

## **Retailers, pork and animal welfare: An overview of existing research and development of an analytical framework**

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### **1. Overall approach of WP3**

The overall purpose of WP3 is to determine what it requires to get slaughterhouses and retailers to actively engage in the marketing of products made of pork from gestation crate-free production. As a first step in this regard, we provide an overview of existing research on retailers, pork and animal welfare. This overview will help construct a pre-understanding of the Danish pork chain as it develops our understanding of the market structure and which issues will be of special interest to explore further. This understanding will help us study the Danish pork chain from a practical point of view, as we will develop an analytical framework that can assist the execution of the empirical study, which involves conducting interviews with 10-12 different actors in the pork industry. The generation of empirical data will take place at the end of 2012 and the beginning of 2013. The analytical framework will be developed based on a review of previous literature and studies regarding market practices combined with research and reports from the pig industry with special focus on animal welfare.

Market legislation in the pig industry is changing and will be finalized by 2013 where the use of gestation crates for sows will be prohibited (Nielsen 2009). The changing legislation creates an interesting setting, as we expect that the market will change in several stages. Firstly, the market will change simply due to national legislation being completed consequently modifying the existing regulations. Secondly, we further believe that changing national regulations will lead to market developments that will transform the industry and motivate actors in the market even more to improve the welfare conditions in the pig industry. The new regulation narrows the gap between the national and organic requirements. As a consequence, the upgraded regulations will motivate actors in the chain to improve welfare conditions further exceeding the national requirements, thus creating possibilities for selling pork at a premium price (Christensen, Esbjerg & Sandøe 2001).

Elzen, Geels, Leeuwis and van Mierlo (2011) studied how normative pressure from national and institutional organisations changes with regard to group housing for pregnant sows in the Netherlands. Market forces were driven not only by national regulations, but also because the pig producers were under pressure from other influences (i.e. consumer demand, pressure from other actors in the pork chain and NGO's). This is in alignment with our assumptions that the market is evolving constantly, as there is dynamic interaction between a number of factors such as chain actors' daily interaction and relationship, changing consumer demand, national and societal pressure, etc.

We build our analytical framework on the market practice perspective proposed by Kjellberg and Helgesson (2007). Their work allows us to explore how the market is shaped through practices; e.g. how the pork sector is shaped by the practices of various actors in the pork chain. Additionally, their framework provides us with the necessary insight for understanding the processes that contribute to this; e.g. which practices are applied in the pork industry and how can these be modified to reshape the market in order to improve marketing activities and increase the sale of Danish pork from gestation crate-free production? Kjellberg and Helgesson (2007) define market practices as “*All activities that contribute to constitute markets*” (Kjellberg & Helgesson, 2007. 141). According to them the market is constructed through three categories of market practices: exchange practices, representational practices and normalizing practices. Representational practices include activities which both create shared images of the market and describe how it functions. Normalizing practices include all the activities which lead to the establishment of rules and norms within the market and prescribe how actors should act accordingly. Exchange practices include all the activities involved in a single economic exchange. Each actor influences the shaping of the market when doing business together (Azimont & Araujo 2007), thus from our perspective all actors in the pork chain contribute to shaping the market and therefore also the reshaping, for improving marketing activities and sale of Danish gestation crate-free pork.

As mentioned above, the overall purpose of WP3 is to *determine what is required for slaughterhouses and retailers to support and promote pork from loose sows*. Based on the framework proposed by Kjellberg and Helgesson, we have identified three issues which we will explore in order to meet the overall objective. These are (1) the current interaction and relationship between the various actors in the supply chain characterized, (2) how the different actors understand the market, including the understanding they have constructed of consumers and their demand for

pork, and (3) the actors' own views on how the promotion of gestation crate-free pork from loose sows can be increased and improved.

