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Private standards

-leveling the playing field for global competition in the food supply chain?

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FOREWORD

As the world is becoming more and more globalized, domestic policy choices increasingly have implications for our relations with the surrounding world. One such aspect is how the competitiveness of domestic producers is affected when they face stricter legislation than their foreign competitors. A good can be said to embody certain process characteristics derived from the chosen production method, like being produced in an environmentally friendly way or with respect to labor rights. Such process characteristics, however, often come at a cost for the producer. Hence, concerns have been raised about the difficulties of defending domestic policy choices that lead to higher production costs and thereby reduce competitiveness. In the EU, the debate focuses on the risk of increased import competition following higher agricultural standards, motivated by environmental protection, animal welfare etc.

It may seem an obvious case – of course competition should be fair – but the issue is more complicated than it may seem at first sight. Traditionally, national legislation determines the rules a farmer must follow. However, in order to enhance food safety or promote good agricultural practice, retailers and food processing firms are increasingly demanding that suppliers comply with private standards. As both domestic and foreign producers may be covered by these requirements, the question is: Does the increasing use of private standards mean that the competitive conditions on global markets actually are more alike than differences in legislation between countries would suggest?

This report complements *Societal concerns – Domestic policy choice and international competitiveness (AgriFood Report 2011:2)* which empirically tests if competitiveness and trade flows within the EU are affected by differences in regulations to protect animal welfare. It also analyzes if preferential treatment, like import restrictions, should be allowed to protect goods produced in a way that reflects a society's societal concerns. In this report, the focus is on private standards and the extent to which such market requirements result in more equal conditions for domestic and foreign producers.

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Lund, April 2013

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Sammanfattning

Privata standarder inom livsmedelssektorn innehåller krav på hur jordbruks- och livsmedelsproduktionen ska utformas för att möta vissa kriterier. Denna studie fokuserar i huvudsak på privata så kallade business-to-business-standarder (B2B), som är verksamma mellan aktörer i livsmedelskedjan. Om detaljhandel och förädlingsföretag använder privata business-to-business-standarder som ett krav på leverantörer i stor omfattning kan de bli *de facto* obligatoriska, alltså tvingande trots att de inte är en del av lagstiftningen.

Nationell lagstiftning som rör produktionsmetoder, till exempel med avseende på djurvälfärd och miljöhänsyn, omfattar enbart inhemsk produktion. Privata standarder kan dock användas för att ställa sådana krav också på import. Om så är fallet, och om de används som de facto-krav för leverantörer, kan privata standarder harmonisera kraven på produktionsvillkor mellan länder och minska skillnader i konkurrenskraft som beror på skillnader i nationell lagstiftning.

I denna rapport undersöks huruvida privata standarder därmed skapar mer likvärdiga förutsättningar för globalt konkurrerande producenter i olika länder. Resultaten visar att privata standarder innehåller krav på både säkra livsmedel och djurvälfärd, miljöhänsyn och arbetsvillkor, men att kraven ställs på olika sätt och av olika anledningar.

Eftersom säkra livsmedel är viktigt för hela branschens rykte och inte bara för ett enskilt företags förtroende, har företag incitament att samarbeta för att säkerställa att maten som säljs är säker att konsumera. Företags krav på säkra livsmedel är därför relativt harmoniserade på internationell nivå. Detta innebär att de har potential att utjämna kraven som ställs på producenter i olika länder. Information om hur företagen använder privata standarder är knapphändig, så denna studie innehåller fallstudier av två detaljhandelskedjor och ett förädlingsföretag i den svenska livsmedelssektorn. Dessa visar att tredjepartscertifiering av en privat standard för säkra livsmedel i regel är ett krav som leverantörer måste uppfylla. Sammanta-

get indikerar detta att privata standarder bidrar till en harmonisering av kraven på säkra livsmedel i olika länder.

Privata standarders krav på produktionsmetoder är mer heterogena, eftersom icke-harmoniserade privata standarder fungerar som ett profileringsverktyg och marknadsföringsinstrument för det enskilda företaget. Det finns exempel på privata standarder vars krav är hårdare än motsvarande krav inom lagstiftningen i produktionslandet. Trots att endast ett litet antal företag inkluderas i fallstudierna visar dessa att privata standarder som ställer krav på produktionsmetoder skiljer sig åt från företag till företag. För att kunna avgöra om resultaten är kännetecknande för livsmedelssektorn generellt behövs mer forskning på företagsnivå.

Executive summary

Private standards within the food sector contain requirements on how production should be arranged to meet a number of specified criteria. This study focuses mainly on private business-to-business standards, which operate among actors in the food supply chain and are not communicated to consumers through product labeling. If private business-to-business standards are extensively used by retailers and food processors as requirements imposed on suppliers, they can become de facto mandatory for producers that want to sell their products, although they are not part of legislation.

Whereas national legislation on production methods, for example with respect to animal welfare and environmental protection, only applies to domestic production, private standards can make such demands on imports as well. If they do and if they are de facto mandatory for both domestic producers and producers in other countries, private standards can harmonize production conditions across countries and reduce differences in international competitiveness that arise from differences in national legislations on production methods.

This report investigates whether private standards thereby level the playing field for global competition in the food supply chain. The results show that private standards contain requirements for food safety and animal welfare, environmental protection and labor conditions, and that the requirements are imposed in different ways and for different reasons.

Since food scares damage the reputation of the whole industry and not only the confidence in an individual company, firms benefit from cooperating to achieve food safety and, as a result, requirements for food safety are relatively harmonized at the international level. This implies that they have the potential to reduce differences in the requirements imposed on producers in different countries. Information on how private standards are used by individual firms is scarce. This study undertakes case studies with two retailers and one food processing company in the Swedish food supply chain, and shows that third-party certification to a

private standard for food safety in general is a requirement for suppliers. The overall indication is that private standards contribute to harmonizing requirements for food safety across countries.

Private standards for production methods are more heterogenic, since maintaining non-harmonized private standards within these areas is an important profiling tool for the individual firm. There exist examples of private standards that impose more stringent requirements than the corresponding legal requirements in the country of production. However, despite the fact that only a small number of firms are included as case studies, it is shown that the contents of private standards for production methods differ significantly across firms. More research on the firm level is therefore needed to be able to judge the extent to which the findings hold for the food supply chain in general.

1 Introduction

In the globalized world of today, goods are traded internationally and producers compete on the global market, but production takes place according to the domestic legislation of each country. Differences in national legislations can therefore affect the global competitiveness of an industry, and stringent EU regulations for example on animal welfare and environmental protection are often said to result in a cost disadvantage for domestic agricultural production in the EU.[1]

In recent years, powerful retailers and food processors have started to impose requirements on downstream suppliers through *private standards*. Private standards are used to impose requirements on both domestic producers and producers in other countries. Although they are not part of legislation, private standards can become *de facto mandatory* for suppliers that want to sell their products if they are extensively used by retailers and food processors.

Private standards initially emerged as a way for retailers and food processors to specify how production should take place to ensure that the produced foodstuff is safe for consumption. An important question is whether they have expanded and now cover additional areas. Regarding food safety, an importing country can set its own public standards and impose those standards on imports, according to the WTO Agreement on the Application of Sanitary and Phytosanitary Measures (SPS Agreement). However, such requirements cannot in general be made for production methods; for instance, a country cannot require that imported eggs are produced in an animal-friendly way. Since private standards are used by private actors and not by states, they are not bound by such trade rules. Hence, whereas national legislation on production methods only applies to domestic production, private standards used by private firms are free to make such requirements for imports as well. So what requirements do producers face *in practice*? Do private standards contain requirements for production methods, for example with respect to animal welfare and en-

[1] See for example Grethe (2007) and Brouwer et al. (2000).

vironmental protection? And can the use of private standards thereby reduce differences in production conditions arising from differing national legislations, and level the playing field for global competition in the food supply chain?

The aim of this report is to investigate whether private standards level the playing field for global competition by harmonizing the requirements of legislation that affect production conditions. An example of complete harmonization would be if a retailer demand foreign suppliers to comply with a private standard that requires the same level of, for example, animal welfare in production as do national legislation in the importing country. Harmonization could also be partial, if the requirements are higher than stipulated by public regulation in the exporting country but lower than demands imposed by legislation in the importing country.

To be able to answer this question, the issue of private standards must be analyzed from a number of viewpoints. The investigation must first identify the private standards that are in use, how these standards work and what the requirements in the standards are. There exist a large number of private standards, and it is thus important to compare their contents to see whether they differ or are similar. If the most commonly used private standards are equivalent in their requirements (harmonized) it becomes easier to judge whether private standards in general level the playing field between producers in different countries.

Whether private standards harmonize demands on production conditions crucially depends on the stringency of their requirements compared to public regulations in the importing country. The analysis must therefore consider how private standards and public regulations interact. Private standards are often said to be more stringent than public regulations.[2] However, there exist few detailed comparisons of the requirements made in private standards and public regulations, and it is therefore difficult to judge how and within which areas private standards go beyond public regulations. This study therefore pays special attention to an examination of the contents of private standards and the stringency of requirements in

[2] Se for example Henson and Humphrey (2009)

private standards compared to public regulations. Due to the complexity of the topic, the investigation is delimited to a comparison between rules on animal welfare in private standards and public regulations in the EU and Sweden.

Whether private standards can harmonize production conditions further depends on how widely they are used. Previous research has focused on performing surveys in which retailers express their opinion about private standards, but more detailed information on how retailers and food processors use private standards is scarce. To fill this knowledge gap, this study is supplemented by case studies on the use of private standards by three companies in the Swedish food supply chain.

The study thus aims at answering the following questions:

- What private standards are used in the Swedish food supply chain?
- Do private standards expand beyond the issue of food safety to include aspects relating to production methods, such as animal welfare and environmental protection?
- How do private standards relate to national legislation?
- Does the use of private standards result in a harmonization of production conditions in different countries?

Throughout the report, focus is primarily on the role of private standards in the Swedish food supply chain, but the international characteristics of the research questions imply that the results are also of interest from European and international perspectives.

Chapter 2 of the report presents some background information for the study. What are standards and why have private standards emerged in the food supply chain? Chapter 3 investigates the contents of the dominating private standards in the Swedish food supply chain, and chapter 4 digs deeper into this issue by comparing private standard requirements and public regulations, with a special focus on animal welfare. How does the stringency of private standard requirements for animal welfare compare to the corresponding public regulations in Sweden and the EU?

Chapter 5 considers how private standards are used in the food supply chain. For private standards to have a harmonizing impact on production conditions, they must be extensively used on the market. Through a review of previous research and case studies of three companies in the Swedish food supply chain, we examine whether retailers and food processors require all suppliers to comply with a private standard. During the research process, it was found that a straightforward comparison of national legislation and private standards is rather difficult to make, as differences can occur in many dimensions and for different reasons. Chapter 6 therefore discusses the relationship between, and roles of, public and private standards and provides conclusions on the role of private standards in the food supply chain.

2 Background

Private food safety and quality standards are becoming increasingly prominent in the food supply chain. Although food safety used to be the main concern, other quality characteristics are gaining in importance. This chapter briefly discusses the concept of standards and why private standards have emerged in the food sector. A classification of private standards in the food sector is also provided. Of crucial importance for the analysis is the fact that private standards can have a harmonizing impact on production conditions in different countries, while legislation cannot. Why is this so? This issue is discussed in the final section of the chapter.

2.1 Food – a good with special characteristics

A special feature of food products is that some of their quality and safety characteristics cannot be determined by visual inspection or consumption. For example, even after consumption, a consumer cannot determine whether a food product contains toxic residues with a long-term negative impact on the consumer´s health. Food is therefore said to be a credence good, which means that information on some of its characteristics is not accessible to the consumer. The willingness of the consumer to buy the good thus relies on the consumer´s credence in the seller.

The need for public regulation of food safety

There is a risk that this lack of information leads to excess consumption of food products with unhealthy contents, which can have severe consequences for the individual as well as the societal level. An individual afflicted with a food-borne disease suffers intangible costs, whereas society suffers productivity losses. The costs increase in size with the number of afflicted, and to avoid such negative external effects, it is in the interest of society as a whole to take measures against the occurrence and spread of food-borne diseases, toxic elements in food, etc. On the national level, this is done through national legislation.[3]

[3] Smith (2009)

Further, in the globalized world of today, food products are traded internationally, and food-related health risks do not adhere to national borders. This implies that countries also want to impose requirements on the food safety of imports. Since such measures might be used to protect domestic producers from import competition, there is also a need to agree on how requirements for food safety can be imposed without being misused as disguised protectionism. Such rules exist within the Sanitary and Phytosanitary (SPS) Agreement of the World Trade Organization (WTO), which specifies rules on how countries can impose necessary requirements on imports to maintain the health of humans, animals and plants. The measures taken should be chosen so as not to distort trade more than necessary, and have to adhere to certain principles, such as being based on scientific evidence and risk assessment.[4]

Private firms´ increasing responsibility for food safety

Despite public regulations, the food sector has experienced outbreaks of a number of food safety hazards, such as the bovine spongiform encephalopathy (BSE), also called mad cow disease, and the findings of dioxin in animal feed. This has led to increased concern among consumers about the safety of food and decreased confidence in existing control systems. To meet these concerns, public regulations have become both stricter and more extensive.

One aspect of the more rigorous public regulations is an increased responsibility for ensuring food safety assigned to the private sector. On the EU level, this is explicitly expressed in the Council Regulation (EC) No 178/2002, which states that the food business operator is the party primarily responsible for ensuring food safety. Hence, to meet the more demanding requirements, private actors in the food supply chain needed to develop tools to control production and take preventive measures to hinder further outbreaks of food-borne diseases. One way is to use private food safety standards that specify how production should take place to ensure food safety.[5]

[4] WTO (2010)
[5] Henson (2006), Henson and Humphrey (2009), Henson and Humphrey (2010) and Council Regulation (EC) No 178/2002.

Public regulations have thus been an important driver behind private firms´ increasing use of private food safety standards. In fact, the shift in responsibilities between the public and the private sector has been further strengthened by the industry itself. Previously, processed products were traditionally labeled with the name of the food processing company, but the emergence of private labels, such as Tesco´s Nature´s Choice, Filiéres Qualité of Carrefour and ICA Basic and Garant on the Swedish market, has resulted in a closer connection between the retailer brand and the quality and safety of the product. To protect the reputation of the own firm, retailers have become increasingly interested in using private standards to control production of the foodstuff sold and marketed under their private label.[6]

At the same time, the liberalization of trade together with new innovations and technical solutions have made it possible to transport agri-food products over longer distances without quality losses. This has resulted in a globalization of the food supply chain, with larger geographical and cultural distances between the place of production and the place of consumption. Private food safety standards are then a way of specifying and controlling, from a distance, how production is performed.

Food safety has thus become a major and increasing concern for firms and consumers alike. More recently, firms and food consumers have in addition developed an interest in the *process* of producing the food they consume.

