the measured values lead to the return of goods. This makes export to Europe more difficult" (Exporter 12). In this regard, these MRLs are viewed with incomprehension by producers and exporters in exporting countries.

Private Standards set by supermarkets lower supplier preferences for the European market. Nevertheless, the respondents expect that quality standard requirements will continue to increase in Europe as well as on other international markets. "Standards concerning social and environmental aspects are increasingly important in the developed markets" (Exporter 16). Some respondents explained that, on the one hand, there is a shortage of necessary resources, such as skilled labour, and, on the other hand, the monetary compensation and technical support needed to meet the requirements of various standards is lacking. These circumstances make certification according to the many different standards difficult, especially for small producers: "If every market sets its own and different standards, it will be more expensive and difficult for us" (Exporter 11). Furthermore, the experts see "very few opportunities" (Exporter 1) for improving fruit characteristics and production processes.

Market-specific production is diminished by customers' low willingness to pay in Europe in general and in Germany in particular; thus, producers and exporters suffer from a lack of profitability. The very "specific requirements" (Exporter 8) of this market are sometimes perceived as trade barriers by the exporters, which is not yet the case with other international growth markets. "In case of strongly rising requirements, the quantities that will be sent to Europe will drop" (Exporter 20); "this would be a reason to refrain from shipping goods to Europe" (Exporter 16).

Therefore, the European market is progressively losing its attractiveness for producers and exporters. In response, they are working to diversify their destination markets and become more and more independent from one single market or region or even Europe as a whole. Thus "producers try to find alternative target markets" (Exporter 12) that accept "fruits with lower standards at the same price level" (Exporter 18). The findings suggest that the quality requirements on emerging markets are different from those on developed markets. They are less stringent with regard to MRLs but not lower with regard to the aesthetics of the fresh fruits and

phytosanitary aspects. For example, "Asia is an attractive market, but … there are trade barriers as well" (Exporter 5). Many interviewees stated that Asian markets pay higher prices, but the demand for fruit with a perfect external appearance on these markets potentially increases the complaint rate and is perceived as a high risk by exporters. Moreover, unreliable payment practices mean that entering and delivering to new markets is still connected with "economic and political risks" (Exporter 1).

Nevertheless "developing countries are less oriented to certificates" (Exporter 11) which is still an advantage for exporters. The experts intend to adapt their sales and strategies used for the distribution of risk. "Today the supply for certain fruits is lower than the demand" (Exporter 21); therefore, it is easy to find new customers, and the European market is losing its attractiveness for producers and exporters. It is also lowing its advantages regarding high payment security, stable networks of trade relationships and efficient infrastructure in favour of the newly emerging growth markets in developing and transition countries such as China and India. Even if the participants expect that it will take some time to create a new, successful market position in these growing markets, they noted that the economic and political situation is becoming more stable. Thus, the experts see further potential for extending their business to these new growth markets due to lower quality standards, rising demand and a higher willingness to pay for fresh fruits.

According to the experts, Europe will nonetheless stay a major pillar as a target market for fresh fruits in the short term: "Europe receives a wide range of different fruits" (Exporter 16), therefore "we would definitely not stop delivering the European market because we have been in this market for a long time and we need to maintain it" (Exporter 7) at least "for certain varieties and sizes" (Exporter 16). But with the increasing complexity of European market requirements concerning fruit quality, it will lose its importance in the long term as producers and exporters move their businesses in a different direction and become increasingly independent of the European market.

Discussion and Conclusions

This study shows that the current changes in private food safety standards represent a significant challenge for companies in the international fruit trade. The assumption based on the contingency approach that a mismatch between the changed market situation (emergence of new growth markets) and the strict and complex private standards prevailing on the EU—and especially the German—fruit market (degree of formalization as part of the organizational structure) is leading to procurement issues for importers in the European Union (decreasing performance, i.e., decreasing ability to supply required quantities and qualities at any time) (Lawrence and Lorsch 1967) can be confirmed by the results of the expert interviews conducted in this study. Thus, this study parallels earlier findings on changing international trade patterns (USDA 2014) and reflects the dynamic assumptions of the contingency approach (Kieser and Ebers 2014).