This paper is organized as follows: first we will give an introduction to the supply chain for the pork industry based on empirical studies and reports. Additionally, we will present some of the ethical considerations related to gestation-free housing in Denmark in order to establish the possible benefits for each actor in the chain. Secondly, in order to develop our understanding of how the three practices shape the market in the pork industry, we will review the most recent literature and studies on market practice. These studies will not be limited to the pork industry but will address different aspects of the practice-based approach. This will help us explore how market practice can be applied in various settings thus allowing us to identify how other studies have used the practice approach for different purposes consequently increasing our understanding of how the approach can be applied in the pig industry. All in all, the literature review will provide the necessary background for obtaining the required knowledge with regard to topics of concern for the pork industry, identification of practices and actors that can reshape the market in order to improve marketing activities and the sale of Danish pork from loose sows.

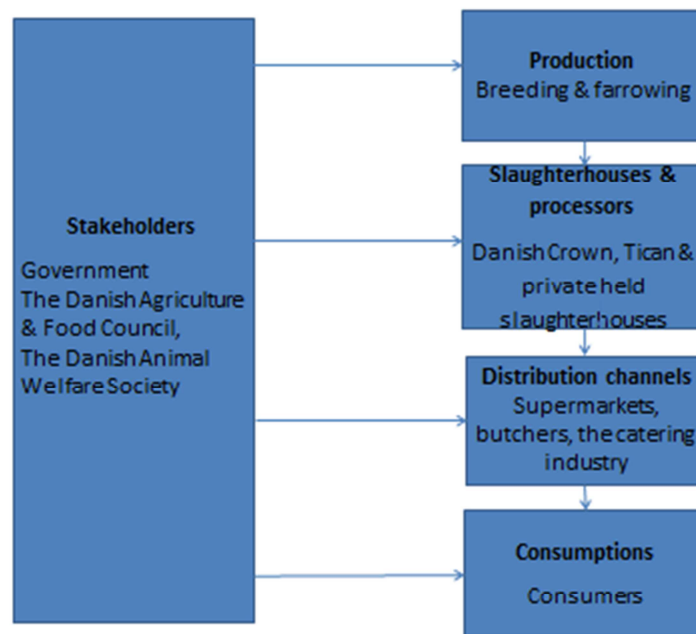
## **2. The Danish pork chain**

A general illustration of the Danish pork chain is provided in Figure 1. As it can be seen, there are several actors involved in the marketing channel, including primary actors such as pig producers, slaughterhouses and processors, retailers and consumers. In addition, a number of other stakeholders are indirectly involved in the pork chain. These include government and industry organizations (e.g. The Danish Agriculture and Food Council) and NGOs (e.g., The Danish Animal Welfare Society). Stakeholders such as these can also participate in shaping the market (e.g., through improving industry norms and regulations). Both primary actors and stakeholders influence how the market is shaped as through market practices actors attempt to shape and change the pork industry.

The Danish Agriculture and Food Council (in Danish: Landbrug & Fødevarer) is an umbrella organization which represents the interest of all producers and slaughterhouses. The Danish Agriculture and Food Council is a merger between Danish Agriculture, the Danish Bacon and Meat Council, the Danish Agricultural Council, the Danish Dairy Board and the Pig Research Centre (Pig Research Centre, 2012).

The Danish pig production includes three different types of farms: (1) Farms with breeding sows, (2) farms with fattening pigs and (3) integrated farms, which is a combination of the first two (Boogaard, Boekhorst, Oosting & Sørensen 2011). The majority of the pig production is slaughtered by farmer-owned co-operative slaughterhouses, i.e. Danish Crown and Tican. The pig producers own and manage the co-operative slaughterhouses (Jeppesen, Bredahl, Fjord, Grunert & Bove, 2002). The remaining small part of pig production is slaughtered at private slaughterhouses, which are not members of the co-operative organization (Landbrug & Fødevarer, 2010). 75% of the Danish pig production and pork is exported (T. Nielsen & Kristensen 2008), with Germany as the biggest purchaser. Other major purchasers are England, Poland and Japan (Landbrug & Fødevarer 2010).