Consumer and firm interest in the agricultural production process

Agricultural production has potentially negative consequences for the environment, farm livestock, farmers themselves and their employees, which raises concerns for environmental protection, animal welfare and decent working and living conditions. Generally, these issues are the concerns of national legislation. For instance, the government corrects negative external effects like pollution, and encourages the provision of positive external effects like animal welfare through regulation, taxes or sub-

[6] FAO (2011)

sidies. Also, the government provides social security through safety nets and the tax regime. However, firms can have incentives to deviate from legislation and set own requirements through the use of private standards. For example, firms can use private standards as a way to increase profits by increasing the product quality compared to other firms on the market[7], or to pre-empt expected changes in public regulation to be able to implement the requirements in a cost-efficient way.[8]

Furthermore, as food consumers are increasingly interested in the production process, producers and distributors have started to include process requirements in private standards. The presence of such characteristics is often communicated to the consumer by a label, for example indicating the use of organic farming methods.

There are several reasons why consumers care about the production process. For example, they may feel responsible for broader values like environmental sustainability, and believe that their government is not doing enough to ensure sustainable agriculture. They may not trust governments in other countries to implement appropriate policies concerning labor conditions for example, and demand socially fair food. Besides, non-governmental organizations (NGOs) may influence consumers and raise awareness of harmful husbandry practices, for instance.

So, in short, the food supply chain is facing an increased responsibility and a need to prevent the outbreak of food-borne diseases, which are highly damaging to the reputation of the industry in general and the own firm in particular. Therefore, powerful retailers, wholesalers and food processors impose preventive requirements on downstream producers, in general by demanding that producers comply with a private food safety standard. Lately, private standards have begun to include additional concerns related to the production process. The next section further defines the concept of private standards.

[7] Lutz et al. (2000)
[8] McCluskey and Winfree (2009)

2.2 What are standards?

In general terms, standards can be defined as "explicitly formulated and explicitly decided rules".[9] However, this is a very broad definition and does not say much about how standards work or what they regulate. The following sections therefore provide a description and a classification of standards in the food sector.

Different types of standards

Standards differ depending on what they regulate. *Product standards* contain requirements for the final product characteristics, such as shape, size or nutritional content. *Process standards*, on the other hand, regulate the process through which the final product is produced. The requirements can refer to routines for ensuring food safety and can thus be used as a tool for fulfilling a product standard, such as meeting a maximum residue limit (MRL). They can also refer to other aspects of the production process, such as conditions for animal welfare, organic production practices or labor conditions.[10]

Food sector standards can be classified according to their origin and their degree of voluntariness. This classification results in four types of standards, as illustrated in table 1.

Table 1. Types of standards

Type \ Origin	Public	Private
Mandatory	Legislation	Legally-mandated private standards
Voluntary	Voluntary public standards	Voluntary private standards

Source: Henson and Humphrey (2010)

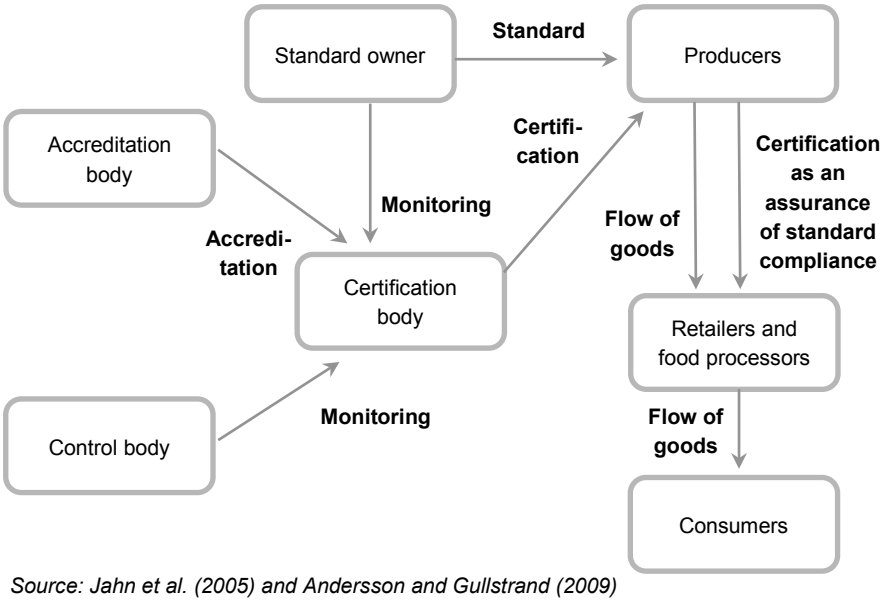
Public mandatory standards is another term for legislation. Hence, public mandatory standards are initiated by the public sector and must be followed by concerned parties. Non-compliance with public mandatory standards can result in legal sanctions. This feature distinguishes public

[9] Brunsson et al. (2012)
[10] Henson and Humphrey (2009) and Smith (2009)

mandatory standards from *public voluntary standards*. The latter also stem from public authorities, but compliance with this category of standards is voluntary. The EU standards and the associated labels of protected designation of origin and protected geographical indication are two examples of standards initiated by a public authority, but are not mandatory for all producers.[11] *Legally-mandated private standards* are initiated by the private sector but made mandatory through recognition from public authorities. These standards are initially voluntary, but become legally mandatory when they are incorporated into legislation. Finally, *voluntary private standards* are developed within the private sector and are voluntary, without any legal sanctions in case of non-compliance.[12]

Standards thus provide specified requirements for a product or process. Figure 1 illustrates the standard-setting and enforcement procedures for private standards while a description of the process is given in box 1.

Figure 1. Private standard-setting and standard enforcement



Source: Jahn et al. (2005) and Andersson and Gullstrand (2009)

[11] Smith (2009)
[12] Henson and Humphrey (2009) and Henson and Humphrey (2010)

Box 1: Description of the standard-setting and enforcement procedures

The specification of the exact requirements of the standard is made by the standard owner, which is a public authority in the case of public standards. For private standards, the standard owner can be, for example, a non-governmental organization or a coalition of retailers. To ensure that the standard is implemented in a correct way, there must be some form of control and punishment procedures in case of non-compliance. Which party is responsible for such procedures depends on the type of standard. Public standards are in general controlled and sanctioned by public authorities, whereas private standards are controlled and sanctioned by private auditors.

Compliance with the private standard is often controlled through third-party certification. This means that an independent certification body, which has no interest in the business transaction between the producer and the buyer, performs audits at the producer to control that the production conditions fulfill the requirements of the standard.

The certification body, in turn, is controlled by an accreditation body, which should ensure that the certification body issues certifications and performs controls in an appropriate way. The work of the certification body is also controlled by the standard owner and, in some cases, a special control body that monitors the working process of the certification body.

After a producer has been approved by a third-party certification body, the producer receives a certificate stating that the production fulfills the requirements of the standard. This certificate can be used as an assurance for the buyers of the products that the production complies with the requirements of the standard.

Compliance with a private voluntary standard can also be controlled through first- and second-party certification. First-party certification implies that the producer itself is the party performing controls. Second-party certification implies that controls are performed by a person connected to the buyer of the products, for example a retailer or a food processing company. The trustworthiness of these types of certifications is lower, though, since they are issued by parties that have vested interests.

Source: Hatanaka et al. (2005), Jahn et al. (2005) and Andersson and Gullstrand (2009).

2.3 Classification of private standards

This study focuses on voluntary private standards. These exist in large variety and for different reasons, with different aims and for different target groups. A useful classification of private standards is the division between business-to-consumer (B2C) standards and business-to-business (B2B) standards, which are addressed towards consumers and other businesses, respectively. Table 2 provides some examples of the different types of private standards.

Table 2. Classification of private standards in the food supply chain

Business-to-Consumer (B2C)		Business-to-Business (B2B)
Individual company standard/own brand	**Communicating a special feature/requirement**	
Nature´s Choice (Tesco)	MSC (Marine Stewardship Council)	BRC Global Food Standard
Filiéres Qualité (Carrefour)	Svenskt Sigill (Swedish Seal)	FSSC 22000
	Rainforest Alliance	GlobalG.A.P.
	Fairtrade	IFS

Source: Henson (2006), Henson and Humphrey (2009), Henson & Humphrey (2010), Smith (2009) and authors´ grouping.

Private business-to-consumer standards (B2C)

Private business-to-consumer standards can be divided into two categories. They can be associated with large retailers' private-label products, which are often certified according to the firm´s individual standards, or with standards aiming at highlighting certain characteristics of a product, for example organic production processes or fair labor conditions. Examples of business-to-consumer standards include Fairtrade, Rainforest Alliance and Marine Stewardship Council (MSC). Both types of business-to-consumer standards aim at differentiating the product from other, similar, products and at informing consumers about the claimed quality difference. To do so, the fulfillment of the standard requirements is communicated to the consumer through product labeling.

Private business-to-business standards (B2B)

The private business-to-business standards are the main focus of this report. These standards operate between actors in the food supply chain and are used to a large extent for the risk management of production. They are not visible to final consumers.

Private business-to-business standards belong to the category private voluntary standards. However, the distribution of market power within the supply chain is uneven, and both the retailing and the processing industries are characterized by concentration and market power. If large, powerful retailers and food processors make use of their market power and require producers to comply with a private standard if they want to sell their products, private business-to-business standards can become *de facto mandatory* requirements that producers have to comply with, although they are not legally binding. This situation can arise if retailers and food processors require suppliers to fulfill the requirements of a private standard in order to be accepted as deliverers of foodstuff. Thus, the term mandatory in this case does not refer to a legal requirement or a legally mandated use of the standard, but to the de facto compulsive feature that can arise if retailers and food processors use private standards so extensively that they become pre-requisites for suppliers that want to sell their products.[13]

Since private business-to-business standards are of interest in the rest of this report, the term private standard is used interchangeably in some cases with the term private business-to-business standard. In cases where a private business-to-consumer standard is referred to, it will be explicitly stated in the text.

Examples of private business-to-business standards include GlobalG.A.P. for primary production and BRC for food processing. Chapter 3 provides a more detailed presentation of some of the most widely used private standards within the food supply chain, and further investigates what requirements they contain. In this investigation, it is of special interest to consider whether private standards include requirements imposed on production methods. The reason is that if they do, they have the potential to reduce differences in competitiveness that arise due to differences in national legislations. But why can private standards have a harmonizing impact when legislation cannot? To answer this question, it is important to understand why differences in legislation arise and why legislation cannot be equalized across countries. This is the focus of the next section.

[13] See for example Smith (2009)

2.4 Private standards and societal concerns

Societal concerns are norms and values that are widely recognized within a society and commonly shared by its citizens. These often have an ethical dimension, and can for example relate to environmental protection, animal welfare and labor conditions. Societal concerns thereby often relate to aspects that influence how production of goods and services takes place, rather than to the characteristics of the final product. These concerns are widely accepted within a society, but can differ *across* societies, as is reflected in differences in national legislation on, for example, animal welfare and environmental protection.

As the world is becoming more globalized, trade in agri-food products is increasing and goods produced in different countries, under different societal concerns, are being transported and consumed across national borders.[14] If more stringent legal requirements result in higher costs, producers facing more stringent requirements will need to charge higher prices for their products. If consumers are willing to pay for the surplus values created by fulfilling the more stringent requirements, producers can charge a higher price by communicating the special feature through product labeling, for instance. However, if consumers are not willing to pay for the surplus values, producers facing legislation of different stringency compete with each other, but on different conditions. By this reasoning, differences in societal concerns, and thereby in national legislations, can result in an unlevel playing field for competition on the global market.

To reduce the competitive disadvantage of the domestic industry, countries with more stringent legislation might want to impose similar requirements on or ban imports produced under perceived unacceptable conditions. However, this is not allowed under the framework of the WTO and the SPS Agreement, which permits countries to impose requirements on the food safety of the final product, but not on the process and production methods in the exporting country.[15]

[14] Lamy (2004),Tothova (2009) and Andersson (2011)
[15] Jobbs (2010) and WTO 1

Private standards used by private actors are not covered by the WTO rules, and can therefore incorporate requirements for process and production methods, as well as issues not directly related to the health of animals, humans and plants.[16] Private standards can thus include aspects that are not traditionally contained in the agreements of the WTO, and can thereby potentially circumvent existing rules and regulations.

It becomes interesting, therefore, to consider the role of private standards within the discussion of societal concerns and differing legal requirements for the production process. What are the requirements in private business-to-business standards? Do they contain requirements related only to food safety, or do they also specify *how* production should take place, for example with respect to animal welfare and environmental protection? To investigate this issue is of importance in order to understand what requirements govern the food supply chain *in practice*. If retailers and food processors require foreign producers to comply with private business-to-business standards, and if the requirements of the standards are more stringent than the domestic legal requirements of the exporting countries, private standards can result in international harmonization of requirements on the production process. Does this mean that private standards in fact level the playing field for global competition in the food supply chain? Investigating this question is the main focus of the rest of this report.

[16] See Andersson and Gullstrand (2009) and Jobbs (2010) for a discussion of the coverage of private standards within the SPS and TBT agreements.

3 Contents of private standards in the food supply chain

It is argued above that private standards, in contrast to public regulations, can have a harmonizing impact on production conditions in different countries. To determine if this is the case, one first needs to investigate what requirements are contained in private standards. To what extent do private standards extend beyond the core issue of food safety and include requirements on production methods, such as animal welfare and labor conditions? Further, are the same requirements made in all private standards?

This chapter provides a general description of the dominant private standards in the Swedish food supply chain and continues with a brief comparison of the requirements for animal welfare, environmental protection and labor conditions in the most important private standards.

3.1 Description of private standards

Two private standards that are dominant in the food supply chain are briefly described below to give a feeling for their content and structure. Information on additional private standards of importance for the Swedish food supply chain can be found in the appendix and in connection to the case studies in chapter 4.

The GlobalG.A.P. Standard

GlobalG.A.P., previously EurepGAP, entails standards for agricultural production and was created on the initiative of European retailers. The aim is to act as a reference for standards aiming at Good Agricultural Practices (G.A.P) and at benchmarking existing rules to avoid duplication of standards. A number of national standards benchmarked to the GlobalG.A.P. standard are therefore recognized as equivalent to the GlobalG.A.P. standard.[17]

[17] GlobalG.A.P. 1, GlobalG.A.P. 2, GlobalG.A.P. 3 and GlobalG.A.P. 5.