Most experts on both the import and the export side agree that the reason for procurement issues is not the problem of complying with specific private standards such as GlobalGAP, but the growing flood of private standards and, especially, the extremely low MRLs for pesticides

required by German retailers. As a result of various food scandals and public pressure, these MRLs are set far below the EU public regulations as part of the retailers' commercial strategies (Soon and Baines 2013; Willems et al. 2005; Henson and Reardon 2005). Our results confirm that the "jungle" of very stringent private food standards in combination with stagnating prices and demand on the German market is decreasing its attractiveness and increasing the attractiveness of alternative export markets in the Southern Hemisphere. In consequence, trade volumes are shifting from developed countries, such as the EU, to countries with higher MRL requirements, such as some Asian countries. Hence, experts expect procurement issues in Germany, as an example of an industrialized importing country (Melo et al. 2013; Diop and Jaffee 2005). Standards do not necessarily impede trade as earlier studies have described (Masood 2014; Maertens and Swinnen 2009; Jaffee and Henson 2005). Furthermore, this study supports the findings of earlier studies on the peculiarities stemming from a lack of harmonization among food safety standards (Müller et al. 2013; Mergenthaler et al. 2009). However, as the experts revealed, the new growth markets with their higher MRLs also have their disadvantages, such as less developed trading relationships and infrastructures. Therefore, suppliers from developing and transition countries are adjusting their export volumes slowly to minimize risk and continue to deliver a large share of their fresh fruit products to the EU where they have established trading relationships with secured payments. As a result, although the shift in trade flows is not yet visible in the trade data, that is expected to change in the near future as suppliers continue to adapt to changes in market characteristics.

Due to these time lags in trade shifts and the qualitative nature of the study, the influences of strict quality requirements on changes in international trade flows cannot yet be quantified. Furthermore, the study provides a snapshot of current developments and does not take into account longer term adaptations such as potential future price increases in EU countries such as Germany, where low prices currently prevail despite the demand for low MRLs. Thus, results have to be considered as tendencies and interpreted tentatively. However, the complexity of context-based details resulting from the qualitative data sampling provide a basis for rethinking the actual role of private standards in the international fruit trade (Harrison and Ng 2011). Furthermore, our findings provide insights into the processes underlying the emergence of stricter food safety standards and the role of nongovernmental organizations in this context. Although retailers are often considered the "new masters of the food chain" (Flynn and Marsden 1992: 90), NGOs also play a decisive role in determining the organization of food supply chains. In the end, the organization of food supply chains can be conceptualized as the outcome of a dense nexus of private and public action on various levels, both national and international (Harrison et al. 1997).

The purpose of our study was to contribute to a better understanding and a radical rethinking of the role of private standards in international fresh fruit chains. Our results have manifold managerial, political and research implications. Management implications can be addressed to companies in the industrialized importing countries, which must avoid setting MRLs even further below those of the EU and liberalize their purchasing and price negotiations to avoid procurement problems (or higher prices, which might be difficult to transmit to consumers) in the middle and long run. At the same time, politicians, companies, standard setters and researchers should try to more thoroughly harmonize food safety standards, especially the MRLs for pesticides. In doing so, it is likely that people around the world will benefit from the same

degree of food safety standards, since suppliers in developing and transition countries could meet the requirements and adopt the standards more easily. As a side effect, the pool of suppliers will enlarge since the harmonization process will lead to decreasing certification costs. However, even if the harmonization of private food standards is difficult to achieve—since European and global retailers may lose their power to control private standards—GlobalGAP has initiated an attempt towards harmonization: the so-called Declaration of Abu Dhabi, which involves standard setters, retailers, researchers and others and should be promoted (Soon and Baines 2013; GlobalGAP 2015). Additionally, politicians should also actively support the entire food chain, but especially the fresh fruit sector in regaining credibility by educating consumers regarding the sufficient evaluation of food safety in order to increase consumer acceptance of natural product characteristics and certain MRLs. Furthermore, import and trade regulations should be evaluated regularly with regard to their appropriateness and effectivity based on the latest research findings. To provide this base, researchers should rethink their common beliefs about private standards functioning as either barriers to trade or door openers for industrialized markets for developing and transition exporting countries (Melo et al. 2013; Maertens and Swinnen 2009; Jongwanich 2009; Jaffee and Henson 2005; Reardon et al. 1999). Instead, they should focus on the new role of standards as contributing to the increasing exclusion of demanding industrialized markets from international trade flows with NTAE or as triggering price increases. Further research on the impact of private standards and retailer requirements on trade flows from an importing country's perspective and large-scale quantitative analyses of import level changes are needed. To that end, databases must be augmented in order to obtain complete, comparable and reliable data for such studies. However, to realize these implications, all actors in the food sectors in industrialized countries must descend from their high horse of 'market power' and come to grips with growing international competition.

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