**Figure 1: The Danish Pork Chain**



*Source: Based on input from the Q-PorkChain Project + Nielsen and Kristensen (2008)*

Danish Crown has a number of subsidiaries which are either partly or fully owned by Danish Crown. The structure of Danish Crown and its subsidiaries can be seen in Appendix 1. Danish Crown is also a major actor when it comes to processing, as several of their subsidiaries located in different countries in Europe are involved in the production and sale of processed meat (Danish

Crown 2012a). For example, Sokolow, which is partly owned by Danish Crown, is a major contributor to the processing sector in Poland (Danish Crown 2012b). Another example is Tulip Ltd., which controls Danish Crown's processing activities on the UK market (Danish Crown 2012b). Interestingly, Nielsen and Kristensen (2008) point out that even though Danish consumers have a strong preference for Danish pork, they do not care where the pork is processed. Therefore, according to them, Danish pork sold in Danish supermarkets can be processed in other countries.

The Danish retail sector, where the majority of the pork is sold, is highly concentrated. Other sales channels include direct sale to the catering industry and butcher shops (Nielsen & Kristensen 2008). However, as a consequence of the majority of pork being exported, Danish retailers have little influence on other actors (Jeppesen et al. 2002). Due to the asymmetric power relationship between the producers, slaughterhouses and retailers, one might argue that the slaughterhouses (and processors) should be the leading chain actor for improving welfare conditions for Danish sows.

In relation to animal welfare, legislation and regulations demanding pig producers to keep sows in gestation crate-free systems will be finalised for the whole industry by 2013 (Landbrug & Fødevarer 2012). As indicated at the beginning, improvement of welfare conditions influence each stage in the pork chain in a different way.

Increasing animal welfare through improving breeding conditions can have much positive impact on the behaviour and health needs of sows (Dyrenes Beskyttelse 2004). Among other things, it will reduce stress factors which can have a positive impact on the quality and taste of pork (Perez, Castro & Furnols 2009). Additionally, the introduction of farrowing pens has a positive influence on piglet growth potential (Petersen & Moustsen 2008) and reduces veterinarian costs as the sows will develop fewer shoulder sores and galls (Dyrenes Beskyttelse 2004). On the other hand, keeping sows in gestation crate-free systems entails an additional production cost, and in the end it is consumers who will pay for these improvements. However, Nielsen and Kristensen (2008) state that one major barrier for animal welfare is that consumers are unwilling to pay for welfare improvements. On the other hand, as described above, there are other economic benefits for changing the conditions in the pork industry. All in all, there probably has to be significant economic benefits to convince pig farmers to voluntarily implement better breeding and welfare conditions for Danish sows.

From a retail perspective, improving welfare for loose sows is associated with several obstacles. For example, retailers, who follow a low-price strategy, will experience animal welfare as a barrier for their strategy as it results in higher priced products (Binnekamp & Ingenbleek, 2006). Additionally, animal welfare is a credence attribute and therefore cannot be evaluated by the consumer at the point of purchase (Codron, Grunert, Giraud-Heraud, Soler & Regmi, 2003). As a consequence, the retailers have to change their marketing strategies in order to incorporate animal welfare in their promotional activities (Perez, Castro & Furnols, 2009). If not, it will not be financially beneficial for retailers as they cannot expect consumers to be willing to pay a premium price (De Roest, Ferrari & Schiff, 2010).

### **3. A market practice perspective**

As mentioned above, we will build our study on the market practice perspective proposed by Kjellberg and Helgesson (2007). Kjellberg and Helgesson (2006) state that a conceptualization of practices “*must focus on market practices rather than marketing, consumption, or production practices*” (842) in order to take into account all activities that contribute to the shaping of the market and not only by addressing actions that concern the seller and the buyer. Studies on market practices are based on this premise (see for example Hagberg & Kjellberg 2010; Araujo & Kjellberg, 2009; Andersson, Aspenberg & Kjellberg, 2008), as they use a market practice approach including all actions that shape markets, and not just those restricted to sellers, buyers or the promotion and sale of products.

The three practices are linked together through processes of translation as it is an on-going and continuous process, i.e. the market is constantly evolving and changing (Kjellberg & Helgesson 2007).