The GlobalG.A.P. standards are divided into several blocks, which cover different types of production such as livestock, aquaculture and crops. Apart from food safety, requirements are made within a large variety of issues, including animal welfare, the health and safety of workers and waste and pollution management.[18]

Certification is performed by third-party certification bodies. Although the standards are widely used around the world, Europe dominates among the certified producers with 74 percent of all issued certificates. Nevertheless, the shares of Africa as well as North and South America in the total amount of issued certificates have increased during recent years. In 2011, more than 112 000 producers were certified to the GlobalG.A.P. standard. In Sweden, a total of 16 producers were certified in 2011, with ICA-handlarna and Lidl among the retail and food service members.[19]

BRC Global Standard for Food Safety

The food standards of the British Retail Consortium (BRC) were initially created primarily for use within the private-label industry in the United Kingdom, but have expanded and are now used by producers and retailers around the world.[20]

The BRC Global Standard for Food Safety contains requirements for food processing and packaging activities where open food is handled, processed or packed. Requirements for certification include the establishment of a food safety plan, a system for food safety and quality management and special requirements when it comes to product design, process controls and the health and hygiene of the personnel.[21] BRC also provides additional standards covering such things as storage and distribution, which can also be applied to food products.[22]

Certifications are issued by independent third-party certification bodies.[23] More than 30 large producers and retailers in Europe, including Carre-

[18] GlobalG.A.P. 6
[19] GlobalG.A.P. (2012a)
[20] BRC 1
[21] BRC 2
[22] BRC 6
[23] BRC 3

four, Kraft, Delmonte and Unilever, officially support and approve of the BRC Global Food Standard as an accepted strategy for ensuring food quality and food safety by their suppliers.[24] In February 2013, a total of 186 Swedish sites were certified to the BRC Global Standard for Food Safety.[25]

The multiplicity of private standards

That several different private standards exist in parallel can be beneficial for producers, since they can choose to implement the standard that best suits their individual production conditions. However, the multiplicity of standards can also be a problem, if different retailers and food processing companies prefer different private standards. In this case, a supplier may have to be certified according to several private standards if the requirements of the private standards are not comparable or generally accepted. Producers thus have to adapt production so that it satisfies the requirements of each private standard, which results in efficiency losses in production and additional costs for multiple audits.[26]

The multiplicity and differences of the existing private standards are thus not only costly for producers, but also complicate the study in this report. If a large number of private standards with differing contents and differing geographical coverage are used in the food supply chain, how can one determine if private standards in general level the playing field for competition?

Of interest for this study is therefore the existing international efforts that aim at reducing the heterogeneity of private standards and provide a classification of private standards that can be viewed as equivalent. If there are several private standards that are equivalent and widely used in a large number of countries, they will have the potential to reduce differences in production conditions across countries if they include requirements on the production process. To see whether this is the case, the following sections discuss these harmonization efforts in more detail and in-

[24] BRC 4
[25] BRC 5
[26] GFSI (2011a) and GFSI (2011b)

vestigate the requirements that are made within the harmonized private standards.

3.2 Harmonization of private standards

A multiplicity of private standards, which are not mutually accepted as equivalent, create costs not only for producers, but also for retailers that have to specify own requirements and perform own audits and inspections. To avoid duplication of costs and audits and increase the efficiency of production, global companies in the food supply chain have decided to work together towards mutual acceptance of existing private food safety standards to increase the efficiency and transparency in the food supply chain, and to ensure the delivery of safe food to consumers around the world. This was done through the Global Food Safety Initiative (GFSI) in 2000.

The GFSI is not a standard or certification scheme in itself, but compares and benchmarks existing standards for food safety against certain criteria agreed upon by the different parties in the supply chain in order to determine whether the compared standards can be classified as equivalent. The aim of the GFSI is not to create one single, global standard. Rather, competition among existing certification schemes is believed to enhance the quality of the services provided. Also, differences in requirements and strategies between firms as well as geographical and cultural aspects create a need for a variety of operating standards and certification schemes.[27]

Standards and certification schemes that have been benchmarked or are currently active in the benchmarking process by the GFSI are presented in table 3. These benchmarked standards include GlobalG.A.P., SQF 1000 and CanadaGAP for primary production, and BRC, FSSC 22000, IFS Food, GRMS and SQF 2000 for food processing and manufacturing. Primus GFS and the joint use of SQF 1000 and SQF 2000 are standards covering both primary production and processing/manufacturing of food products.[28]

[27] GFSI (2011a) and GFSI (2011b).
[28] The Global Aquaculture Alliance Seafood Processing Standard has also been submitted for benchmarking to the GFSI, but rather classifies as a B2C standard since it includes product labeling. In addition, two other private business-to-business standards, Synergy 22000 and Dutch HACCP, have been discussed in

Table 3. Private standards benchmarked by the GFSI

Primary production	Processing and manufacturing	Primary production and processing/manufacturing
GlobalG.A.P.	BRC	Primus GFS
SQF 1000	FSSC 22000	SQF 1000 and 2000 (jointly)
CanadaGAP	IFS Food	
	GRMS	
	SQF 2000	

Source: SGS (2011) and authors´ grouping.

Each of these standards fulfills the requirements by the GFSI as a minimum, but the exact rules and requests can vary between them.[29, 30] It is also important to note that the GFSI in some cases benchmarks parts of the private standards that consist of several modules or sub-scopes, such as both farming and processing. That a private standard is approved by the GFSI thus does not automatically imply that all parts of the standard are benchmarked.[31]

A similar harmonization initiative is the Global Social Compliance Programme (GSCP), which aims at promoting comparability and transparency and at harmonizing systems and standards on social and labour practices as well as site-specific environmental practices.[32] The GSCP thereby plays a role for social and environmental standards similar to the role of the GFSI for food safety standards. Company programs started to become benchmarked towards the GSCP in 2012.[33]

Whereas it is difficult to judge what impact the rather recent initiative GSCP has had thus far, it is clear that the GFSI-benchmarked standards are of great importance for the food supply chain. This is confirmed by the large number of retailers, such as ICA, Carrefour and Wal-Mart, that have agreed to support the GFSI benchmarking procedure and to recognize the GFSI-approved private standards as equivalent.[34] When the con-

relation to the benchmarking process of the GFSI, but have not been submitted for benchmarking to the sixth version of the GFSI Guidance Document. See GFSI 3 and BAP 1 for more information.
[29] SGS (2011)
[30] The standards are described in more detail above and in the appendix.
[31] See for example GFSI 5.
[32] GSCP 1
[33] By February, six systems had completed the Equivalence Process of partial or full benchmarking against the Reference Code of the GSCP (GSCP 2 and GSCP 3).
[34] GFSI 1, GFSI 2, GFSI 4, GFSI 5 and Andersson and Gullstrand (2009)

tents of private standards are investigated in more detail in the next section, it is therefore the private standards benchmarked by the GFSI that are in focus.

3.3 What are the contents of the private standards in the food supply chain?

The private standards that are approved by the GFSI are recognized as equivalent when it comes to ensuring food safety. Examples of requirements for the food safety-aspect of private standards include the requirement of a traceability system, routines for the withdrawal procedures in case food-safety hazards occur and requirements on risk assessment of potential hazards for the health and safety as well as hygiene of the staff.[35] Other examples of requirements include the maintenance of a food safety manual and the documentation of specifications for raw and packaging materials including additives and hazardous chemicals.[36] Private food safety standards are thus process standards specifying how production should take place, rather than product standards imposing requirements on the characteristics of the final product.

However, the GFSI-benchmarked private standards can still differ in other respects, such as differing requirements on the production process. A comparison of the private standards active in GFSI-benchmarking reveals that their coverage of requirements on animal welfare, environmental protection and labor conditions varies.[37] The private standards compared differ when it comes to their extensiveness in terms of the variety of aspects covered, the stringency of the requirements and the accepted time limit for the implementation of the necessary measures. The comparison is presented in table 4 and figure 2 below.

[35] GlobalG.A.P. (2012g)
[36] SQF (2012)
[37] The comparison is performed with the help of the database Standards Map and includes the private standards BRC Global Food Standard, CanadaGAP, FSSC 22000, GlobalG.A.P.,GRMS, IFS Food version 5, Primus GFS and SQF. The information was retrieved 2012-09-06.

Table 4. Non-food safety-issues covered by private standards

	BRC	CanadaGAP	FSSC	GRMS	GlobalG.A.P.	IFS	Primus	SQF
Environmental issues								
Soil protection		/			X		/	
Handling of chemicals	X	/	X		X		/	X
Water use, recycling and disposal	X	X			X	/		/
Waste disposal	X	/	/	/	/	/		X
Workers´ conditions								
Training, safety, access to facilities etc.	/	/	/	/	X	X	/	/
Welfare of workers, e.g. minimum wage, child labor, collective bargaining					*			*
Animals feeding, treatment and welfare	Not applicable	Not applicable	Not applicable	/	X	Not applicable	Not applicable	X

Source: authors´ comparison based on ITC (2012).
Key to abbreviations: Blank: very limited or no coverage. /: partly covered but only some aspects and/or less strict time requirements on implementation. X: relatively extensive coverage and/or more strict time requirements on implementation.
**GlobalG.A.P. includes requirements on worker welfare criteria in the GRASP (GLOBALG.A.P. Risk Assessment on Social Practice) module, which is a voluntary complement to GlobalG.A.P. certification, and SQF provides an Ethical Sourcing Certification as a voluntary supplement to SQF certification.*

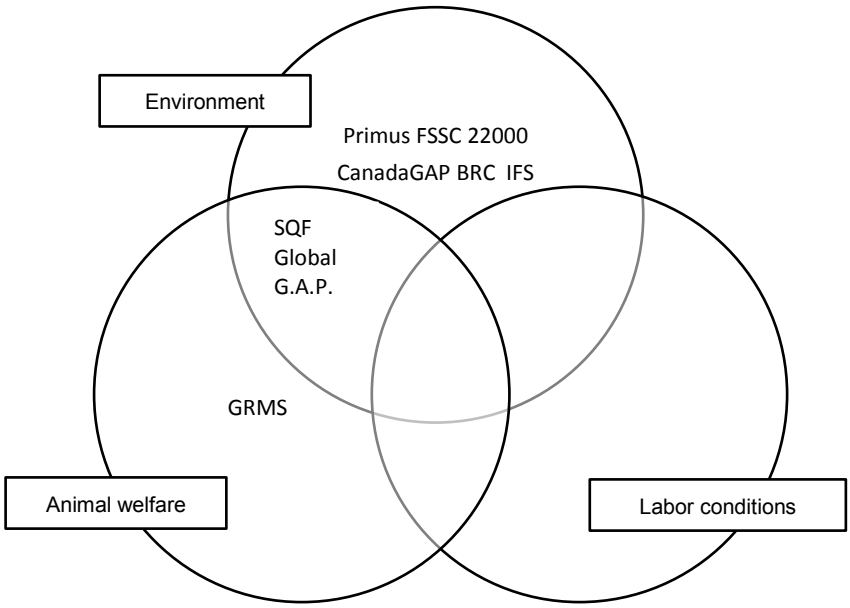
The standards differ considerably. The Foundation for Food Safety Certification standard (FSSC 22000), the Global Red Meat Standard (GRMS), Primus and the International Featured Standard Food (IFS) seem to cover a relatively small number of aspects. The CanadaGAP, GlobalG.A.P., and SQF standards include many of the investigated criteria.[38] Regarding the aspects considered for environmental issues, waste disposal is covered by almost all standards to some extent, whereas the coverage of requirements on soil protection, handling of chemicals and water use, recycling and disposal varies. Similarly, animal welfare-related aspects are covered by all three standards where such requirements are applicable, but the extensiveness differs. Labor conditions are regulated by some standards in terms of training, safety, access to sanitary facilities and similar requirements. However, none of the reviewed standards include requirements on aspects related to labor rights and labor welfare as stated for example in the international labor standards of the International Labour Organization (ILO), but GlobalG.A.P. and SQF provide additional standards focusing on social responsibility as a voluntary supplement.

The table above shows what criteria are used in the investigation of the contents of the standards. A more easily accessible overview is given in figure 2 below, where the private standards are approximately sorted according to the findings of the comparison.

Thus, the private standards dominating the food supply chain extend to some extent beyond the core issue of food safety, but the scope and extent to which non-food safety-related issues are covered vary. That the private standards cover different issues to different extents illustrates the complexity of the topic, and further indicates that it might be difficult to provide a clear-cut answer to the question of whether private standards level the playing field for competition by harmonizing production conditions in different countries. Production conditions might basically be harmonized to a different extent depending on the private standard that is used.

[38] See the appendix for more information on the FSSC 22000, GRMS, IFS, CanadaGAP, Primus and SQF standards.

Figure 2. Overview of aspects included in private standards



Source: authors´ grouping based on ITC (2012).

To give some indication of the scope for harmonization of production conditions across countries, the next section compares the stringency of the GlobalG.A.P. standard with the stringency of public regulations. The choice of focusing on the GlobalG.A.P. standard is motivated by GlobalG.A.P. being a standard commonly used on the market and by the results of the comparison performed above, where GlobalG.A.P. seems to be the most extensive standard when it comes to both the number of covered aspects and the time allowance for implementation.

4 The stringency of private standards compared to legislation

To be able to judge whether private standards harmonize production conditions across countries, it is important to investigate the stringency of their requirements compared to national legislation. If private standards set requirements corresponding to the level of the legal requirements of the importing country, demands on production conditions would be harmonized at the level of national legislation of this country.

The stringency of private standards compared to the corresponding legislation of the importing country is thus important for the research question in this study, but there exist few detailed comparisons assessing the stringency of private standards in comparison to public regulations.[39]

An important part of this study is therefore the comparison of the stringency of the requirements in private standards and public regulations. Due to the complexity of the topic, some delimitations are necessary. Since legislations differ between countries, also the relationship between private standards and public regulations varies across countries. The comparison therefore focuses on requirements on animal welfare in one private standard (GlobalG.A.P.) with the Swedish and EU legal requirements. This choice is motivated by the stringent legal requirements on animal welfare within the EU that are often said to result in a cost disadvantage for EU producers competing on the global market.[40]

4.1 Comparing GlobalG.A.P.- and public regulations on animal welfare

The following section aims at investigating how the animal welfare-requirements of the GlobalG.A.P. standard correspond to public regula-

[39] Some exceptions do exist, such as examples of private standards specifying more stringent requirements on maximum residue limits (MRLs) and pesticides, and a general overview of the contents of private business-to-business standards in relation to the recommended practices by Codex.[39] No discussion of animal welfare-requirements in private business-to-business standards compared to public regulations has been found during the research carried out for this report.

[40] See for example Grethe (2007) and Brouwer et al. (2000). Brouwer et al. (2000) provide a comparison of differences in rules for environmental protection and their impact on competitiveness.

tions on pig, poultry and cattle production. Similar comparisons of requirements on for example environmental protection would also be of interest, but is excluded with the motivation that animal welfare measures are believed to result in higher costs for producers.[41]

GlobalG.A.P. requirements are compared with Swedish and EU legislation to investigate whether non-Swedish/non-EU producers certified to the GlobalG.A.P. standard satisfy the same requirements as Swedish/EU producers must fulfill according to legislation. Since the comparison in the previous section indicates that GlobalG.A.P. is the most comprehensive private standard, the results of the comparison give an indication of the stringency of a comprehensive private standard in comparison to public regulations.[42] Other private standards can thus have other requirements.