Several studies have used a market practices perspective for various purposes. For example, Azimont and Araujo (2007) used it to study the interaction between manufacturers and retailers in a context of category reviews. Azimont and Araujo argue that the interaction between a manufacturer and a retailer can be seen “*as the result of multiple influences and as an incremental rather than discontinuous process that can only be understood within the timeframe of the relationship*” (Azimont & Araujo 2007, 850). They found that the daily interaction between the manufacturer and the retailer shape the relationship between the two actors. The annual category review meetings between manufacturers and retailers in the market for fast-moving consumer goods (in this case non-alcoholic beverages) is one activity which is suitable for studying the interaction between the

various actors, because the category meeting involves both a discussion of recent events and future plans. Hence, the category meeting illustrates how manufacturers and retailers form a shared image of the market and further coordinate their actions, which all contributes to changes in the exchange, representational and normalizing practices.

Nenonen and Storbacka (2011) use the market practice approach to demonstrate how an organization changes the market conditions. By using two cases of multinational companies operating in different industries, they show how the market is shaped by exchange, representational and normalizing practices. For example regarding exchange practices, one company used various approaches to demonstrate to their customers that their product was superior compared to other solutions. Furthermore, exchange practices also included the identification of segments in order to tailor their market activities to their main target group. The normalizing practices are related to quality standards and approvals required by their customers. Additionally, it includes participating in conferences, committees and research studies, as this is an effective way for a company to communicate their interest and influence industry rules and regulations. Lastly, Nenonen and Storbacka (2011) argue that a company can influence the representational practices in an industry by attending industry exhibitions and by providing articles and statements to the industry as their input influences how actors see the market.

Corsaro (2011) explored how the market practice approach can help develop an understanding of value creation in business networks. By applying the market practice perspective, Corsaro describes how the introduction of a new distributor creates new practices in the market. Among other things it includes developing the exiting channel and increasing marketing activities (exchange practices), providing market and organizational information through meetings and seminars (representational practices) and the establishment of new rules that may emerge with the introduction of a new actor (normalizing practices). Furthermore, the study demonstrates that actors have different interpretations on how to create value, which therefore influence their market representations and hence they will form different understandings of the market conditions. This finding is in agreement with Esbjerg's (2010) results which showed that actors in the marketing channel for potatoes only have partially shared representations of the industry.

Andersson and Mattsson (2010) applied the market practice approach in order to study how networks shape and reshape business practices. Actors within a network can shape and reshape markets because the environment is not fixed but rather dynamic; thus business practices are not

homogeneous as routinized practices are changed and replaced by new practices (Esbjerg 2011). This argument is supported by Finch and Acha's (2008) work which argues that actors will have different representations of the market and therefore different approaches to conducting business. Hence, it creates implications for establishing a business policy applicable to every single exchange process.

After having elaborating on how markets are formed and presenting previous research, we will now discuss how the market practice perspective can be applied in the pork chain. This will be discussed in terms of how the different practices can be seen in relation to the industry.

### **3.1.1 Actor representations of the market and other actors in the pork industry**

Both primary actors and stakeholders influence how the market evolves as they, through their representations of the market, shape and change the pig industry. Representational practices concern activities which provide a general understanding of how the market is shaped and how it works (Kjellberg & Helgesson 2007). Several factors have an impact on the pork supply chain, as each actor will have different representations and objectives for increasing welfare conditions for Danish sows. For example, producers will view welfare from a production point of view (Bracke, Greef & Hopster 2005) and look at the economic terms and technical aspects of improving living conditions (Skarstad, Terragni & Torjusen 2007). For an actor such as The Danish Animal Welfare Society (Dyrenes Beskyttelse), natural behavior and health will be central in their perception of animal welfare and therefore also their main concern (Dyrenes Beskyttelse 2004).

According to Nenonen and Storbacka (2011), representational practices can be defined through actors' shared images of markets and can be seen as a tool where organizations each have the possibility of making their business visible to stakeholders and other actors in the chain. Representational practices can be characterized through oral or written practices. For example, it includes meetings, seminars, annual reports, and sales statistics. According to Skytte (2005), actors in the Danish pork chain form an opinion of each other through several activities, including reports from the Danish Agriculture and Food Council, research centres, through face-to-face conversations with other actors, meetings held by the industry association and annuals reports.

Finch and Acha (2008) explain how actors in emerging markets have different representations of the market. In our case, the introduction of new welfare standards creates an interesting setting as we expect that actors will have to redefine their promotion and sales activities regarding non-



confinement sows as well as to change their representations of themselves and the market. Nevertheless, the interaction between actors in an exchange situation helps develop a commonly agreed terminology (Nenonen & Storbacka 2011) and a shared understanding of relevant concepts (Esbjerg, 2011), which enable actors to develop a shared image of the market (i.e. developing representational practices).

Studies suggest that pig producers believe that other chain actors such as retailers do not take any responsibility for promoting animal welfare products. In addition, pig producers are not confident that retailers will purchase animal welfare product but instead source pork from other countries offering lower prices (Hubbard, Bourlakis & Garrod 2007). The lack of trust in the relationship seems reasonable. Christensen et al. (2001) argue that a retailer's main goal is to provide products that respond to consumer demand. Therefore, they do not see it as their responsibility to increase animal welfare conditions e.g. promoting welfare-friendly products, if it does not fit with their main goal. Hence, one of the main problems when it comes to motivating producers to voluntarily implement better welfare conditions for sows is the lack of trust between them and the rest of the actors in the pork chain. This is in line with Karantininis and Nielsen's (2004) findings which demonstrated that enhancing vertical cooperation in the Danish pig chain will motivate pig producers to make the required investments that the industry demands.

### **3.1.2 Actor representations of consumers and their demand for pork**

Norwood (2011) explains that consumer buying behaviour is inconsistent with what consumers state in several research studies, namely that they are willing to pay a higher price for gestation crate-free pork. However, in real life, their attitude and concerns are not translated into actual purchasing behaviour.

Hubbard, Bourlakis and Garrod (2007) write that producers blame consumers for practicing a double standard. On the one hand, they state a preference for animal-friendly products and concerns for the current level of animal welfare in the pig production. On the other hand, they are unwilling to pay a premium price for pork products with a focus on animal-friendly production. One of the reasons for consumers' buying behaviour is lack of communication between pig producers and consumers (Nielsen & Kristensen 2008). Consumers have little knowledge of initiatives that producers already have taken or currently are taking in order to improve welfare standards. Instead,

consumers create their assumptions from the media. This source of information often paints a rather negative picture of pig production and its “lack” of animal-friendly production facilities (Nielsen & Kristensen 2008).

It is not only producers who have a negative understanding of consumers and their demand for pork produced with a higher level of animal welfare. Retailers are also under the impression that consumers do not wish to buy pork with a higher level of animal welfare if it comes at a premium price (Nielsen & Kristensen 2008). Retailers’ understanding of consumers’ demand for animal-friendly produced pork creates a problem for gestation crate-free pork. Retailers act as middlemen between producers and consumers, though their most important task is to ensure that their supply of food products correspond to consumer demand (Christensen et al. 2011). Hence, retailers will not be motivated to promote or sell pork products that focus on the use of gestation crate-free production if they are under the assumption that consumers want pork as cheaply as possible.

### **3.2 Normalizing practices and the current interaction between actors in the pork industry**

In order for cooperation to work in an industry, companies must adjust their actions and activities to guidelines and norms applied in the industry and on an organizational level. Actors in the pork industry can, in accordance with the market practices reflected in their activities, influence the established norms and regulations. All activities that contribute to the establishing of guidelines on how the market should be formed and function can be classified as normative practices (Kjellberg & Helgesson 2007).

Normalizing practices involve the formulation and implementation of norms and regulations as to the shaping of the market. Normalizing practices include both macro- and micro-level activities. Macro-level activities refer to how markets are shaped at the societal level. Hence, normalizing practices include activities which help form and implement legal and voluntary norms for behaviour in society (Andersson & Mattsson 2010).

It might be argued that with the introduction of the new welfare legislation the Danish government, through normalizing practices, is about to change the industry’s conditions. According to Hubbard, Bourlakis and Garrod (2007) pig producers will change the welfare conditions in order to stay in the market, but their actions are not voluntary. Changing normalizing practice comes at an additional cost. Firstly, the pig producers will have to pay for any direct investments related to production facilities. This is likely to influence the interaction and relationship between producers and others

actors in the pork chain, as it creates an uneven economic investment scheme in favour of slaughterhouses and retailers (Christensen et al 2011, Hubbard, Bourlakis & Garrod 2007).