What is animal welfare?

A comparison of animal welfare across different sets of rules first requires a definition of animal welfare. Of the several existing approaches to finding a definition, most are based on one or a combination of methods assessing the animal´s emotions, its biological function and its possibilities to natural behavior. A commonly used definition is the "Five Freedoms" provided by the Farm Animal Welfare Council in Great Britain, which implies that the welfare of an animal is dependent upon freedom i) from hunger and thirst, ii) from discomfort, iii) from pain, injury or disease, iv) to express normal behavior and v) from fear and distress.[43]

Different approaches exist on how to ensure that animal welfare is secured in production. One distinguishes between resource-, management- and animal-based measures, which focus on the living environment, the management of the animals on behalf of the caretaker and the animal´s

[41] Grethe (2007)
[42] The comparison below is based on the current rules for livestock production stated in the fourth version of the Integrated Farm Assurance, which currently governs GlobalG.A.P. rules on animal welfare. However, work is in progress to develop a complementary module that provides a standard explicitly incorporating animal welfare requirements that go beyond national legislation. (See GlobalG.A.P. 4) This means that the results reflect the stringency of GlobalG.A.P. requirements today, and that the situation might change in a few years' time.
[43] FAWC 1 and Hoffmann et al. (2010)

shape and actions, respectively. While it is difficult to base a comparison between public rules and private standards on the animal´s behavior, resource- and management-based rules are to a larger extent contained within legislation and can therefore form the basis for a comparison.[44]

The comparison in this section focuses on aspects which are relatively easy to compare and measure. The choice of which aspects to include also builds on previous studies assessing and comparing animal welfare requirements.[45] These include, among others, the maximum allowed stocking density, the size of pens and access to feed and water. Thereby, both the resource- and management perspectives are taken into account.

Aggravations affecting the comparison

Even if there is agreement on what is meant by the term animal welfare, it is important to note that animal welfare can be achieved in several ways. It can be achieved in differently designed production systems and through fulfilling different requirements, and there is no consensus on how to weigh the importance of different aspects to assess the resulting level of animal welfare.[46] When taking resource- and management measures as a starting point, there is thus a risk that other production systems are perceived as less animal welfare-friendly, although the difference rather lies in how animal welfare is achieved.

Research within the area of animal welfare has therefore changed from focusing on housing systems, pen size etc., and become more outcome-oriented. For a certain requirement to be considered as animal welfare-enhancing, there must be a clear connection to the well-being of the animal. For example, access to feed and the length of the feeding bin are important to prevent aggressive behavior within groups of animals, and the design of slatted floors affects the health of animals´ feet. This shift in focus from the resource-based to the outcome-based approach naturally makes it more difficult to assess animal welfare by looking at the requirements specified by legislation. However, legal requirements are de-

[44] Hoffmann et al. (2010)
[45] See for example Hoffmann et al. (2010), Andersson (2011) and Mul et al. (2010).
[46] Hoffmann et al. (2010) and telephone interview with Linda Keeling, Professor of Animal Welfare at the Swedish University of Agricultural Sciences, 2013-02-06.

signed to capture the connection to the animal´s well-being; in general they can therefore be considered as good indicators of animal welfare.[47]

The comparison of animal welfare-requirements is further complicated by the structure of the GlobalG.A.P. standard; its requirements consist of three different types: major musts, minor musts and recommendations. Whereas major musts have to be fulfilled to achieve GlobalG.A.P. certification, it is sufficient to comply with 95 percent of the applicable control points classified as minor musts. For recommended control points, there is no required number or percentage of compliance points. This means that although certain requirements are included in the GlobalG.A.P. standards, the extent to which they are compulsory for obtaining a certificate can vary. Furthermore, the requirement on compliance with 95 percent of the control points classified as minor musts implies that two farms certified according to the same GlobalG.A.P. standard can still fulfill partly differing requirements.

An additional aggravation is that the three sets of rules are not always directly comparable. GlobalG.A.P. certification within the sub-scope poultry is available for broiler production only[48], and requirements on conditions for layer hens in Swedish and EU legislation cannot be compared with the contents of GlobalG.A.P. On the other hand, EU rules do not cover hatcheries[49], which are regulated within GlobalG.A.P. Similarly, GlobalG.A.P. and Swedish legislation entail rules for cattle and dairy cows, whereas EU regulations impose requirements only on calves.[50] It should therefore be kept in mind that the comparison forms an indicative rather than comprehensive discussion about the stringency of animal welfare-requirements in private standards and public regulations. The description below of animal welfare-requirements for the separate animal groups thus highlights *some*, but not all, important differences between the compared sets of rules. Since, as described above, there is no common view on how different aspects of animal welfare can be com-

[47] Telephone interview with Linda Keeling, Professor of Animal Welfare at the Swedish University of Agricultural Sciences, 2013-02-06.
[48] GlobalG.A.P. (2012c)
[49] See Council Directive 2007/43/EC
[50] See Council Directive 2008/119/EC

bined into an overall measure, focus is on aspects that are likely to be costly for producers and which thereby can affect competitiveness.

Finally, it is important to note that more stringent animal welfare-requirements not only result in higher costs for producers but also in healthier animals, which in turn influences production positively through decreased costs for veterinary services etc. However, such aspects are not considered in more detail here.[51]

4.2 Requirements on pig production

Space requirements and requirements on the shaping of the interior of the buildings are important for pig welfare and the size of buildings, and thereby for the costs of the producer. Differences in space requirements can thus have an impact on the costs and the competitiveness of pig producers in different countries.[52]

Regulations on housing are similar in the EU regulation and the GlobalG.A.P. standard, whereas Swedish legislation in general is somewhat stricter than both EU and GlobalG.A.P. rules. Swedish legislation in general requires slightly larger floor areas than the EU and GlobalG.A.P. For example, GlobalG.A.P. and the EU require an area of 6 square meters for boars, whereas Swedish rules require 7 square meters. In Sweden and the EU, this area is extended to 10 square meters for mating, whereas GlobalG.A.P. without further specification states that additional space must be provided. The EU and GlobalG.A.P. rules, in contrast to the Swedish, allow decreased floor space per animal for groups of more than 40 animals.

A related aspect is the requirement on the shaping of the floors. Drainage openings are not allowed in solid floor areas in Sweden, but can constitute 15 percent of the floor area for gilts and sows according to EU and

[51] See Hoffmann et al. (2010) for more information on the relationship between animal welfare and production costs.
[52] Telephone interview with Annika Sällvik, the Federation of Swedish Farmers (LRF) 2013-02-08

GlobalG.A.P. rules. [53] This difference likely results in higher costs for Swedish producers.[54]

The design of the buildings is also affected by differences in requirements on the light source. Buildings for pig production in Sweden must have windows to let in daylight. The EU and GlobalG.A.P. do not explicitly state that natural light must be provided. EU rules state that light with an intensity of 40 lux must be provided eight hours a day, whereas GlobalG.A.P. requirements are in accordance with national legislation. For EU producers, GlobalG.A.P. states that light with an intensity of 80 lux must be provided 8 hours a day.[55]

Several differences thus exist when it comes to the design and size of the buildings for housing the animals. These fall into the resource measures of animal welfare described in the previous section. With some smaller exceptions, GlobalG.A.P. rules seem to be in line with EU rules on the buildings for pig production, but do not correspond to Swedish legislation.

Differences also exist within the management area, that is, how the animals are treated. According to an industry representative, tail docking is an important aspect that affects not only the welfare of the pigs, but also the costs for the producer, since the prohibition of tail docking implies a need for better management and larger housing areas.[56] Tail docking is not allowed according to Swedish rules. In GlobalG.A.P. and the EU, tail docking is not to be carried out routinely and, when performed, has to be within seven days after birth, according to GlobalG.A.P. rules. EU regulations state that tail docking after the seventh day of life must be performed with an anesthetic.

EU and Swedish legislation entail requirements on sows to be held in groups, with the exception of the time around farrowing. Requirements

[53] Jordbruksverket 1, Jordbruksverket 2, Jordbruksverket 3, Council Directive 2008/120/EC, GlobalG.A.P. (2012b) and Mul et al. (2010)
[54] LRF (2013)
[55] Jordbruksverket 1, Jordbruksverket 2, Council Directive 2008/120/EC, GlobalG.A.P. (2012b) and Mul et al. (2010)
[56] Telephone interview with Erika Brendow, the Federation of Swedish Farmers (LRF), 2013-02-08.

do differ somewhat, with Swedish legislation being stricter on the time allowed in isolation. GlobalG.A.P does not explicitly state that sows should be kept in groups. Another important difference is that Swedish rules include a sow stall ban. EU and GlobalG.A.P. rules allow sow stalls for a specified time period around farrowing and service.[57] Furthermore, Swedish legislation stipulates that pigs should have access to straw, and GlobalG.A.P. rules state that pigs should get straw or other material to satisfy their behavioral needs. EU rules do not require pigs to be provided with straw.

However, similarities also exist; all three sets of rules state that castration should be performed within seven days after birth. If performed thereafter, an anesthetic has to be used. Tooth clipping and grinding should also be performed within seven days after birth for all three sets of rules.[58, 59]

The general picture emerging from the above examples is that Swedish legislation is the most stringent of the three sets of rules. GlobalG.A.P. rules are in line with EU rules for most of the compared requirements, although differences do exist. For example, GlobalG.A.P. requires that pigs have access to straw or other material that satisfy their behavioral needs, which is not a requirement in EU rules. On the other hand, GlobalG.A.P. rules do not have a requirement corresponding to the highly topical EU ban on individual housing for sows, which came into force on January 1, 2013.

4.3 Requirements on poultry production

As mentioned above, GlobalG.A.P. certification for the sub-scope poultry is available for broiler production only,[60] and requirements on conditions for layer hens are thus excluded from the following comparison.

[57] Mul et al. (2010), Council Directive 2008/120/EC, GlobalG.A.P. (2012b) and telephone interview with Annika Sällvik, the Federation of Swedish Farmers (LRF) 2013-02-08 and LRF (2013).
[58] Jordbruksverket 8, Jordbruksverket 2, Council Directive 2008/120/EC and GlobalG.A.P. (2012b)
[59] GlobalG.A.P. (2012b), Jordbruksverket 2, LRF (2013) and telephone interview with Erika Brendow, the Federation of Swedish Farmers (LRF).
[60] GlobalG.A.P. (2012c)

According to a representative for the Swedish Poultry Meat Association, the maximum allowed stocking density is the most important factor driving costs for chicken producers.[61] Within EU regulation, the allowed maximum stocking density for chickens kept for meat production is in general 33 kg per square meter. Under certain welfare-improving conditions, however, up to 39 kg and in some cases 43 kg per square meter is accepted. In GlobalG.A.P., an explicit requirement is that the stocking rate is not higher than applicable EU regulations. Swedish legislation states a maximum stocking density of 20 kg per square meter, with exceptions for some control programs, in which at most 36 kg and 25 animals per square meter are allowed.[62] The maximum stocking density can thus be extended under EU and Swedish rules if certain criteria are fulfilled. However, according to the representative for the Swedish Poultry Meat Association, the stringency of the criteria that have to be fulfilled differs between the EU and Sweden and results in cost differences for the producers. Since Swedish requirements are more comprehensive, the more restrictive rules on stocking density, and the extra requirements that have to be met to be allowed to have more chickens per square meter, result in additional costs for Swedish producers.[63]

Differences in requirements on housing and buildings also exist for the lighting of the buildings. Swedish legislation requires buildings to have windows to let in daylight, whereas EU and GlobalG.A.P. requirements state that lighting should follow a 24-hour rhythm with periods of darkness of at least six hours.

Swedish and GlobalG.A.P. rules contain more detailed requirements on drinking and feeding facilities compared to EU rules. Swedish legislation and GlobalG.A.P. entail requirements on drinking troughs and nipple drinkers in terms of space and, in some cases, the maximum amount of chickens allowed per drinking nipple. The requirements are similar but not identical, and are calculated on different grounds, such as the water

[61] Telephone interview with Maria Donis, Director of The Swedish Poultry Meat Association, 2013-02-11.
[62] GlobalG.A.P. (2012d), Council Directive 2007/43/EC and Jordbruksverket 5
[63] Telephone interview with Maria Donis, Director of The Swedish Poultry Meat Association, 2013-02-11.

pressure and flow rate for GlobalG.A.P. and the age for Sweden. No corresponding requirements are found in EU rules.

The feeding requirements are not directly comparable either. The requirements differ between length and circular feeding bins, and can refer to the required space per animal (Sweden), sometimes in combination with the maximum number of birds per feeding bin (GlobalG.A.P.). No corresponding specified requirements are stated in the EU regulation, other than the fact that feed should be either continuously accessible or provided at meal times. [64]

The EU, Swedish and GlobalG.A.P. requirements for housing facilities thus differ. GlobalG.A.P. and the EU have the same requirements on maximum stocking density, but Swedish legislation is more stringent. A more divergent picture emerges from the comparison of requirements on feeding and drinking facilities. Swedish legislation and GlobalG.A.P. rules are more detailed than EU rules, but requirements are imposed differently. It is thus difficult to judge how the level of animal welfare is affected, but it is likely that more detailed requirements result in less flexibility for producers and thereby potentially higher costs. By this reasoning, Swedish and GlobalG.A.P. producers probably face more costly requirements than producers complying with EU regulations.

4.4 Requirements on cattle production

Detailed EU regulations on cattle are stated in Council Directive 2008/119/EC. However, as mentioned above, only regulations on calves are included. In general therefore, Swedish legislation and GlobalG.A.P. rules are more comprehensive and contain more detailed requirements for producers. Examples include Swedish legal requirements on the size of slatted floors and littered areas for animals of different sizes and ages, and space requirements for feeding areas and loose housing systems. [65] Another important example is the requirement on grazing time for cattle in Sweden, which requires more labor and thereby results in additional

[64] Jordbruksverket 6, Jordbruksverket 7, GlobalG.A.P. (2012d) and Council Directive 2007/43/EC
[65] Jordbruksverket 10 and Council Directive 2008/119/EC

costs.[66] GlobalG.A.P. also contains requirements for older animal groups, such as minor must-requirements on the minimum bedded and total areas for dairy cows in loose housing systems.[67] Since corresponding requirements do not exist within EU rules, the following comparison of requirements for cattle is delimited to comparing rules for calves.