Internationally, the US government provides an example of how meat producers and slaughterhouses have reshaped normalizing practices voluntarily. The government chose to provide financial support to activities that help promote the voluntary acceptance of food standards in the food chain (Loader & Hobbs 1999).

At the industry level, The Danish Agriculture and Food Council has the power to influence legislation and regulations on an international, national and local level. The Council has developed “The Danish Product Standard” (also called "DANISH") in order to regulate animal welfare, food safety and traceability for primary production (Videncenter for Svineproduktion 2012).

DANISH applies to almost the entire pork industry, as more than 95 per cent of the pig production is represented in this scheme (Videncenter for Svineproduktion 2012). DANISH offers the Danish Agriculture and Food Council with the opportunity to change market practice in the industry. Vertical coordination in the chain is achieved through actors’ compliance with DANISH, thus the use of DANISH decreases the need for formal contractual relationships in the chain. One of the main reasons for the success of the Danish pork chain is the effective coordination across levels in the chain (Karantininis & Nilsson, 2004). As it can be seen from the above discussion, the implementation of DANISH provides the Danish Agriculture and Food Council with the opportunity to change market practice in the pork chain.

National animal welfare organizations also hold the power to reform markets. For example, in the Netherlands, The Animal Protection Society influenced and pressured the industry to improve the welfare conditions for sows, which successfully led to an increase in animal welfare for pregnant sows (Elzen, Geels, Leeuwis & van Mierlo 2011). In addition, it also motivated one of the major retailers to voluntarily promote and increase the sale of pork produced with a higher level of animal welfare. After one year, the pork was being sold in more than one hundred of this chain’s outlets.

Additionally, normalizing practices include the micro level which refers to the individual organisation’s strategies (Andersson & Mattsson, 2010). Slaughterhouses also influence the norms in the pork industry. For example, Danish Crown (DC) has developed a code of practice with the

purpose of ensuring that food safety, quality and animal welfare are respected (Danish Crown 2009). All Danish Crown suppliers are obliged to adhere to this code of practice, thus giving Danish Crown free scope to change industry norms and rules. Hence, DC has the power to influence and coordinate activities and cooperative tasks between the different levels in the pork chain (Karantininis & Nielsen 2004).

Another method that actors can use to change normalizing practices in the pork industry is the implementation of private standards. Retailers can influence and control the behaviour of other upstream actors as well as market practices as they can require their suppliers use private standards (Bredahl, Northen, Boecker & Normile 2001; Hatanaka, Bain & Busch 2005). This may include requirements for production, processing and transportation, thus producers and slaughterhouses have to comply with these. Animal welfare can be one of the requirements included in private standards (Hatanaka, Bain & Busch 2005). Several private standards exist with GLOBALGAP (former EUREP GAP) being particularly important as many of the European retailers require their suppliers to follow this standard (Codron, Grunert, Giraud-Heraud, Soler & Regmi, 2003; Tennent & Lockie, 2012).

As Kjellberg and Helgesson (2007) have explained, the three practices are interlinked, thus changing normalizing practice will also change representational practices and exchange practices. Private standards can be seen as a measurement which helps ensure that the animal welfare rules are upheld and influence the actors' perception of the market consequently influencing their representations of the market. The use of private standards also affects exchange practices between the different actors in the pork chain. For instance, the use of private standards typically requires producers and processors to prove that they follow the requirements. For instance, Hubbard, Bourlakis, and Garrod (2007) explain that pig farmers are required to fill out a lot of paperwork due to the audit inspection that is required as a result of the use of private standards. It also affects the exchange practices for retailers, as they have to incorporate standards into their marketing activities in the supermarket. For example, it can include providing staff training in order that they can provide consumers with information about standards.

One example of how actors in the supply chain have changed the industry through normalizing practices is provided by the Canadian meat industry. The industry has reformed food safety requirements not due to national requirements but because of pressure from consumers and other actors in the pork chain (Uzea, Hobbs & Zhang 2011; Loader & Hobbs 1999). Canada supplies pork

to several actors, i.e. international food companies and retailers in North America, and several major actors demanded that the Canadian producers comply with their country's legislation (Loader & Hobbs 1999). In 2007, several of those announced that they would only purchase pork from gestation-free production, which the pig producers had to implement in order to stay in business (Uzea, Hobbs & Zhang 2011).