As for pigs and chickens, one important cost driver for cattle producers is the requirement on the size and shape of buildings.[68] In general, Swedish legislation on housing is more comprehensive compared to both EU regulations and GlobalG.A.P. requirements. Swedish legislation entails requirements on the size of slatted floors and littered areas for animals of different size. In addition, space requirements are stated for different kinds of cribs, calving pens, single pens for calves, feeding areas and loose housing. EU and GlobalG.A.P. requirements are similar to each other and have the same requirements on the size of individual pens and space when calves are kept in groups.[69]

An additional difference in requirements on buildings is that the EU and GlobalG.A.P. require calves to have natural or artificial lighting corresponding to normal daylight at least eight hours a day, whereas Swedish legislation requires buildings for cattle to have windows or another opening to let in daylight.[70]

From the management perspective of animal welfare, several regulations are common to all three sets of rules. For example, calves should not be kept alone in an individual pen after the age of eight weeks, and should have access to colostrum at least within six hours after birth. However, the latter requirement is a minor must in GlobalG.A.P., which means that only 95 percent of the minor musts have to be fulfilled for certification. A minor must is also the feeding of calves twice a day, which is a requirement of the EU and Swedish legislation. All three sets of rules al-

[66] Telephone interview with Annika Sällvik, the Federation of Swedish Farmers (LRF), 2013-02-08.
[67] GlobalG.A.P. (2012f)
[68] Telephone interview with Erica Lindberg, the Federation of Swedish Farmers (LRF), 2013-02-15.
[69] Jordbruksverket 10, GlobalG.A.P. (2012e), GlobalG.A.P. (2012h) and Council Directive 2008/119/EC
[70] Jordbruksverket 11, EU Council Directive 2008/119/EC, GlobalG.A.P. (2012e) and GlobalG.A.P. (2012h).

so state that the tethering of calves is prohibited, with the exception of feeding for one hour explicitly stated in EU and GlobalG.A.P. rules.[71]

In summary, GlobalG.A.P. rules affecting the animal welfare of calves are in general very similar to EU regulations, whereas Swedish legislation is more detailed. In addition, Swedish and GlobalG.A.P. rules contain requirements for dairy cows and older animals, and thereby in general leave less room for cattle producers to adapt production conditions in a flexible way. This inflexibility is probably costly for producers.

4.5 Summarizing discussion

The above sections describe some important differences and similarities of animal welfare-requirements. These and the other compared criteria, such as the limits for air contaminants, are summarized in table 5 below.

The table illustrates that the question of whether private standards are more, less or equally stringent compared to public regulations lacks a yes-or-no answer. While GlobalG.A.P. requirements are equal to or even extend beyond EU rules in some cases, the public regulations are more comprehensive in others. In addition, the approach and manner in which some of the aspects are regulated differ, and judging whether or not one set of rules is more or less strict than another also implies weighing the importance of different aspects against each other. As stated above, there is no common view on how this should be done.

Some interesting results are worth emphasizing. For all three animal groups, GlobalG.A.P. space requirements generally correspond to the EU rules, but not to Swedish legislation. This is an interesting finding, since space requirements affect the size of buildings for animal housing, which in turn is an important cost driver for producers. Cost differences resulting from differences in legal requirements on space and stocking density might therefore be smaller than indicated by national legislations if non-EU producers are certified to the GlobalG.A.P. standard. Noticeable is also that none of the compared criteria for pig welfare in Swe-

[71] Jordbruksverket 9, EU Council Directive 2008/119/EC and GlobalG.A.P. (2012e) Council Directive 2008/119/EC, GlobalG.A.P. (2012e)and Jordbruksverket 9

den are met by the GlobalG.A.P. requirements, with the exception of a minor must-requirement on water access. For chickens and calves, GlobalG.A.P. requirements correspond to EU regulations on animal welfare, again with the exception of some minor must-requirements.

Table 5. Approximate correspondence table for GlobalG.A.P. and public regulations

	Pig		Chicken		Calves	
Requirements on	**EU**	**Sweden**	**EU**	**Sweden**	**EU**	**Sweden**
Housing						
Individual/group	-	-	Not	Not	=	=
Tethering, tooth clipping, tail docking etc.	=	-	Not	Not	=	-
Stocking density/floor space	=	-	=	-	=	-
Lighting	-	-	=	-, diff	=	-
Air quality/contaminants	+**	-	+	-	=*	-*
Feeding						
Frequency	-*	-*	Not	Not	=*	=*
Space regulations	=*	-*	+	+, diff	=*	-*
Water access	+*	+*	+	=, diff	=	-

Source: authors´ comparison based on GlobalG.A.P. (2012a-h), Jordbruksverket 1-11, Council Directive 2007/43/EC, Council Directive 2008/119/EC and Council Directive 2008/120/EC.

*Key to abbreviations: = same requirements, - covered but less detailed/stringent than EU/Swedish rules, + more detailed/stringent than EU/Swedish rules, diff: different approach, not: not covered in EU/Swedish regulation nor in GlobalG.A.P., * GlobalG.A.P. rules classified as a minor must. **Recommendations within GlobalG.A.P..*

As stated above, previous research often makes the assumption that private standards are more stringent than public regulations, but few comparisons exist and it is therefore difficult to make an informed judgment of how private standards actually compare to public regulations.

The comparison in this study adds knowledge of how private standards relate to public regulations, and shows that GlobalG.A.P. requirements on animal welfare correspond to most of the EU requirements, but not to Swedish legislation. In addition, the difficulties encountered when un-

dertaking the comparison further illustrate the complexity that characterizes the relationship between private standards and public regulations. Despite the delimitations of the study both when it comes to the number of compared issues and included benchmark legislations, the comparison cannot provide a clear-cut answer to the question of how the stringency of the private standard relates to the stringency of the legal requirements serving as a benchmark. The difficulties associated with comparing private standards and public regulations are further discussed in chapter 6.4.

5 The role of private standards in the food supply chain

As shown in the previous chapters, several standards are of importance for the food supply chain, and these differ in scope and extensiveness. An analysis of the role of private standards in creating more equal production conditions in different countries must therefore dig deeper into the private standards and how they are used. Which private standards are the most important? Is compliance with a private standard a must for producers that want to sell their products to the Swedish food market? This chapter presents a brief review of previous research within this field, focusing on retailer surveys. To complement the picture given in the surveys, the final section of this chapter goes into further detail and investigates the use of private standards in three food companies in the Swedish food supply chain.

5.1 Previous research on the use of standards

The impact of private standards depends on how they are used on the market. Why do retailers use private standards and which standards are most common? Do retailers in general view private standards as more stringent than public regulations? This section reviews retailer surveys on the role of private standards in the food supply chain.

Retailer surveys

According to interviews with 16 leading food retailers in 2006, the need to maintain a good reputation is the major driving force behind the extensive use of private standards in the food supply chain.[72] Standards for food safety are seen as the most important kind. More than 85 percent of the interviewed retailers considered their required food safety standards to be higher than those set by the government, and approximately half reported requirements to be significantly higher. As an example, most firms had enforced traceability systems prior to such systems becoming

[72] The interviewed food retailers are Ahold, Auchan, DelHaize, Carrefour, Coop Suisse, ICA, Krogers, Loblaws, Metro, Migros, Sainsbury, Superquinn, Tesco, Wal-mart, Woolworths-South Africa and Woolworths Australia.

a legal requirement, although with varying coverage of different product groups.[73]

When it comes to environmental concerns, a majority of the retailers (78 percent) reported the use of more extensive requirements than those required by the minimum public standard. 50 percent of the EU retailers stated that their requirements on animal welfare were slightly higher than national legislation, and 33 percent stated that requirements were significantly higher.

Judging from the survey, the most commonly used standards are BRC, IFS, SQF 1000, SQF 2000 and GlobalG.A.P. All these are active in the benchmarking process by the GFSI, and the retailer survey thus confirms the picture that the GFSI-benchmarked standards are the most important. Requirements on certification seem to be more stringent when suppliers are located in non-OECD countries. The more far-reaching requirements on non-domestic producers are due to differences in the perceived level of risk of the products and long-term satisfactory relationships with local suppliers.[74]

Most of the interviewed retailers wish to see a development towards one global standard for food safety, and express the need for harmonization of process characteristics such as environmental concerns, labor standards and animal welfare. Despite calls for harmonization, the retailers often impose additional requirements that are specified by the firms themselves. These often include more extensive requirements when it comes to food safety issues such as potentially damaging packaging materials, allergens, contaminants and care during transport.[75]

The retailer surveys reviewed above thus indicate that retailers use several of the GFSI-benchmarked private standards *and* private standards that are specific for each firm. Hence, an investigation of whether private standards equalize production conditions across countries cannot be per-

[73] Fulponi (2006).
[74] Note that the survey was published in 2006.
[75] Fulponi (2006).

formed on a general basis. Rather, one has to look into the requirements of the individual firm, and then make an overall judgment of the contents and stringency of the requirements. However, no detailed information regarding the work on private standards on the firm level has been found during the research for this report. The next section is therefore devoted to case studies of the work on and use of private standards in three companies in the Swedish food supply chain.

5.2 Case studies of three Swedish firms

This section presents three case studies of the use of private standards and third-party certification in the Swedish food supply chain. The intention is to deepen the understanding about the role and contents of private standards through including the perspective of the actors employing private standards in practice. Each case study is divided into two sections focusing on private food safety standards and aspects relating to the production process, respectively.

Choice of case studies

The Swedish food supply chain shows clear tendencies of vertical coordination. The wholesaler and retailer markets are characterized by a high degree of concentration and are dominated by the three large actors ICA, Coop and Axfood with market shares of 49.4, 21.4 and 15.0 percent, respectively.[76] All three are active as retailers and through affiliated companies also as wholesalers and distributors. Also the food-processing industry is characterized by high concentration, with actors exercising considerable market power against primary producers. Market power is thus present among the actors in both the food processing industry and the retailer sector.[77] Thus, they most likely have the ability to impose requirements on compliance with a private standard on producers without having to bear a large share of the cost burden. It is therefore reasonable to include companies in both the retail and food processing industries in the case studies.

[76] Dagligvarukartan (2012)
[77] Konkurrensverket (2009) and Olofsdotter et al. (2011)

The choice of including the three companies ICA, Bergendahls Food and Findus Sverige AB can also be justified for other reasons. Including ICA, which has the largest market share, provides an indication of the practices employed by the most dominant player on the Swedish food retail market. Bergendahls Food including the chain CityGross[78], is a smaller, family-owned company with approximately 10 percent of the market in some regions, and provides an illustration of the practices of a smaller but nevertheless important actor. Hence, by including both ICA and Bergendahls Food, the perspectives of a large as well as a relatively small food retail firm are included in the analysis. Finally, the inclusion of Findus Sverige AB, one of the leading companies in the markets for deep-frozen fish, vegetables and semi-finished products, provides insights from a food-processing company operating on the Swedish as well as European and international markets. Furthermore, Findus can provide an illustration of the views of a company situated in the middle of the chain between the concentrated retail industry and the producers with less market power.

That the study is based on three cases only means that the analysis can point to some important aspects, but it is not a comprehensive study of private standards in general. This is clearly a limitation, but there exist few, if any, detailed studies building on firm-internal information on retailers´ and food processors´ work on private standards in Sweden. For this reason, the analysis, despite the limited number of case studies, is an important addition to the understanding of the role of private standards in the food supply chain.

ICA[79]

Food safety

All suppliers delivering products to the central ICA organization are required to be third-party certified to a private standard. This holds for private-label products that are sold under the ICA label as well as for products sold under the label of the individual suppliers. The difference

[78] See Bergendahls 1 for more information

[79] When not stated differently, the following section builds on a personal interview with Lena Sparring, Director Product Safety and Quality at ICA, 2012-11-26.

lies in the standards that are accepted, and how compliance is controlled. Relatively more stringent requirements are imposed on producers of ICA´s private-label products, which must be third-party certified to a GFSI-recognized standard. For these producers, ICA actively requires suppliers to send in their certificates and continuously controls that certificates are up-to-date. ICA´s requirement on third-party certification to a GFSI-recognized standard is in general absolute for private-label producers, except for local fruit and vegetable suppliers. However, some temporary exceptions do exist, in which case ICA performs own inspections of the production site and the production process to ensure that production takes place under appropriate conditions.

For products labeled with the brand of the supplier and local fruit and vegetable suppliers of private-label products, ICA requires that producers are third-party certified, but standards not recognized by the GFSI, such as IP Livsmedel and IP Sigill, are also accepted. For these products, the supplier has an increased responsibility and an additional interest in requiring third-party certification, since the name and brand of the individual supplier, rather than the ICA brand, are associated with the quality and safety of the products.

ICA´s requirements on third-party certification to a recognized standard are the same for producers in different countries. Nevertheless, due to potential differences in culture and the functioning of the framework for certification, such as the control of certification bodies, ICA performs own inspections in some countries that are perceived as high-risk areas.

Requiring suppliers to be third-party certified to a private standard is seen as a way of ensuring product quality and food safety. According to ICA, imposing such a requirement is also necessary since ICA does not consider Swedish public controls on behalf of municipalities and Livsmedelsverket (National Food Agency) as enough for assuring food safety. ICA directs criticism at the infrequent rate of controls and differences across municipalities in how controls are performed. Furthermore, according to the firm representative of ICA, controls are performed not against a given standard, but with respect to national legislation, which

is considered to be too open for interpretation. ICA therefore calls for the public authorities to take a more active role, and to co-operate with actors engaged in the private certification and control system to take advantage of the private structures that are operating on the market. Furthermore, ICA stresses the crucial role of the inspectors that perform the certification audits. The statement "The system is not better than its inspectors", expressed by the interviewed ICA representative, is a good illustrative example of this view. Public authorities are thus encouraged to take an active role in the control of these inspectors, and to include third-party certification to a private standard as a factor in their risk assessment.

ICA takes an active part in the work of the GFSI towards developing and forming the norms for food quality systems and the potential differences between the benchmarked standards are not perceived as a problem.[80] Rather, ICA sees the benchmark level by the GFSI as the minimum level which suppliers of private-label products have to fulfill, and the existence of multiple standards can be positive in terms of suppliers being able to choose the standard that best suits their own conditions.

ICA also actively participated in the development of IP Livsmedel (see box 2 below), which is seen as very important for small and/or local suppliers wanting to deliver their products to the market. Since each ICA store is independent of the central organization, the central office can directly control only those products that are delivered through the central system. The development of IP Livsmedel and the creation of "Svensk standard för livsmedelshantering i butik" (Swedish standard for handling food in shops) create a useful combination of standards for the individual store. By using these two standards, it can ensure that locally produced products and/or products coming from smaller producers are also produced and handled in an appropriate way, even if the producer does not have the financial means to comply with a GFSI-benchmarked standard.

[80] ICA (2012)

According to the firm representative, ICA´s suppliers were at first reluctant to accept the increasing requirements associated with third-party certification. However, once implemented, standard compliance also resulted in advantages for the producer in that an improved structure and a deeper knowledge of the production practices increased producers´ efficiency and profitability. Having a third-party certification also eased the entry into export markets for those suppliers aiming at expanding production.

Box 2: The IP Sigill and IP Livsmedel Standards

The standard "Svenskt Sigill" (Swedish Seal) consists of three certification levels. The first level is a business-to-business standard, whereas level two and three are business-to-consumer-standards that go beyond Swedish legislation. As such, they are communicated to consumers through product labeling.

The basic level of the standard can be used for certification of the production of pork ("Grundcertfiering Gris"), the production of beef ("Grundcertifiering Nöt"), slaughtering ("IP Slakt") and transport ("IP Slakttransport"). The requirements of the standard are based on Swedish laws for food safety and animal protection.

Food processors can also be certified according to the basic certification level corresponding to Swedish legislation. In this case, the standard IP Livsmedel ("IP Food"), previously IP Livsmedelsförädling, was developed as a complement to accepted standards such as the BRC standard, to facilitate standard compliance for small-scale producers. It contains requirements on careful documentation and monitoring of routines for food safety, hygiene and traceability and was developed in co-operation with the large retailers on the Swedish market. The four largest retailers in Sweden, ICA, Coop, Axfood and Bergendahls, all support IP Livsmedel as an accepted standard.

Although IP Livsmedel is developed by and for the Swedish market, it is an open standard also accessible for non-Swedish producers. In fact, there are some certified producers in neighboring countries delivering their products to the large retail chains in Sweden, but a more widespread use is likely to be limited by the potential lack of certification bodies in countries further away from Sweden.

Source: Svenskt Sigill 1, Svenskt Sigill 2, Svenskt Sigill 3, IP Livsmedelsförädling (2008) and Telephone interview with Sven Pettersson, Svenskt Sigill, 2012-10-11.

In general, the requirement on third-party certification has not resulted in a change of suppliers for ICA. There is a general trend of suppliers becoming increasingly larger, but also a parallel development of consumers wanting to support local producers and buy products from their neighborhood. As described above, the development of the standard IP

Livsmedel enables structured work on food safety and quality aspects for these producers as well. The concern that requirements on third-party certification will result in the exclusion of small producers is thereby not supported in this case.

Animal welfare, environmental protection and social responsibility

ICA´s requirements for suppliers are described and summarized in an appendix to the agreement the supplier signs with ICA. The requirements on third-party certification to a private standard on food safety, as well as the requirements in the areas of social responsibility, environmental protection and animal welfare, are included in the appendix.

ICA is engaged in GSCP, BSCI and ETI Norway, which are international initiatives for social responsibility.[81] ICA´s requirements for suppliers are based on international conventions from the ILO, the Declaration of Human Rights and the Convention on the Rights of the Child. Social, environmental and quality audits are conducted for suppliers of private-label products, and the control system is based on the requirements of the BSCI. Audits are performed both through own and third-party inspections.[82] ICA uses ISO 14000 and EMAS[83] for environmental protection, but requirements on third-party certification are not as extensive as for the standards on food safety.

ICA considers the requirements of the GlobalG.A.P. standard on livestock production as insufficient and not stringent enough for imposing requirements on animal welfare. Imposing more stringent requirements on producers in other countries is in general seen by ICA as a social responsibility for creating more equal conditions for meat producers in Sweden and foreign countries. ICA´s own requirements on animal welfare are imposed on all meat producers delivering products to the central organization, regardless of brand labels or where production takes place. The requirements are based on IP Sigill, which corresponds to

[81] See chapter 3 and the appendix.
[82] ICA (2012) and ICA 1.
[83] EMAS is the abbreviation for the EU Eco-Management and Audit Scheme and is "a management tool for companies and other organisations to evaluate, report and improve their environmental performance". See EMAS 1 for more information.

Swedish legislation on food safety and animal welfare. ICA performs inspections in order to ensure that the requirements are fulfilled. Exceptions for producers not fulfilling these requirements can be accepted to a small extent in order to enable the supply of a variety of products and meet consumer demand. An example is the acceptance of Danish pig meat, where compliance with Danish legislation is accepted as sufficient. For ICA´s private-label products, further requirements above Danish legislation are imposed through the concept "Englandsgrisen", which extends beyond Danish legislation but does not correspond to the requirements of public regulations in Sweden.[84] The individual ICA stores are encouraged, but cannot be forced, to impose the same requirements for products sourced outside the central organization.

Bergendahls Food[85]

Food safety

Bergendahls Food (hereafter Bergendahls) requires all suppliers to be third-party certified to a recognized private standard. Accepted are the GFSI-recognized standards, IP Livsmedel, IP Sigill for fresh vegetables and the RIP[86] for potatoes. One exception is a small number of small-scale honey producers, for which third-party certification would be very costly due to the size of production. Bergendahls requires these producers to fill out a checklist based on the standard IP Sigill Biodling (Beekeeping), which must be sent in to Bergendahls as an assurance of appropriate production practices. Other potential exceptions are new producers that aim at becoming certified to one of the accepted standards within half a year and show progress in this process. For these, Bergendahls accepts a temporary lack of certification.

Just like ICA, Bergendahls took an active part in the formation and acceptance of the IP Livsmedel standard, and can thereby maintain the relationship with small suppliers that find it too costly to comply with a GFSI-recognized standard. IP Livsmedel is also seen as an appropriate

[84] ICA 2
[85] When not stated differently, the following section builds on a personal interview with Annica Hansson-Borg, Environmental and Quality Manager at Bergendahls Food, 2012-11-23.
[86] Riktlinjer för hygien-, miljö- och kvalitetsarbete på potatispackerier (Guidelines for the work on hygiene, environment and quality at potato packing sites). For more information, see RIP (2004).

first step for producers working to become certified to the BRC or a similar standard.

Bergendahls' requirement on third-party certification to a private standard is also imposed on suppliers of the private labels "Budget" and "Favorit". One difference compared to the requirements on suppliers' products that are sold under the suppliers' labels lies in the acknowledgement of IP Livsmedel, which is not accepted for private-label products. Hence, as in the ICA case, what is required is a third-party certification to use a GFSI-recognized standard. In addition, private-label fish products must be certified according to the business-to-consumer Marine Stewardship Council (MSC) standard.

As also described by ICA, more effort is put into the verification of standard compliance for private-label products. Bergendahls requires certificates to be sent in to the Bergendahls central administration every second year. This requirement also holds for local producers delivering food to nearby stores.

Similar to ICA, the firm representative of Bergendahls directs criticism at Swedish public food safety controls. Bergendahls stresses that differences in control frequency between municipalities make the system unreliable, and that it is problematic when controls focus too much on the state of the buildings and the equipment and too little on the systems for traceability and product withdrawal. Bergendahls suggests that the public control systems should take account of existing private standards, and that firms that have a third-party certification should get a discount on the mandatory control fee paid to the inspection authority.

Requiring producers to fulfill a private standard is thus seen by Bergendahls as a way to compensate for insufficient public controls and fulfill the requirements of public regulations rather than going beyond the national legislation. One exception might be the BRC standard, which is seen as more detailed than some of the other standards and imposes requirements in a strict manner. While BRC and IFS are seen as similar by Bergendahls, the ISO family and FSSC 22000 were first met with some

skepticism, as the requirements are phrased in more general terms. This creates the potential problem that differences in interpretation of the contents result in differences in the implementation and thereby also in the quality level. In general, however, Bergendahls views the multiplicity of existing standards and the acceptance of different standards as equivalent by the GFSI as something positive. The own company, Bergendahls Food, is third-party certified to the BRC standard throughout the whole chain including transport, storage and wholesale.

The fragmentation of the production process is an important reason behind Bergendahls' requiring foreign producers to comply with a private standard. Imported food is produced under different systems for food safety, different preferences and different political systems, which by Bergendahls are perceived as more sensitive to bribery and corruption. Requiring producers to be third-party certified to a well-known standard is therefore a way for Bergendahls to ensure that the food is produced under appropriate conditions regardless of where production takes place. One difference compared to the case study of ICA is that Bergendahls does not perform extra inspections in perceived high-risk areas.

According to the firm representative, Bergendahls' suppliers' perceptions of the requirement on third-party certification to a private standard are in general positive. Although initially perceived as unnecessary and to some extent as a demonstration of retailers' power, Bergendahls' suppliers also experienced benefits in terms of quality assurance and improvement when structuring their production practices to fulfill the requirements of a private standard. As in the case of ICA, Bergendahls' requirements on third-party certification have not resulted in a change of suppliers due to requirements on standard compliance, with the exception of some bakeries that were not aiming at becoming certified and therefore had to stop their deliveries.

Animal welfare, environmental protection and social responsibility

All suppliers are required to sign a three-sided code of conduct developed by Bergendahls. The agreement contains requirements on the situation of workers and regulates things such as wage, working conditions

and the prohibition of child labor. The code of conduct works as a contract in that suppliers commit to fulfill the stated requirements. Bergendahls does not perform inspections to control that this is the case, but the signed agreement is seen as providing assurance of compliance, and as evidence of breach of contract in case of irregularities.

Bergendahls´ perception that geographical and cultural distance creates an increased need for control has consequences for the selection of sold products. Part of Bergendahls´ and its largest chain City Gross´ profile is the choice of selling mainly Swedish meat and to cut and pack all fresh meat in the individual store. This adds to increased control of the production and handling of the meat products, and decreases the need for control of external cutting and packing sites.

To meet consumers´ demand, a smaller share of frozen and vacuum-packed meat, produced outside Sweden, complements the assortment. Bergendahls does not impose specific requirements on meat producers located outside Sweden. Hence, imported meat is produced under the conditions approved by the national legislation in the country of production. The conditions for animal welfare are not explicitly controlled, apart from the general control of the production site that is made in relation to third-party certification. Bergendahls expresses the view of wanting to impose more detailed requirements, but doing so is difficult since many companies are involved in the production process. This implies that requirements cannot be imposed directly on producers.

Findus[87]

Food safety

Findus' own factories are certified according to the BRC Global Food standard. As in the case of ICA and Bergendahls, Findus requires all suppliers including subcontract factories producing products that are sold under the Findus label to have a recognized quality and safety system. Examples of the accepted certification schemes are BRC and IFS. Findus sees third-party certification and private standards as important

[87] When not stated differently, the following section builds on a personal interview with Inger C Nilsson, Sustainability Director at Findus, 2012-11-12.

steps in the creation of trust for the own brand and a good relationship with customers and suppliers. Moreover, also Findus expresses the opinion that public controls of hygiene and safety at production sites handling food are unreliable, both in terms of the frequency with which controls are performed and in terms of how public regulations are interpreted and controlled in practice.

Findus sees third-party certification to a recognized private food safety standard as a pre-requisite for market access, and makes no distinction, based on geographical origin, between requirements imposed on producers. The audits performed by third-party inspectors are complemented by inspections performed by the company brand labeling the product. Hence, Findus performs additional audits at the production sites of its suppliers. In cases where Findus produces products that are sold as private-label products of another firm, the Findus factories are inspected by the other firm. Producing products sold under the label of another firm also result in additional requirements imposed on Findus´ suppliers, and an increasing administrative workload. For example, one large customer selling Findus-produced products under its own label requires Findus to communicate the values and rules of the customer firm to the suppliers delivering input goods.

As a food processing company, Findus thus not only performs inspections at the production sites of suppliers, but is also inspected by other firms in the food supply chain. This is a noticeable difference compared to ICA and Bergendahls, which are active as retailers, and indicates that the further down the supply chain, the larger is the number of controls and requirements imposed by upstream actors.

According to the firm representative, Findus´ imposition of third-party certification as a requirement on suppliers was a process that lasted for several years. Suppliers were encouraged to adapt their production practices and were also given time to do so. Therefore, only a few producers had to stop delivering their products to Findus due to problems of complying with a private standard. The imposition of the new requirements was further facilitated by the resulting advantages for the producers in

terms of creating structure and order among the production practices. Findus´ experience is thus in line with the view of ICA and Bergendahls; requirements imposed on standard compliance create problems only for a small number of suppliers, and suppliers also benefit from following a private standard.

Animal welfare, environmental protection and social responsibility

Findus requires vegetables produced in Sweden to be certified according to the third level of the standard Svenskt Sigill (Swedish Seal), which specifies requirements that are more stringent than public regulations on food safety, animal welfare and measures to decrease the environmental impact of production.[88] Noticeable is that requirements go beyond the basic business-to-business level of certification and that all vegetables sourced in Sweden are certified according to the third certification level, which also implies that the certified products are marked with a label.[89] This is a difference compared to ICA and Bergendahls, which use business-to-consumer standards for product differentiation rather than as a requirement on all producers. Findus´ decision to work towards Swedish Seal-certification for all Swedish producers of vegetables was taken at a point in time when the Findus-specific program Low Input Sustainable Agriculture (LISA) had already been in operation for several years. Since LISA is developed and managed by the own company, Findus was in need of third-party certification to an independent standard to enable the work on sustainability questions to be communicated to consumers.

The requirement of third-level Swedish Seal certification covers the vegetables produced in Sweden, which amounts to approximately 30 percent of Findus´ total production of deep-frozen vegetables. For vegetables sourced in other countries, Findus recommends but does not require suppliers to have a GlobalG.A.P. certification. According to the firm representative, fulfillment of the requirements of the GlobalG.A.P. standard is achieved implicitly through the fulfillment of Findus' own requirements based on the GlobalG.A.P. standard. In addition, several suppliers of vegetables use private standards that are benchmarked to the Glob-

[88] Svenskt Sigill 2
[89] Findus 2

alG.A.P. standard. Findus does not consider third-party certification necessary as the large European suppliers had already implemented extensive programs of good agricultural practices (GAP) prior to the increasing use of third-party certification.[90] Follow-up of the requirements imposed by Findus is a future priority in the work on quality and sustainability questions, and Findus´ goal is to perform audits at all suppliers.

For animal welfare and social responsibility, Findus does not require third-party inspections at suppliers´ production sites, but Findus performs own inspections to ensure that production takes place according to the company´s rules. This is a similar procedure to the case of ICA above. According to Findus´ rules, all parties involved in the production of Findus´s food must fulfill the requirements of the Ethical Trading Initiative (ETI)[91]. Furthermore, all producers, regardless of where production takes place, should comply with EU rules on animal welfare in production and the handling of meat. Hence, although Findus sources precooked chicken from Thailand and from a supplier in Europe using chicken from Europe and Brazil, the same rules apply to all producers regardless of potential differences in the national legislations of the countries. Production systems in Thailand are similar to the systems used in Europe, with even lower maximum stocking density for chickens (33kg/m^2 in Thailand) and with stricter regulations on the maximal transport time (6 hours in Thailand).[92]

By the same reasoning, Findus requires that production of beef sourced from Ireland, Brazil and Nordic countries must comply with the same rules that apply to producers within the EU. According to Findus, dehorning is more common in these non-European countries, but animals are held outside to a larger extent, which is seen as a factor contributing to their welfare.