New Zealand and Australia are two examples of countries where, instead of enforcing standards by national requirements, supply chain actors have voluntarily implemented private standards exceeding national requirements (Loader & Hobbs 1999). Their systems are quite similar to the Danish one, as actors in the industry play a larger part in designing and implementing the legislative policy.

### **3.3 Sale and promotion activities**

As mentioned earlier, exchange practices can, according to Nenonen and Storbacka (2011), among other things include the promotion of the product and identification of segments. Buller and Cesar (2007) explain that producers and retailers use labelling fresh meat products with claims of higher animal welfare as a segmentation tool. McEachern and Warnaby (2005) explain that labelling is one of the few promotion activities that retailers can perform when it comes to fresh meat products. This is in line with Tonsor and Wolfs' (2011) viewpoint as they state that labelling provides benefits of reducing consumer uncertainty and search cost. However, several studies state that consumers do not have the information required to understand these (McEachern & Warnaby 2004; McEachern & Warnaby 2005; Hubbard et al. 2007), thus there seems to be a need for retailers to change their marketing activities in order to provide consumers with the necessary information.

In addition to providing retailers with the opportunity to differentiate pork, private standards and labelling also minimizes transaction costs as it guarantees food safety (Hatanaka, Bain & Busch 2005); thus it also affects the exchange situation between retailers and their suppliers. Coordination of and cooperation on market activities are scarce in the pork supply chain, as producers believe that retailers do not take enough responsibility when it comes to promoting welfare standards (Tennent and Lockie 2012; Hubbard, Bourlakis & Garrod 2007).

A recent European research study, EconWelfare, explored the strengths and weaknesses of standards in order to further improve animal welfare. Although the study concluded that welfare schemes and labels are effective in relation to promoting animal welfare, it also argued that this was

not enough, thus recommending that retailers adapt their marketing activities as for example, to include the use of websites where they can provide information regarding their policy on animal welfare (De Roest, Ferrari & Schiff 2010).

Tonsor, Olynk and Wolf (2009) studied how consumers perceive voluntary labelling of crate-free pork. Their results suggest that a special label for crate-free pork creates market opportunities as well as nudges pig producers to voluntarily abandon the use of gestation crates. Norwood (2011) points out that, at the moment it is nearly impossible to find crate-free pork in a UK supermarket. Despite the fact that the new welfare conditions for sows will be fully implemented in 2013, this regulation is not a new phenomenon. In the Danish pig industry, it was estimated that in 2004 up to 60% of the Danish sows gestated under crate-free production facilities (Dyrenes Beskyttelse, 2012). One explanation why it seems impossible to find crate-free pork in supermarkets despite many producers already having implemented the necessary production facilities might be that the market needs time to adjust to the regulations, and therefore actors at the chain level cannot be expected to make the necessary adjustment (e.g. increasing promotional activities for sows) before they are sure that it will be profitable to focus on pork produced without the use of gestation crates (Norwood 2011).