[90] E-mail contact with Inger C Larsson, 2012-12-03.
[91] Findus (2012)
[92] Findus 1

Findus sources pork mainly from Ireland, with some smaller quantities from other countries in Europe, such as Germany, Sweden and Denmark. According to the firm representative, some differences in conditions for animal welfare exist also for pork; pigs raised outside Sweden are slaughtered at a relatively early age, and castration is therefore not necessary. On the other hand, tail docking is more common, the supply of litter is more restrictive and sows are tethered to a larger extent. These differences in the production systems make the direct comparability of the conditions for animal welfare more difficult.[93]

5.3 Discussion

The case studies indicate that the influence of private standards on the Swedish food supply chain is extensive. Regarding food safety, the three firms in general impose very similar requirements. All see third-party certification and compliance with a private food safety standard as prerequisites for the delivery of agri-food products. Just as in the retailer surveys discussed above, the accepted standards are in general those that are harmonized at the international level through GFSI-benchmarking. In the case studies, also the IP Livsmedel and IP Sigill standards are accepted in some cases. All three firms invest more time and energy in following up the compliance requirements of private-label products. This confirms the finding of the reviewed retailer surveys that defending the reputation of the firm is one of the most important reasons behind retailers´ use of private standards.

Several similarities exist regarding how the firms make requirements on the production process. First of all, all three firms actually make requirements in one or more of the areas of environmental protection, animal welfare and labor conditions. They are thus similar in terms of imposing requirements on the production process beyond the public regulations of the country where production takes place. Furthermore, in all three cases, requirements on the production process are most often controlled through own inspections and not by a third party. However, the *actual contents* of the requirements on the production process differ and

[93] Findus 3 and telephone interview (2012-10-15) and meeting (2012-11-12) with Inger C Larsson, Sustainability Director at Findus.

are specific for each firm; in fact, the three investigated companies use three different sets of requirements on production methods. This confirms the findings in the reviewed retailer surveys of companies specifying individual firm requirements in addition to established private standards that are used by many actors.

Regarding both private food safety standards and firm-specific standards on the production process, it is important to note that in all three cases, requiring producers to comply with a private standard is an ongoing process. The aim is to source products only from complying producers, but the adjustment of production to fulfill the requirements in the standard takes time, and it is therefore not always the case that all producers fulfill all requirements of a private standard. In the longer run, as suppliers get time to adapt to the requirements, it seems likely that compliance with a private standard will increasingly become an absolute requirement for suppliers. As a consequence, it is also likely that requirements on the production process will become at least partly harmonized at the international level in the future.

Previous research on private standards stresses that the public sector assigning increased responsibility for ensuring food safety to private food companies was one important driver of the emergence of private standards. The important role of the public sector behind the increasing importance of private standards is confirmed in this study, but in a slightly different way. In this study, all three firms independently of each other express the view that Swedish public controls of food safety are insufficient and suffer serious shortcomings. In the Swedish food supply chain, private standards thus not only emerged as a way to handle the increasing responsibility given to the private sector, as discussed in previous research, but were also necessary to cover control areas not properly handled by the public authorities. Since it is the private food company that has the ultimate responsibility for ensuring food safety, problems of public supervision affect the firm negatively in case a non-safe product is found.

The responsibility for public controls in the Swedish food sector is divided among several different public authorities. Controls of food-processing companies are performed by the municipalities, whereas Länsstyrelserna (the county administrative boards) are responsible for the control of primary producers. Länsstyrelserna also perform supervision of the municipalities, whereas Livsmedelsverket (the National Food Agency) controls the largest companies, such as dairy factories. Livsmedelsverket also has the overall responsibility for the development of public controls of the agri-food sector.[94]

In 2006, Swedish food legislation gave increased responsibility to the actors in the food supply chain to ensure that the food sold on the market is safe. The new legislation pays more attention to the existence of a system for self-monitoring and focuses less on the production facilities.[95] The changes have been made in accordance with the Council Regulation (EC) No 178/2002, which gives actors on the market increasing responsibility for ensuring food safety.[96]

A report by Livsmedelsverket on the contents of the planned inspections by Swedish municipalities and Livsmedelsverket in 2011 indicates that public controls are still undertaken in accordance with the food legislation prior to 2006. 29 and 24 percent of the planned inspections check the traceability system and procedures for withdrawal of products, respectively, and only 7 percent control the existence of microbiological criteria for foodstuffs.[97] The focus areas of the outdated legislation, such as the status of the infrastructure, the production facilities and the equipment, are controlled in 74 percent of the inspections.[98] This information from the responsible authority Livsmedelsverket thus confirms the criticism by the firm representatives directed at the contents of public food safety controls.

[94] Livsmedelsverket (2012b)
[95] Livsmedelsverket 1, Livsmedelsverket (2012a) and telephone interview with report author Linda Eskilsson, National Food Agency, 2012-12-04.
[96] See the Council Regulation (EC) No 178/2002.
[97] For more information on these microbiological criteria, see the Commission Regulation (EC) No 2073/2005 of 15 November 2005 on microbiological criteria for foodstuffs.
[98] Livsmedelsverket (2012a) and telephone interview with report author Linda Eskilsson, National Food Agency, 2012-12-04.

6 Discussion and conclusions

Public regulations regarding agricultural– and food processing differ between countries and producers in countries with stringer regulation may find themselves at a cost disadvantage. However, in addition to public regulation, the food supply chain is characterized by a complex network of private standards through which retailers and food processors impose requirements on suppliers. The main purpose of this report is to analyze whether private standards level the playing field for global competition; that is, if they result in more equal demands on production conditions in different countries than differences in legislation regarding animal welfare, the environment and labor conditions may suggest.

In order to do so, the existence of private standards and the process of standardization must be analyzed from different viewpoints. The first step is to identify the private standards used on the market and for what purposes they are used. The second step is to scrutinize the contents of the requirements. Do private standards contain requirements only on food safety or do they also incorporate aspects relating to production methods? Further, an important part of the study is to investigate how private standards relate to national legislation. This chapter discusses and draws conclusions based on the findings in previous chapters and discusses the difficulties encountered when investigating the relationship between private standards and public regulations.

6.1 What private standards are used in the Swedish food supply chain?

Private standards contain requirements that specify how production should take place. The reviewed retailer surveys and case studies of two Swedish retailers (ICA and Bergendahls) and one processing firm (Findus) indicate that the most commonly used private standards are those that are benchmarked by the international harmonization organization the Global Food Safety Initiative (GFSI).

However, the GFSI-benchmarked private standards are not the only private standards used; rather, they form one type of private standard in the food supply chain. The second type of private standard is less uniform and used for a different purpose compared to the harmonized standards of the first type. The characteristics of the two types of private standards are discussed in more detail below.

6.2 Do private standards expand beyond the issue of food safety?

Private standards in the food supply chain can thus be categorized into two different types, which cover different areas and are used for different purposes.

Type 1: Harmonized private standards for food safety

This type of private standard is used by many actors and widely recognized on an international or national basis. The GFSI-recognized standards and the IP Livsmedel standard belong to this category. These private standards focus mainly on necessary measures to ensure food safety. They also include requirements related to animal welfare and environmental protection, but the extent and coverage of such requirements vary among them. The case studies indicate that third-party certification to a private standard within this category is a general requirement for suppliers. Since food-safety hazards are damaging not only to the individual firm, but to the whole industry, firms can benefit from cooperating and harmonizing private standards aiming at securing food safety.[99] The benchmarking by the GFSI ensures that they fulfill the specified minimum food safety level. That private standards are accepted as equivalent for ensuring food safety benefits both purchasers and suppliers, who can avoid duplication of costs due to having to follow several standards and perform more than one audit. These benefits of harmonization increase with the number of retailers that accept and the number

[99] Personal interview with Lena Sparring, Director Product Quality and Safety, ICA, 2012-11-26

of producers that comply with one of the GFSI-benchmarked standards.[100]

Type 2: Competing private standards for firm profiling

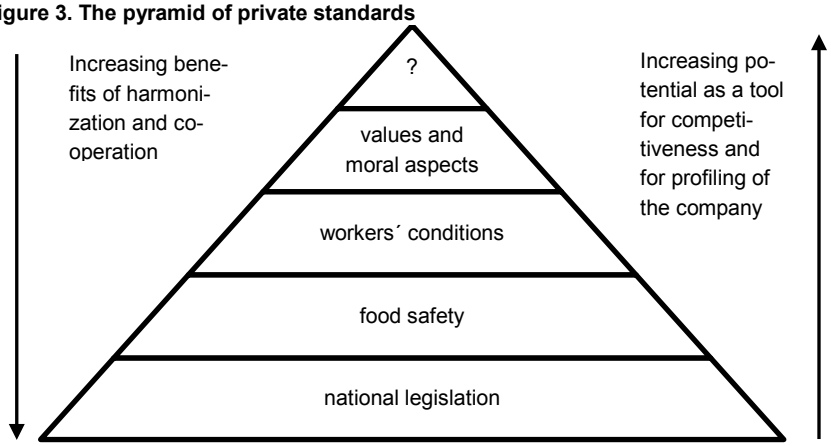
The second type of private standard consists of private standards that are specific to each firm. These private standards can be developed within the firm, but firms can also use an existing standard and extend its coverage to a larger geographical area. One example of the latter is Findus´ use of the EU regulations on animal welfare as a private standard for non-EU producers.

These firm-specific private standards expand beyond the core issue of food safety and mainly cover areas related to the production process, such as animal welfare, environmental protection and labor conditions. In these areas, a private standard is seen as an important competitive tool for the individual firm. Harmonization and benchmarking of firms´ practices are therefore not as beneficial as harmonization and benchmarking of private standards for food safety. Rather, firms can benefit from specifying own requirements, as this is a way of profiling the firm as a responsible company vis-à-vis its consumers.[101] Noticeable is also that private standards within this second category deviate from the way in which private standards are usually constructed and audited; rather than being controlled through third-party certification, the firm-specific private standards are to a larger extent used as policies, guidelines and codes of conduct and are not always controlled by a third party.

The two types of private standards are illustrated in figure 3 below. The harmonized first category of private standards that aim at ensuring food safety and at protecting the reputation of the industry are located at the bottom, whereas the second category of private standards are found further up the pyramid.

[100] In the literature, this is called the compatibility aspect of standards. For more information, see Feng (2003)
[101] Reinecke et al. (2012)

Figure 3. The pyramid of private standards



Source: Personal interview with Lena Sparring, Director Product Quality and Safety, ICA, 2012-11-26

However, the dividing line between the two categories of private standards is not static. As time passes and the industry faces new challenges, new areas, here illustrated by the question mark, will be added on the top of the pyramid. The areas that were previously of importance for profiling the company are thereby pushed downwards and become increasingly interesting as objects for harmonization and co-operation.[102] The relatively recent initiative GSCP, which aims at promoting comparability of social, labor and environmental practices, is an example of such beginning harmonization and benchmarking efforts.

The differing scopes of co-operating to ensure food safety in the first category and the use of private standards for firm profiling in the second category thus affect the degree of harmonization among the private standards. This, in turn, implies that their potential for equalizing production conditions in different countries also varies, which is discussed in more detail in the next section.

[102] Personal interview with Lena Sparring, Director Product Quality and Safety, ICA, 2012-11-26

6.3 Does the use of private standards result in a harmonization of production conditions in different countries?

Whether private standards equalize production conditions across countries and thereby level the playing field for global competition depends on i) the contents of private standards compared to the national legislation in the exporting country and ii) if suppliers in exporting countries with less stringent legislation must comply with a private standard to be able to sell their products.

The harmonization of the private standards within the first category means that similar requirements for food safety are imposed in all of the approved private standards, which in turn implies that their potential for equalizing production conditions is large. Since the case studies show that compliance with a private standard in this category is in general an absolute requirement for suppliers, it is likely that private standards contribute to equalizing requirements on food safety across countries and thereby contribute to a more level playing field for global competition. Still, it should be emphasized that the benchmarking by the GFSI does not imply that the approved private standards impose identical requirements, but that they all achieve a certain minimum level of food safety. Differences therefore still exist among the private standards in this category, and it is unlikely that they result in totally equal requirements for producers.

The private standards in the first category focus mainly on food safety, but also include requirements on animal welfare, environmental protection and labor conditions which are not subject to benchmarking. The plunge into the details of the GlobalG.A.P. standard shows that animal welfare rules in GlobalG.A.P. approximately correspond to EU rules, but are lower than Swedish legislation. This means that the animal welfare-requirements in GlobalG.A.P. can level the playing field for domestic EU producers relative to third country imports. However, the requirements on production methods in the first category of private standards are not harmonized in the same way as the requirements on food safety, which implies that the other GFSI-benchmarked private standards do not nec-

essarily contain the same requirements and equalize production conditions to the same extent as the GlobalG.A.P. standard.

Furthermore, retailers' and food processors' requirements on production methods are also imposed through private standards in the second category described above. The contents of the second category of private standards are less uniform, and the competitive aspect of these private standards implies that retailers and food processors have an interest in maintaining non-harmonized private standards. The case studies show that the use of private standards in this category is similar across firms, in the sense that they impose additional requirements beyond the national legislation in the country of production. For example, Findus requires that all meat suppliers fulfill the EU rules on animal welfare, and ICA bases its requirements for imports on the IP Sigill standard, and thereby indirectly on Swedish legislation. Thus, there are indications of private standards that result in production conditions in different countries becoming more equal than indicated by national legislations. Private standards thereby contribute to leveling the playing field for competition not only in food safety but also production methods. However, since these private standards are used to a larger extent as guidelines for improvement and not always controlled by a third party, it is difficult to determine what requirements are really imposed. Furthermore, despite the small number of firms included, the case studies clearly indicate that the *contents* of the private standards in the second category vary significantly. This means that private standards' scope for equalizing production conditions is smaller in this second category than in the case of harmonized food safety requirements in the first category. As described above, though, as new areas that are important for competition and profiling enter the top of the pyramid in figure 3, firms can benefit from harmonization of the private standards that are now classified in the second category. This means that, in the longer run, it is likely that there will also be increasing scope for equalization of production conditions, regarding for example animal welfare, across countries.

It can further be noted that, in the GlobalG.A.P. standard as well as the second category of private standards, requirements on the production

methods in some cases explicitly refer to already existing sets of rules. For example, ICA bases requirements on IP Sigill and thereby indirectly on Swedish legislation, and Findus uses EU rules to impose requirements on suppliers in third countries. This indicates that private standard-setting can avoid the costly specification and implementation of own requirements by building on rules that already apply to some producers, and thereby benefit from some kind of economies of scale in standard-setting. This, in turn, implies that it is not necessarily the case that private standards result in *one* level playing field for competition, but that private standards specify requirements in line with existing standards of differing stringency, and that they thereby can result in harmonization of production practices at *several* different levels. To determine whether this is the case for the food supply chain in general, more future research on the contents of private standards is needed.

6.4 How do private standards relate to national legislation?

The harmonization of production conditions across countries through the use of private standards thus crucially depends on the relationship between private standards and the national legislation.

Private standards are often assumed to be more stringent than corresponding public regulations,[103] but national legislations differ and therefore, also the relationship between private standards and public regulations varies across countries. When discussing the stringency of private standards compared to national legislation, it is thus important to be explicit about which legislation that serves as a benchmark.