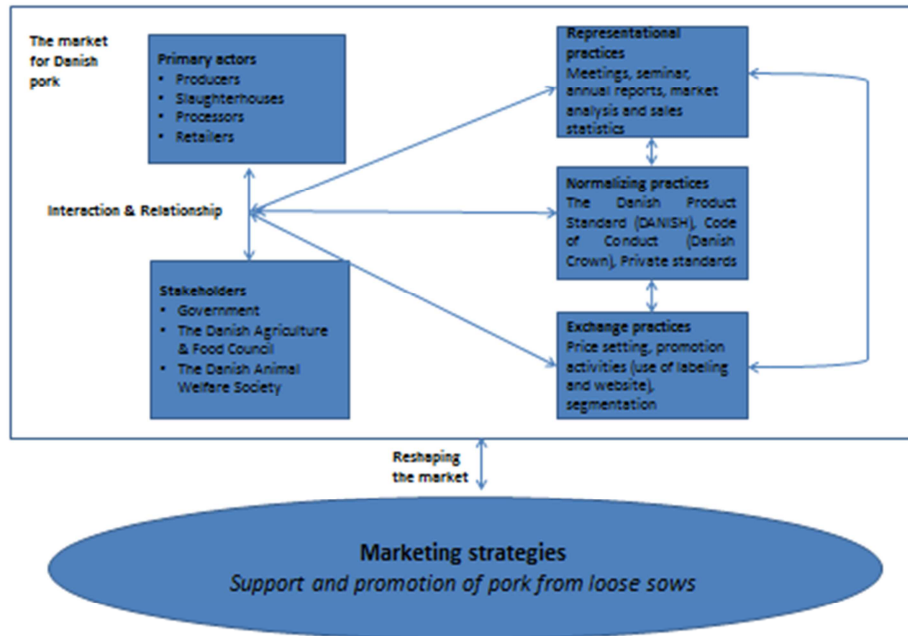
In addition, exchange practices involve price formation mechanisms (Nenonen & Storbacka 2011). All producers, who are members of the co-operative slaughterhouses, get the same price for their assortment as every week a committee adjusts and sets prices based on market analysis of foreign markets (Nielsen & Kristensen 2008).

Just as representational and normalizing practices influence exchange practices, exchange practices may also affect representational and normalizing practices. The altering of exchange practices leads to a readjustment of the actors' understanding of the market, thus producing a new set of measurements (for example how to measure animal welfare using private standards). Private standards allow the actors to monitor compliance with animal welfare rules therefore changing how actors produce an understanding of the market.

#### **4. Summary of the analytical part**

Based on the use of the market perspective combined with studies and reports from the pork industry, we have covered the analytical part of WP3. This will be helpful in the empirical study as

it enables us to create an analytical frame of reference. An illustration of this framework is provided in Figure 2.



**Figure 2: Analytical framework for the empirical study**

The framework illustrates how the market is shaped through (1) interaction and relationship between the various actors in the pork channel and through (2) interaction and relationship between channel actors and other stakeholders that indirectly influence the pork supply chain. Both central actors in the pork chain and stakeholders shape the market through representational, normalizing and exchange practices. Each practice includes different activities, and we have identified some of these by using exiting research studies and reports from the pig industry. However, as Kjellberg and Helgesson (2007) argue, it is not possible to identify every single activity; we therefore expect that our empirical study will contribute further to this area. Both actors and stakeholders can reshape the market through the three types of practices and therefore this framework will support us when exploring how the market can be reshaped in order to motivate retailers and other actors to engage in marketing activities and the sale of Danish pork from loose sows. The framework and theoretical foundation in practice theory further highlights the dynamic and evolving nature of markets, as actors often have different representational practices of markets (Esbjerg 2011) as well as

conflicting practices (Kjellberg & Helgesson 2006), and consequently actors in the market are constantly shaping and reshaping the market.

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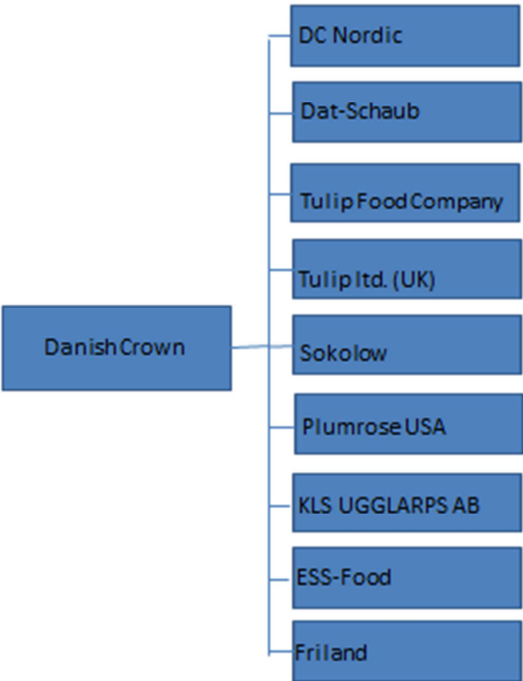
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**Appendix 1: Subsidiaries of Danish Crown** (leaving out the Beef Division)



*Source: Adapted from Danish Crown 2012c*