Further, it is important to clarify what is meant by the term stringency and in what ways private standards relate to legislation. Does the stated stringency of private standards always refer to the strictness of requirements included in both private standards and public regulations? Do private standards relate to national legislation in other ways? These and related issues are discussed in more detail in this section.

[103] See for example Henson and Humphrey (2009)

How to interpret "more stringent"?

Private standards are often assumed to go beyond the requirements of public regulations, but there are several ways in which private standards can be more stringent than public regulations.[104] First, they can specify more stringent requirements within areas that are covered by national legislation. That Findus requires all domestically grown vegetables to be third-party certified to the third level of the Swedish Seal-standard, in which requirements are more stringent than the corresponding requirements in Swedish legislation, is an example of this kind of stringency. In a broader view, private standards can also go beyond public requirements in terms of covering areas that are not included in legislation, or extend the public requirements to other actors in the food supply chain. Findus´ use of EU rules on animal welfare as a private standard for third country producers can be seen as an example of the latter. Furthermore, private standards can go beyond public regulations by specifying in more detail *how* the legal requirements can be fulfilled. This view is confirmed by the case studies, where private standards are seen as more detailed complements to food safety legislation that is perceived to be too general and open to interpretation.

The case studies thus confirm that private standards can be more stringent than public regulations in several different ways. Furthermore, they show that the term stringency can refer not only to the contents of the requirements, but also to how the controls of the specified criteria are undertaken. All three firms share the view that Swedish public controls of food safety are insufficient in terms of control frequency and the aspects that are tested, and that requiring suppliers to comply with a private standard, which is associated with regular controls of the traceability system and withdrawal procedure, is a way to fill gaps in the public control system. To the knowledge of the authors, unreliable public controls as drivers of the increasing use of private standards is an aspect that has not been extensively discussed in previous studies.

[104] See Henson and Humphrey (2009)

When discussing the stringency of private standards in relation to public regulations, it is thus of crucial importance to first clarify what is meant by the term stringency. Furthermore, discussions on the stringency of private standards in relation to public regulations cannot be phrased in general terms, but must focus separately on the stringency of each private standard in relation to public regulations in different countries and for different foodstuffs.

Difficulties in comparing private standards and public regulations

Investigating the stringency of private standards in relation to the corresponding public regulations naturally includes a comparison of the included requirements, but undertaking such a comparison is difficult for several reasons. It is partly due to the multiplicity of existing private standards within the food supply chain, but also to differences in the construction of private standards and public regulations. Whereas legislation must be complied with, private standards contain not just requirements that must be fulfilled, but also requirements that function partly as recommendations. For example, in the case of the GlobalG.A.P. standard, the producer must fulfill 95 percent of the control criteria classified as "minor musts", which means that third-party certification can be achieved without compliance with all the control criteria. This makes it difficult to understand what requirements producers face through private standards and how these compare to the requirements of public regulations.

The difficulty of comparing the stringency of private standards with public regulations further increases with the height of the pyramid in figure 3. This is partly due to the fact that the areas at the bottom of the pyramid are relatively harmonized, while the contents of private standards in the areas closer to the top differ. It is also related to the characteristics of the areas that are regulated. Naturally, it is more difficult to measure whether moral aspects are considered in production than to measure whether foodstuffs contain an infectious disease. For instance, what is needed to achieve animal welfare? There is no common view on how to combine different aspects of animal welfare into an overall measure, and since the same level of animal welfare can be achieved in

different ways and under different production systems, one must focus on the outcome, that is the behavior and welfare of the animal. Making a judgment only by comparing a number of specified requirements in different sets of rules is thus difficult.

The different roles of national legislation and private standards

That private standards and public regulations are different indicates that they also have different functions on the market, and that it is not necessarily the case that they should be set at the same level. For firms, specifying requirements that are different or more stringent compared to requirements within legislation can be a way to increase profits by increasing the product quality compared to other firms on the market.[105] This is confirmed by our case studies, which reveal that imposing requirements on production methods that are more stringent than the corresponding public regulations in the country of production is an important profiling tool for the individual firm.

The market thus needs room for setting private standards above legislation to differentiate products and supply products with differing characteristics to different niche markets. If legislation sets a mandatory public standard of high stringency, this opportunity is lost since all producers have to comply with the stringent mandatory public standard although not all consumers demand foodstuff produced under such conditions. By this reasoning, setting public requirements at a high level might create difficulties for the industry, and it can therefore be argued that instead of specifying stringent public requirements that apply to all producers, the role of national legislation is rather to specify requirements in line with an accepted minimum level, thus leaving the possibility for product differentiation to the private firms. This argument is further in line with the view of the actors on the market; in the surveys reviewed in chapter 4, retailers express the view that the setting of minimum standards is a task for the government.

[105] Lutz et al. (2000)

Supplier perspective on the increased use of private standards

Retailers and food processors thus have a self-interest in specifying private standards that differ from public regulations. Due to their market power, they are often also able to impose such requirements on their suppliers without having to bear the whole cost.

The discussion on the consequences of private standards often stresses the difficulties arising for small producers and producers in developing countries that have to comply not only with legislation but also with private standards if they want to sell their products to retailers and food processors. Private standards are perceived as burdensome since adjusting production and paying for certification audits bring extra costs, and producers with small financial means risk being excluded from markets if they cannot comply with the requirements in a private standard.[106]

However, the results of the case studies in this report partly stand in contrast to this view. According to the interviewed companies, producers might have some difficulties initially complying with private standards, but as time passes, the difficulties in general turn to benefits in terms of structuring the production practices to become more efficient and giving access to markets. This finding is further in line with previous research, which shows that requirements on food safety imposed within the SPS agreement can be costly for producers, but that such requirements in general bring benefits in terms of increased efficiency and market access which may be higher than the costs.[107]

6.5 Future research on private standards

The findings in this study thus question several "truths" that sometimes seem to be taken for granted in the discussion on the role and effects of private food standards. To bring more clarity to and increase the understanding of the role of private standards in the food supply chain, more research is needed that focuses on the use of private standards on the firm level, including information from a larger number of retailers and food processors, but also from restaurants and public services handling

[106] See for example COLEACP PIP (2009), IIED and NRI (2008), UNCTAD (2008) and WTO (2007).
[107] Johansson (2005) and Fredriksson (2006)

food. If only the widely used private standards such as those by the GFSI are considered, important information that is internal to each firm will be excluded and the results will be misleading. Future research should also focus on undertaking detailed investigations and comparisons of the contents of private standards in relation to public regulations in both developed and developing countries. Surprisingly few comparisons exist, but they are of crucial importance for providing information and enabling sound discussions on the relationship between private standards and public regulations.

In summary, this study shows that private standards contribute to leveling the playing field for global competition in the food supply chain. This is especially the case for food safety issues. On the other hand, private standard requirements on the production process, relating to animal welfare, environmental protection and labor conditions, are more heterogenic and thereby provide less scope for harmonization of production conditions across countries.

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Appendix

Other private standards for food safety

IFS Food

International Featured Standard (IFS) Food entails rules and requirements applying to the processing and packaging of loose food, and is thereby a standard applying to the post-farm stage of the food production process.[108] The standard is recognized by the GFSI[109] and contains detailed descriptions about the usage of a Hazard Analysis and Critical Control Point (HACCP) system for food safety,[110] as well as routines when it comes to the hygiene of the personnel, sanitary facilities, waste disposal and the requirement of an existing traceability system.[111] Founded and developed by associated members of the German, French and Italian retail federations, it has become an internationally accepted standard and is supported by retailers such as Coop, Aldi, Migros and Lidl.[112]

SQF

The Safe Quality Food standard (SQF) aims at providing certification schemes for primary producers (SQF 1000) and manufacturers and distributers (SQF 2000) of food products.[113] The two certification schemes consist of three parts, each of which increases the requirements on the production process and where HACCP is required at levels two and three. At the second level, SQF is recognized by the sixth edition of the GFSI Guidance Document.[114] Since the requirements can be implemented stepwise, this structure also facilitates the compliance with the standard for smaller producers.[115] Certificates are issued by licensed certifica-

[108] IFS 1
[109] GFSI 3
[110] See FAO 1 for more information.
[111] IFS (2012)
[112] IFS 2
[113] SQF 1
[114] GFSI 3
[115] SQF 2

tion bodies.[116] Retailers and providers which support the SQF include, among others, the Carrefour Group, Kraft Foods and Wal-Mart.[117]

FSSC 22000

Food Safety System Certification 22000 (FSSC 22000), sometimes referred to as FS 22000, is a certification scheme covering food manufacturing of perishable animal and vegetable products, food ingredients and long-life products. The process of food packaging material manufacturing can be certified according to the FSSC22000[118] and, for the future, the aim is to make certification available for animal feed manufacturing as well.[119] Based on the existing international ISO 22000 series and sector-specific pre-requisite programs, FSSC22000 aims at being the globally leading independent system for food certification.[120] Work is currently in progress to benchmark the FSSC 22000 against the GFSI.[121]

40 percent of all certificates have been issued in Europe, and producers and retailers committed to the standards include, among others, ICA, Coop, Migros and Kraft Foods.[122] Certificates are issued by certification bodies associated to the owner, the Foundation for Food Safety Certification.[123]

GRMS

The Danish Global Red Meat Standard (GRMS) is a standard specifically developed for and by the meat industry and is currently active in the benchmarking process of the GFSI.[124] It aims at creating transparency in the transport, slaughtering, cutting, deboning and handling of meat and meat products from beef and pork. The standard covers the entire production chain and entails requirements on traceability, the handling of products, implementation of a HACCP system and cleaning programs.[125]

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[116] SQF 3
[117] SQF 4
[118] FSSC 1
[119] FSSC 2
[120] FSSC 1
[121] GFSI 3
[122] FSSC 3
[123] FSSC 4
[124] GFSI 3
[125] GRMS (2011)

The GRMS Standard can also be used as a basis for products labeled with the Danish Logo.[126]

The majority of the totally 19 approved sites are located in Denmark, but Germany, Sweden, the United Kingdom and Poland are also represented among the certified producers.[127]

PrimusGFS

PrimusGFS, a voluntary standard applied in North America for agricultural products,[128] is active in the benchmarking process of the GFSI.[129] It consists of several modules covering a food safety management system (FSMS), good agricultural practices (GAP), good manufacturing practices (GMP) and HACCP, respectively. Traceability, pest and foreign material controls and employee practices are examples of issues covered by the different modules.[130] The PrimusGFS standard ranges from pre- to post-farm gate production, and is thereby a standard covering the whole supply chain.[131]

CanadaGAP

CanadaGAP is a HACCP-based food safety program aiming at providing effective food safety procedures for the production, packing and storage of fruits and vegetables.[132] The guidelines entail requirements about employee hygiene, good agricultural practices (GAP), storage, transportation and traceability.[133] Use of the logo on products and packaging is explicitly not permitted.[134] Used in Canada, its spread is limited but it is being benchmarked to the GFSI and is therefore commonly accepted as equivalent to other GFSI-recognized standards.[135]

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[126] GRMS (2009)
[127] GRMS 1
[128] Primus 1
[129] GFSI 3
[130] Primus 2
[131] SGS (2011)
[132] CanadaGAP 1
[133] CanadaGAP 2
[134] CanadaGAP 3
[135] CanadaGAP 4 and GFSI 3.

Other private standards for production methods

SA 8000

SA 8000 is a private standard for social accountability open to the food sector but also to other industries. It sets requirements on workplace conditions, workers´ rights and management systems, based on national laws and the conventions of the International Labour Organization (ILO) and United Nations (UN). Issues included are, among others, health and safety, child, forced and compulsory labor, discrimination, working hours, remuneration and the right to collective bargaining.[136]

In 2012, 3083 facilities were certified to the SA 8000 standard, of which most are located in Italy, India and China[137], and only a minority of the total number of certified producers are active in the food industry.[138]

BSCI

The Business Social Compliance Initiative (BSCI) is an initiative aiming at improving working conditions in global supply chains, especially focusing on high-risk countries. The right to collective bargaining, prohibition of discrimination, child labor and forced labor, regulations on working hours, wages and management systems and workplace health and safety are some of the topics included. However, the BSCI is not a standard against which suppliers can be certified. Instead, it entails a Code of Conduct and a stepwise implementation approach, which participating companies are committed to follow. Fulfilling the BSCI requirements is a first step towards certification to the SA 8000 standard.[139]

ETI

The Ethical Trading Initiative, which is a co-operation of trade unions, companies and voluntary organizations, is another international initiative in the area of social responsibility. The aim is to improve conditions for workers in the production of consumer goods. The cornerstones are stated in the Base Code, which is based on the international conventions

[136] SA8000 (2008) and SA8000 1.
[137] SA8000 2 and SA8000 3.
[138] SA8000 4.
[139] BSCI (2009) and BSCI 1

of the ILO and covers aspects of the right to collective bargaining, safe and hygienic working conditions, child labor, working conditions, working hours and living wages.[140]

WRAP

The Worldwide Responsible Accredited Production (WRAP) program is a standard-setting certification scheme for lawful, humane and ethical production. WRAP consists of twelve principles for workers´ rights in production, including the prohibition of forced and child labor, the right to collective bargaining, the prohibition of discrimination and the provision of a healthy and safe working environment. Initially a standard and certification scheme for the apparel industry, it can now be applied in several sectors, including the food industry.[141]

SAI Platform

The Sustainable Agriculture Initiative (SAI Platform) is an organization aiming at supporting sustainable agricultural practices and sharing knowledge with the different actors in the food chain. Principles and practices to guide actors in implementation of sustainable production methods are issued for fruits, arable and vegetable crops, dairy cattle and coffee.[142] The principles and practices cover a wider range of areas, including working conditions, the management of soil, water and waste and, where applicable, animal breeding, health and welfare. However, requirements are stated in a relatively general way and detailed information on requirements on, for example, space and access to feed and water are not given.[143] Kraft Foods, Nestlé and Unilever are three of the total of over 30 food industry companies that are members of the SAI Platform.[144]

FLA

Another initiative is the Fair Labor Association (FLA) aiming at protecting workers´ rights. The FLA Workplace Code of Conduct is based on

[140] ETI 1 and ETI 2.
[141] WRAP 1, WRAP 2 and ITC 1.
[142] SAI 1, SAI 2 and ITC 1.
[143] See for example SAI (2009)
[144] SAI 3

the standards of the International Labor Organization (ILO). The Code of Conduct cover issues of discrimination, harassment, forced and child labor, the right to collective bargaining, health, safety and working environment, working hours and compensation issues. However, companies cannot be certified against the FLA principles, but the FLA performs accreditation of a company´s compliance program. Although open to all sectors, the FLA standard is not yet of significant importance to the food sector. Of the currently 16 certified companies, none operates in the food sector.[145]

[145] FLA 1, FLA 2, FLA 3 and ITC 1.

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